AGENDA

State Board of Education

July 2, 2020

Committees of the State Board of Education

INSTRUCTION

Sue Melton-Malone, chair
Pam Little, vice chair
Aicha Davis
Georgina C. Pérez
Marty Rowley

SCHOOL FINANCE/PERMANENT SCHOOL FUND

Tom Maynard, chair
Lawrence Allen, Jr., vice chair
Donna Bahorich
Patricia Hardy
Ken Mercer

SCHOOL INITIATIVES

Barbara Cargill, chair
Marisa Perez-Diaz, vice chair
Ruben Cortez, Jr.
Keven Ellis
Matt Robinson

June 29, 2020

State Board of Education
Austin, Texas

I certify that this is the official agenda of the State Board of Education for its meeting on
June 29-July 2, 2020. Agenda items have been prepared and reviewed by Texas Education
Agency staff and are presented for the board's discussion and consideration. Where appropriate,
I have proposed an action.

Respectfully submitted,

Mike Morath
Commissioner of Education

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William B. Travis Building
1701 N. Congress Avenue, Austin, Texas

SCHEDULE AND AGENDAS

Committees and Board
State Board of Education, Austin, Texas

<table>
<tr><td align="center">**Meeting Times**
June 29-July 2, 2020</td></tr>
<tr><td>

Monday, June 29, 2020

9:00 a.m.   **Committee of the Full Board (Virtual Meeting)**

Tuesday, June 30, 2020

9:00 a.m.   **Committee of the Full Board (Room 1-104)**

Wednesday, July 1, 2020

9:00 a.m.   **Committee on Instruction (Virtual Meeting)**

9:00 a.m.   **Committee on School Finance/Permanent School Fund (Virtual Mtg)**

9:00 a.m.   **Committee on School Initiatives (Virtual Meeting)**

Thursday, July 2, 2020

9:00 a.m.   **General Meeting (Room 1-104)**

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If the Committee of the Full Board does not complete its agenda Monday, it will resume its meeting on Tuesday, Wednesday, or Thursday. If the Committee of the Full Board does not complete its agenda Tuesday, it will resume its meeting virtually on Wednesday, or in Room 1-104 on Thursday. If the Committee on Instruction does not complete its agenda Wednesday, it will resume its meeting in Room 1-104 on Thursday. If the Committee on School Finance/Permanent School Fund does not complete its agenda Wednesday, it will resume its meeting in Room 1-104 on Thursday. If the Committee on School Initiatives does not complete its agenda Wednesday, it will resume its meeting in Room 1-104 on Thursday.

NOTE: The chair may permit the board to take up and discuss any of the discussion items on a committee agenda, including hearing any invited presentations to a committee, based upon a recommendation from the committee or inability of the committee to complete its agenda on a preceding day.

The SBOE or a committee of the SBOE may conduct a closed meeting on any agenda item in accordance with Texas Open Meetings Act, Chapter 551, Subchapters D and E. Before any closed meeting is convened, the presiding officer will publicly identify the section or sections of the Act authorizing the closed meeting. All final votes, actions, or decisions will be taken in open meeting.

Agenda is online at https://tea.texas.gov/sboe/agenda/ on the Texas Education Agency website. The posted information contains links to board action items including rule items and rule text, and selected discussion items. Public comments on proposed rules may be submitted electronically. All agenda items and rule text are subject to change at any time prior to each board meeting. To the extent possible, copies of changes made after the agenda and the schedule are published will be available at the board meeting.

MONDAY

June 29, 2020

9 a.m.

<u>**COMMITTEE OF THE FULL BOARD – Virtual Meeting**</u>
Public testimony – Individual testimony will be taken at the time the related item comes up for committee discussion or action. The procedures for registering and taking public testimony at State Board of Education committee meetings and general board meetings are provided at https://tea.texas.gov/about-tea/leadership/state-board-of-education/sboe-meetings/sboe-operating-rules-amended-9-13-19 or in the information section of the agenda.

1. **Public Hearing on Proposed Revisions to 19 TAC Chapter 116, <u>Texas Essential Knowledge and Skills for Physical Education</u>** (Board agenda page I-1)	**COMMITTEE – DISCUSSION** **SBOE – NO ACTION**

A public hearing before the State Board of Education (SBOE) is scheduled for Monday, June 29, 2020. Testimony will be presented virtually regarding proposed revisions to 19 Texas Administrative Code (TAC) Chapter 116, <u>Texas Essential Knowledge and Skills for Physical Education</u>, Subchapter A, <u>Elementary</u>; Subchapter B, <u>Middle School</u>; and Subchapter C, <u>High School</u>. Due to the anticipated volume of testimony, testimony will be limited to two minutes per person. Statutory authority for this item is the Texas Education Code (TEC), §§7.102(c)(4), 28.002(a) and (c), and 28.025(a).

2. **Public Hearing on Proposed Revisions to 19 TAC Chapter 115, <u>Texas Essential Knowledge and Skills for Health Education</u>** (Board agenda page I-3)	**COMMITTEE – DISCUSSION** **SBOE – NO ACTION**

A public hearing before the State Board of Education (SBOE) is scheduled for Monday, June 29, 2020. Testimony will be presented virtually regarding proposed revisions to 19 Texas Administrative Code (TAC) Chapter 115, <u>Texas Essential Knowledge and Skills for Health Education</u>, Subchapter A, <u>Elementary</u>; Subchapter B, <u>Middle School</u>; and Subchapter C, <u>High School</u>. Due to the anticipated volume of testimony, testimony will be limited to two minutes per person. Statutory authority for this item is the Texas Education Code (TEC), §§7.102(c)(4), 28.002(a) and (c), and 28.025(a).

COMMITTEE OF THE FULL BOARD (continued)

3. **Discussion of Proposed Revisions to 19 TAC Chapter 116, <u>Texas Essential Knowledge and Skills for Physical Education</u>**
   (Board agenda page I-5)

   This item provides an opportunity for the committee to discuss proposed revisions to 19 Texas Administrative Code (TAC) Chapter 116, <u>Texas Essential Knowledge and Skills for Physical Education</u>, Subchapter A, <u>Elementary</u>; Subchapter B, <u>Middle School</u>; and Subchapter C, <u>High School</u>. The proposed revisions would update the standards to reflect current physical education research and best practices and to align with changes to requirements in state statute. Statutory authority for this item is Texas Education Code (TEC), §§7.102(c)(4), 28.002(a), (c), and (d), and 28.025(a).

   COMMITTEE – DISCUSSION
   SBOE – NO ACTION

4. **Discussion of Proposed Revisions to 19 TAC Chapter 115, <u>Texas Essential Knowledge and Skills for Health Education</u>**
   (Board agenda page I-7)

   This item provides an opportunity for the committee to discuss proposed revisions to 19 Texas Administrative Code (TAC) Chapter 115, <u>Texas Essential Knowledge and Skills for Health Education</u>, Subchapter A, <u>Elementary</u>; Subchapter B, <u>Middle School</u>; and Subchapter C, <u>High School</u>. The proposed revisions would update the standards to reflect current health education research and best practices and to align with changes to requirements in state statute. Statutory authority for this item is the Texas Education Code (TEC), §§7.102(c)(4), 28.002(a), (c), (r), and (s), and 28.025(a).

   COMMITTEE – DISCUSSION
   SBOE – NO ACTION

TUESDAY
June 30, 2020

9:00 a.m.

COMMITTEE OF THE FULL BOARD – Room 1-104
Public testimony – Individual testimony will be taken at the time the related item comes up for committee discussion or action. The procedures for registering and taking public testimony at State Board of Education committee meetings and general board meetings are provided at https://tea.texas.gov/about-tea/leadership/state-board-of-education/sboe-meetings/sboe-operating-rules-amended-9-13-19 or in the information section of the agenda.

1.	**Commissioner's Comments** **(Board agenda page I-9)**	**COMMITTEE - DISCUSSION** **SBOE - NO ACTION**

This item provides an opportunity for the board to be briefed on current agenda items, agency operations, policy implementation, and public education-related legislation.

2.	**Ratification of *Proclamation 2021* Deadline Extension for Publishers Affected by COVID-19** **(Board agenda page I-10)**	**COMMITTEE - ACTION** **SBOE - CONSENT**

The State Board of Education issued *Proclamation 2021* in June 2019. This item gives the board the opportunity to ratify a deadline extension for publishers unable to meet the published deadline for providing pre-adoption samples, final correlations to the Texas Prekindergarten Guidelines, *Certification of Editorial Review*, *Affidavit of Authorship or Contribution*, and *Report on Interoperability and Ease of Use* due to closures and business disruptions related to COVID-19. The published April 6, 2020, deadline was extended to April 20, 2020 for submitting deliverables to the Texas Education Agency. In response to requests from the field, the deadline for providing pre-adoption samples and final correlations to the education service centers was extended to May 6, 2020. Statutory authority for this action is the Texas Education Code (TEC), §31.022.

COMMITTEE OF THE FULL BOARD (continued)

3. **Review and Adoption of the Long-Term Strategic Asset Allocation Plan of the Permanent School Fund of the State Board of Education and the Permanent School Fund Liquid Account**
   (Board agenda page I-11)

   This item provides an opportunity for the board to review and adopt the long-term strategic asset allocation plan of the Permanent School Fund of the State Board of Education (SBOE) and the Permanent School Fund (PSF) Liquid Account. Statutory authority for this action is the Texas Constitution, Article VII, §2 and §5 and 19 Texas Administrative Code (TAC) Chapter 33.

   COMMITTEES - ACTION
   SBOE - CONSENT

4. **Review of the Report on Permanent School Fund Percentage Distribution Rates Under Consideration for Fiscal Years 2022 and 2023**
   (Board agenda page I-12)

   This item provides an opportunity for the board to evaluate and approve the report on Permanent School Fund (PSF) percentage distribution rates under consideration for fiscal years 2022 and 2023. The board will consider various factors associated with the distribution rate such as expected returns, inflation, and student growth. Additionally, this item provides the opportunity for the board to discuss anticipated instructional material needs for the 2022-2023 biennium. Statutory authority for this action is the Texas Constitution, Article VII, §2 and §5 and 19 Texas Administrative Code (TAC) Chapter 33.

   COMMITTEES - ACTION
   SBOE - CONSENT

5. **Proposed New 19 TAC Chapter 61, <u>School Districts,</u> Subchapter B, <u>Special Purpose School Districts,</u> §61.101, <u>Applicability of State Law for Special Purpose School Districts</u>**
   (First Reading and Filing Authorization)
   (Board agenda page I-13)

   This item presents for first reading and filing authorization proposed new 19 Texas Administrative Code (TAC) Chapter 61, <u>School Districts</u>, Subchapter B, <u>Special Purpose School Districts</u>, §61.101, <u>Applicability of State Law for Special Purpose School Districts</u>, to identify provisions of the Texas Education Code (TEC) that are not applicable to the special-purpose school districts operated by Texas Tech University (TTU) and The University of Texas at Austin (UT Austin).Statutory authority for this action is the Texas Education Code (TEC), §11.351.

   COMMITTEE - ACTION
   SBOE - ACTION

COMMITTEE OF THE FULL BOARD (continued)

6. **Discussion of Proposed Revisions to 19 TAC Chapter 112, <u>Texas Essential Knowledge and Skills for Science</u>**
(Board agenda page I-16)

This item provides an opportunity for the committee to discuss proposed revisions to 19 Texas Administrative Code (TAC) Chapter 112, <u>Texas Essential Knowledge and Skills for Science</u>, Subchapter A, <u>Elementary</u>; Subchapter B, <u>Middle School</u>; and Subchapter C, <u>High School</u>. The proposed revisions would update the standards to ensure they remain current. Statutory authority for this item is the Texas Education Code (TEC), §§7.102(c)(4), 28.002(a), (c), (j), and (n), and 28.025(a).

COMMITTEE – DISCUSSION
SBOE – NO ACTION

7. **Ethics Training**
(Board agenda page I-18)

This item will provide State Board of Education (SBOE) members with a discussion of the ethics statutes and rules that apply to SBOE members. Statutory authority for this item is the Texas Education Code (TEC), §43.0031 and 19 Texas Administrative Code (TAC), §33.5(s).

COMMITTEE - DISCUSSION
SBOE - NO ACTION

8. **Update on Texas Essential Knowledge and Skills (TEKS) Review**
(Board agenda page I-39)

This item provides the opportunity for staff to present an update on the review of the Texas Essential Knowledge and Skills (TEKS) and the English Language Proficiency Standards (ELPS). Statutory authority for this item is the Texas Education Code (TEC), §§7.102(c)(4), 28.002(a) and (c), and 28.025(a).

COMMITTEE – DISCUSSION
SBOE – NO ACTION

COMMITTEE OF THE FULL BOARD (continued)

9. **Discussion of Pending Litigation**   COMMITTEE - DISCUSSION
    (Board agenda page I-41)   SBOE – NO ACTION

The State Board of Education may enter executive session in accordance with the Texas Government Code, §551.071(1)(A), to discuss pending and contemplated litigation with the general counsel, legal staff, and, if necessary, attorney(s) from the Attorney General's Office. The Committee of the Full Board will meet in Room 1-103 to discuss this item.

Cases to be discussed may include:

Tribune Company, No. 08-13141*; The Official Committee of Unsecured Creditors of Tribune Company v. Fitzsimmons, Adv. Pro.* No. 10-54010 *(Bankr. D. Del);*

Deutsche Bank v Bank of America, No. 3:11-CV-01175-F *(N. D. Tex., Dallas Div.) and Deutsche Bank v. Employees Retirement Fund of the City of Dallas,* No. 3:11-CV-1167-F*; (N. D. Tex. Dallas Div.) CONSOLIDATED in: In re: Tribune Company Fraudulent Conveyance Litigation;* No. 11-MD-2296 *Consolidated Multidistrict Action (S.D.N.Y.);* and

any other litigation arising after the date of posting or reasonably contemplated as of the date of the board meeting.

WEDNESDAY
July 1, 2020

9 a.m.

<u>**COMMITTEE ON INSTRUCTION – Virtual Meeting**</u>
Members: Sue Melton-Malone, chair; Pam Little, vice chair; Aicha Davis; Georgina C. Pérez; Marty Rowley. A quorum of the State Board of Education may attend the committee meeting and discuss items on the committee agenda.
Public testimony – Individual testimony will be taken at the time the related item comes up for committee discussion or action. The procedures for registering and taking public testimony at State Board of Education committee meetings and general board meetings are provided at https://tea.texas.gov/about-tea/leadership/state-board-of-education/sboe-meetings/sboe-operating-rules-amended-9-13-19 or in the information section of the agenda.

1. **Proposed Amendments to 19 TAC Chapter 74, <u>Curriculum Requirements,</u> Subchapter A, <u>Required Curriculum</u>, §74.1, <u>Essential Knowledge and Skills</u>, and §74.3, <u>Description of a Required Secondary Curriculum</u> (First Reading and Filing Authorization)** **(Board agenda page II-I)**

   COMMITTEE – ACTION
   SBOE – ACTION

   This item presents for first reading and filing authorization proposed amendments to 19 Texas Administrative Code (TAC) Chapter 74, <u>Curriculum Requirements</u>, Subchapter A, <u>Required Curriculum</u>, §74.1, <u>Essential Knowledge and Skills</u>, and §74.3, <u>Description of a Required Secondary Curriculum</u>. The proposed amendments would update the rules to align with recent legislation and with changes to the technology applications and career and technical education (CTE) Texas Essential Knowledge and Skills (TEKS).Statutory authority for this action is the Texas Education Code (TEC), §§7.102(c)(4), and 28.002(a), as amended by Senate Bill (SB) 11 and House Bill (HB) 18, 86th Texas Legislature, 2019.

COMMITTEE ON INSTRUCTION (continued)

2. **Proposed New 19 TAC Chapter 120, <u>Other Essential</u>
    <u>Knowledge and Skills</u>, Subchapter A, <u>Character Traits</u>
    (First Reading and Filing Authorization)**
    (Board agenda page II-8)

          COMMITTEE – ACTION
          SBOE - ACTION

    This item presents for first reading and filing authorization
    proposed new 19 Texas Administrative Code (TAC)
    Chapter 120, <u>Other Essential Knowledge and Skills</u>,
    Subchapter A, <u>Character Traits</u>. The proposed new
    subchapter would add new Texas Essential Knowledge and
    Skills (TEKS) for positive character traits for Kindergarten-
    Grade 12 in accordance with House Bill (HB) 1026, 86th
    Texas Legislature, 2019. Statutory authority for this action
    is the Texas Education Code (TEC), §§7.102(c)(4),
    28.002(a) and (c), and 29.906, as amended by HB 1026,
    86th Texas Legislature, 2019.

3. **Proposed Approval of Innovative Courses**
    (Board agenda page II-16)

          COMMITTEE – ACTION
          SBOE - ACTION

    This item recommends approval of innovative courses that
    do not fall within any of the subject areas of the foundation
    or enrichment curriculum. Statutory authority for this action
    is the Texas Education Code (TEC), §28.002(f).

4. **Update Regarding Origo Education**
    (Board agenda page II-20)

          COMMITTEE – ACTION
          SBOE - ACTION

    This item provides the opportunity for the committee to
    receive an update regarding Origo Education and consider
    further action including possible amendments to
    administrative rules in 19 TAC Chapter 66 if necessary.
    Statutory authority for this action is the Texas Education
    Code (TEC), §§31.003, 31.022, and 31.151.

WEDNESDAY
July 1, 2020

9 a.m.

COMMITTEE ON SCHOOL FINANCE/PERMANENT SCHOOL FUND – Virtual Meeting
Members: Tom Maynard, chair; Lawrence A. Allen, Jr., vice chair; Donna Bahorich; Patricia Hardy; Ken Mercer. A quorum of the State Board of Education may attend the committee meeting and discuss items on the committee agenda. A quorum of the Committee of Investment Advisors to the Permanent School Fund may attend the committee meeting and discuss items on the committee agenda.
Public testimony – Individual testimony will be taken at the time the related item comes up for committee discussion or action. The procedures for registering and taking public testimony at State Board of Education committee meetings and general board meetings are provided at
https://tea.texas.gov/about-tea/leadership/state-board-of-education/sboe-meetings/sboe-operating-rules-amended-9-13-19 or in the information section of the agenda.

1.	**Per Capita Apportionment Rate for the 2019-2020 School Year** **(Board agenda page III-1)**	**COMMITTEE – DISCUSSION** **SBOE – NO ACTION**

A per capita apportionment rate for each school year is set based on an estimate of the amount available for expenditure from the Available School Fund. A preliminary 2019–2020 per capita apportionment rate of $ $259.207 was set in September 2019. A final per capita apportionment rate is set by the commissioner of education based on actual funds available for expenditure. Agency staff will present the final rate for the 2019–2020 school year at the June meeting of the Committee on School Finance/ Permanent School Fund. Statutory authority for this item is the Texas Education Code (TEC), §48.004, §48.251(c), and §43.001(b).

COMMITTEE ON SCHOOL FINANCE/PERMANENT SCHOOL FUND (continued)

2. **Proposed Amendment to 19 TAC Chapter 109, Budgeting, Accounting, and Auditing, Subchapter B, Texas Education Agency Audit Functions, §109.23, School District Independent Audits and Agreed-Upon Procedures**
(Second Reading and Final Adoption)
(Board agenda page III-3)

   This item presents for second reading and final adoption a proposed amendment to 19 Texas Administrative Code (TAC) Chapter 109, Budgeting, Accounting, and Auditing, Subchapter B, Texas Education Agency Audit Functions, §109.23, School District Independent Audits and Agreed-Upon Procedures. The proposed amendment would reflect changes made by House Bill (HB) 1520, 86th Texas Legislature, 2019, that eliminated the requirement for out-of-state certified public accountancy (CPA) firms to be licensed in Texas. No changes are recommended since approved for first reading. Statutory authority for this action is the Texas Education Code, §§7.102(c)(32), 44.001, 44.007, 44.008, and 44.010.

   COMMITTEE - ACTION
   SBOE - ACTION

3. **Review of Permanent School Fund Securities Transactions and the Investment Portfolio**
(Board agenda page III-9)

   Investment staff will report on the transactions executed during the months of March and April 2020 in the investment portfolio of the Texas Permanent School Fund. Statutory authority for this item is the Texas Constitution, Article VII, §2 and §5, and 19 Texas Administrative Code (TAC) Chapter 33.

   COMMITTEE – DISCUSSION
   SBOE – NO ACTION

4. **Ratification of the Purchases and Sales of the Investment Portfolio of the Permanent School Fund for the Months of March and April 2020**
(Board agenda page III-10)

   This item provides an opportunity for the committee and board to consider approval of the purchases and sales of investments executed in the portfolio of the Permanent School Fund for the months of March and April 2020. Statutory authority for this action is the Texas Constitution, Article VII, §2 and §5, and 19 Texas Administrative Code (TAC) Chapter 33.

   COMMITTEE – ACTION
   SBOE – CONSENT

COMMITTEE ON SCHOOL FINANCE/PERMANENT SCHOOL FUND (continued)

5. **Report by the State Auditor's Office on the Audit of the Permanent School Fund's Financial Statements and Certification of the Bond Guarantee Program for the Fiscal Year Ending August 31, 2019**
(Board agenda page III-11)

    COMMITTEE – DISCUSSION
    SBOE – NO ACTION

    This item provides an opportunity for representatives of the State Auditor's Office (SAO) to make a presentation regarding the Audit of the Permanent School Fund's Financial Statements and certification of the Bond Guarantee Program for the Fiscal Year Ending August 31, 2019. Statutory authority for this item is the Texas Constitution, Article VII, §2 and §5, and Texas Education Code, (TEC) §45.053(b).

6. **Adoption of an Annual Report on the Status of the Bond Guarantee Program**
(Board agenda page III-12)

    COMMITTEE – ACTION
    SBOE – CONSENT

    This item provides an opportunity for the committee and board to adopt an annual report on the status of the Bond Guarantee Program. Statutory authority for this action is the Texas Constitution, Article VII, §2 and §5, and Texas Education Code, (TEC) §45.053(c).

7. **Review of the Bond Guarantee Program Charter Capacity**
(Board agenda page III-13)

    COMMITTEE – ACTION
    SBOE – CONSENT

    This item provides an opportunity for the committee and board to receive a presentation on bond guarantee program's charter capacity. Statutory authority for this action is the Texas Constitution, Article VII, §2 and §5, Texas Education Code, (TEC) §45.0532; and 19 Texas Administrative Code (TAC) Chapter 33.

COMMITTEE ON SCHOOL FINANCE/PERMANENT SCHOOL FUND (continued)

8. **Approval of the Selection of a Legal Counsel for the Bond Guarantee Program as outlined in RFQ 701-20-006 for the Texas Permanent School Fund and Authorization for Contract Execution by the Commissioner of Education**
    (Board agenda page III-14)

    COMMITTEE – ACTION
    SBOE – CONSENT

    This item provides the opportunity for the committee and board to approve the selection of a legal counsel for the Bond Guarantee Program (BGP) of the Texas Permanent School Fund (PSF) as outlined in Request for Qualifications (RFQ) 701-20-006 and authorization for contract execution by the Commissioner of Education. Statutory authority for this action is the Texas Constitution, Article VII, §2 and §5; and 19 Texas Administrative Code (TAC) Chapter 33.

9. **First Quarter 2020 Permanent School Fund Performance Report**
    (Board agenda page III-15)

    COMMITTEE – DISCUSSION
    SBOE – NO ACTION

    The performance measurement consultant to the Permanent School Fund, BNY Mellon Asset Servicing, will report on the investment performance during the first calendar quarter 2020 and cumulative investment performance of the various portfolios of the Fund. This item will allow the committee to discuss in depth, various issues related to portfolio management such as risk characteristics of portfolios and portfolio attributes. Statutory authority for this item is the Texas Constitution, Article VII, §2 and §5, and 19 Texas Administrative Code (TAC) Chapter 33.

10. **Review and Adoption of the Long-Term Strategic Asset Allocation Plan of the Permanent School Fund of the State Board of Education and the Permanent School Fund Liquid Account**
    (Board agenda page III-16)

    COMMITTEE - ACTION
    SBOE - CONSENT

    This item provides an opportunity for the board to review and adopt the long-term strategic asset allocation plan of the Permanent School Fund of the State Board of Education (SBOE) and the Permanent School Fund (PSF) Liquid Account. Statutory authority for this action is the Texas Constitution, Article VII, §2 and §5; and 19 Texas Administrative Code, Chapter 33.

COMMITTEE ON SCHOOL FINANCE/PERMANENT SCHOOL FUND (continued)

11. **Review of the Report on Permanent School Fund Percentage Distribution Rates Under Consideration for Fiscal Years 2022 and 2023**
(Board agenda page III-17)

    COMMITTEES - ACTION
    SBOE - CONSENT

    This item provides an opportunity for the board to evaluate and approve the report on Permanent School Fund (PSF) percentage distribution rates under consideration for fiscal years 2022 and 2023. The board will consider various factors associated with the distribution rate such as expected returns, inflation, and student growth. Additionally, this item provides the opportunity for the board to discuss anticipated instructional materials needs for the 2022-2023 biennium. Statutory authority for this action is the Texas Constitution, Article VII, §2 and §5; and 19 Texas Administrative Code, Chapter 33.

12. **Report of the Permanent School Fund Executive Administrator and Chief Investment Officer**
(Board agenda page III-18)

    COMMITTEE – DISCUSSION
    SBOE – NO ACTION

    The Permanent School Fund (PSF) executive administrator will report to the committee on matters relating to the management of the PSF and the Charter District Reserve Fund. The report may present information on historical and current status of Fund holdings, current and proposed investment policies and procedures, and historical and current Fund performance and compliance. The administrator may update the board on the bond guarantee program, the status of requests for proposal or for qualifications and current contracts for services and other administrative activities undertaken on behalf of the board. The administrator may provide an update on the PSF distribution or on the effect of legislation impacting the PSF. The administrator may provide an analysis of current and future investment market conditions, focusing upon the impact on the holdings of the PSF. Statutory authority for this item is Texas Constitution, Article VII, §2 and §5; and 19 Texas Administrative Code (TAC) Chapter 33.

**WEDNESDAY
July 1, 2020**

9 a.m.

<u>**COMMITTEE ON SCHOOL INITIATIVES – Virtual Meeting**</u>
Members: Barbara Cargill, chair; Marisa B. Perez-Diaz, vice chair; Ruben Cortez, Jr; Keven Ellis; Matt Robinson. A quorum of the State Board of Education may attend the committee meeting and discuss items on the committee agenda.
Public testimony – Individual testimony will be taken at the time the related item comes up for Committee discussion or action. The procedures for registering and taking public testimony at State Board of Education committee meetings and general board meetings are provided at
https://tea.texas.gov/about-tea/leadership/state-board-of-education/sboe-meetings/sboe-operating-rules-amended-9-13-19 or in the information section of the agenda.

1.	**Review of Proposed Revisions to 19 TAC Chapter 232, <u>General Certification Provisions</u>** **(Board agenda page IV-1)**	COMMITTEE – ACTION SBOE – ACTION

This item provides the State Board of Education (SBOE) an opportunity to review the State Board for Educator Certification (SBEC) rule actions that would propose revisions to 19 Texas Administrative Code (TAC) Chapter 232, <u>General Certification Provisions</u>. The proposed revisions would implement the statutory requirements of House Bills (HBs) 18 and 403 and Senate Bills (SBs) 11 and 37, 86th Texas Legislature, 2019. The proposed revisions would provide continuing professional education (CPE) instruction regarding mental health and substance abuse training; training requirements for superintendents regarding sexual abuse and human trafficking; and the removal of student loan default as grounds to deny the renewal of a certificate. Technical changes would also clarify processes and reorganize current provisions to improve readability and align citations. Statutory authority for 19 TAC Chapter 232 is the Texas Education Code (TEC), §§21.003(a); 21.0031(f); 21.031; 21.041(b)(1)–(4) and (7)–(9); 21.054, as amended by SB 11 and HBs 18, 403, and 2424, 86th Texas Legislature, 2019; 21.0541; and 21.0543; and Texas Occupations Code, §55.002 and §55.003, for Subchapter A; and the TEC, §21.041(c) and §22.0831(f), for Subchapter B.

COMMITTEE ON SCHOOL INITIATIVES (continued)

2. **Recommendation for Appointment to the Lackland Independent School District Board of Trustees**
(Board agenda page IV-27)

<div align="right">COMMITTEE - ACTION
SBOE - CONSENT</div>

This item provides an opportunity for board consideration of one reappointment to the board of trustees of the Lackland Independent School District (ISD). The reappointment is necessary due to the expiration of a term of office. Statutory authority for this action is the Texas Education Code (TEC), §11.352, and 19 Texas Administrative Code (TAC) §61.2.

Information Materials

1. **State Board of Education Operating Rules, September 13, 2019**
Public testimony information begins on page V-8.
(Board agenda page V-1)

2. **Current Status of the Permanent School Fund**
(Board agenda page V-24)

3. **2017-2021 Rule Review Plan for State Board of Education Rules**
(Board agenda page V-25)

This item outlines the rule review plan for State Board of Education (SBOE) rules during the period of September 2017 through August 2021. Texas Government Code, §2001.039, requires an ongoing four-year rule review of existing state agency rules, including SBOE rules. The rule review requirement is designed to ensure that the reason for initially adopting or readopting a rule continues to exist.

4. **Review of Annual Audit Plan of the Division of Financial Compliance for 2020-2021 School Year**
(Board agenda page V-32)

This item covers the annual audit plan of the Division of Financial Compliance for the 2020-2021 school year for field and independent financial reviews as specifically described in 19 TAC Chapter 109, Texas Education Agency Audit Functions, §109.21, Annual Audit Plan.

<u>**OFFICIAL AGENDA**</u>

STATE BOARD OF EDUCATION
AUSTIN, TEXAS

July 2, 2020
9:00 a.m.

William B. Travis Building, Room 1-104
1701 N. Congress Avenue

Invocation

Pledge of Allegiance

Roll Call

Approval of Minutes

State Board of Education, April 17, 2020

Public testimony – Individual testimony will be taken at the time the related item comes up for Committee discussion or action. The procedures for registering and taking public testimony at State Board of Education committee meetings and general board meetings are provided at https://tea.texas.gov/about-tea/leadership/state-board-education/sboe-meetings/sboe-operating-rules-amended-9-13-19 or in the information section of the agenda.

1.　　**Approval of Consent Agenda**

　　　　Any agenda item may be placed on the Consent Agenda by any State Board of Education committee.

　　　　(Agenda Exhibit) ....　21

<u>**COMMITTEE OF THE FULL BOARD**</u>

2.　　**Proposed New 19 TAC Chapter 61, <u>School Districts</u>, Subchapter B, <u>Special Purpose School Districts, §61.101, Applicability of State Law for Special Purpose School Districts</u> (First Reading and Filing Authorization)**

　　　　This item presents for first reading and filing authorization proposed new 19 Texas Administrative Code (TAC) Chapter 61, <u>School Districts</u>, Subchapter B, <u>Special Purpose School Districts</u>, §61.101, <u>Applicability of State Law for Special Purpose School Districts</u>, to identify provisions of the Texas Education Code (TEC) that are not applicable to the special-purpose school districts operated by Texas Tech University (TTU) and The University of Texas at Austin (UT Austin).Statutory authority for this action is the Texas Education Code (TEC), §11.351.

　　　　(Agenda Exhibit) ....　I-13

COMMITTEE ON INSTRUCTION

3. **Proposed Amendments to 19 TAC Chapter 74, <u>Curriculum Requirements,</u> Subchapter A, <u>Required Curriculum</u>, §74.1, <u>Essential Knowledge and Skills</u>, and §74.3, <u>Description of a Required Secondary Curriculum</u>**
(First Reading and Filing Authorization)

This item presents for first reading and filing authorization proposed amendments to 19 Texas Administrative Code (TAC) Chapter 74, <u>Curriculum Requirements</u>, Subchapter A, <u>Required Curriculum</u>, §74.1, <u>Essential Knowledge and Skills</u>, and §74.3, <u>Description of a Required Secondary Curriculum</u>. The proposed amendments would update the rules to align with recent legislation and with changes to the technology applications and career and technical education (CTE) Texas Essential Knowledge and Skills (TEKS).Statutory authority for this action is the Texas Education Code (TEC), §§7.102(c)(4), and 28.002(a), as amended by Senate Bill (SB) 11 and House Bill (HB) 18, 86th Texas Legislature, 2019.

4. **Proposed New 19 TAC Chapter 120, <u>Other Essential Knowledge and Skills</u>, Subchapter A, <u>Character Traits</u>**
(First Reading and Filing Authorization)

This item presents for first reading and filing authorization proposed new 19 Texas Administrative Code (TAC) Chapter 120, <u>Other Essential Knowledge and Skills</u>, Subchapter A, <u>Character Traits</u>. The proposed new subchapter would add new Texas Essential Knowledge and Skills (TEKS) for positive character traits for Kindergarten-Grade 12 in accordance with House Bill (HB) 1026, 86th Texas Legislature, 2019. Statutory authority for this action is the Texas Education Code (TEC), §§7.102(c)(4), 28.002(a) and (c), and 29.906, as amended by HB 1026, 86th Texas Legislature, 2019.

5. **Proposed Approval of Innovative Courses**

This item recommends approval of innovative courses that do not fall within any of the subject areas of the foundation or enrichment curriculum. Statutory authority for this action is the Texas Education Code (TEC), §28.002(f).

6. **Update Regarding Origo Education**

This item provides the opportunity for the committee to receive an update regarding Origo Education and consider further action including possible amendments to administrative rules in 19 TAC Chapter 66 if necessary. Statutory authority for this action is the Texas Education Code (TEC), §§31.003, 31.022, and 31.151.

COMMITTEE ON SCHOOL FINANCE/PERMANENT SCHOOL FUND

7.   Proposed Amendment to 19 TAC Chapter 109, <u>Budgeting, Accounting, and Auditing</u>, Subchapter B, <u>Texas Education Agency Audit Functions</u>, §109.23, <u>School District Independent Audits and Agreed-Upon Procedures</u>
(Second Reading and Final Adoption)

This item presents for second reading and final adoption a proposed amendment to 19 Texas Administrative Code (TAC) Chapter 109, <u>Budgeting, Accounting, and Auditing</u>, Subchapter B, <u>Texas Education Agency Audit Functions</u>, §109.23, <u>School District Independent Audits and Agreed-Upon Procedures</u>. The proposed amendment would reflect changes made by House Bill (HB) 1520, 86th Texas Legislature, 2019, that eliminated the requirement for out-of-state certified public accountancy (CPA) firms to be licensed in Texas. No changes are recommended since approved for first reading. Statutory authority for this action is the Texas Education Code, §§7.102(c)(32), 44.001, 44.007, 44.008, and 44.010.

(Agenda Exhibit) III-3

COMMITTEE ON SCHOOL INITIATIVES

8.   Review of Proposed Revisions to 19 TAC Chapter 232, <u>General Certification Provisions</u>

This item provides the State Board of Education (SBOE) an opportunity to review the State Board for Educator Certification (SBEC) rule actions that would propose revisions to 19 Texas Administrative Code (TAC) Chapter 232, <u>General Certification Provisions</u>. The proposed revisions would implement the statutory requirements of House Bills (HBs) 18 and 403 and Senate Bills (SBs) 11 and 37, 86th Texas Legislature, 2019. The proposed revisions would provide continuing professional education (CPE) instruction regarding mental health and substance abuse training; training requirements for superintendents regarding sexual abuse and human trafficking; and the removal of student loan default as grounds to deny the renewal of a certificate. Technical changes would also clarify processes and reorganize current provisions to improve readability and align citations. Statutory authority for 19 TAC Chapter 232 is the Texas Education Code (TEC), §§21.003(a); 21.0031(f); 21.031; 21.041(b)(1)–(4) and (7)–(9); 21.054, as amended by SB 11 and HBs 18, 403, and 2424, 86th Texas Legislature, 2019; 21.0541; and 21.0543; and Texas Occupations Code, §55.002 and §55.003, for Subchapter A; and the TEC, §21.041(c) and §22.0831(f), for Subchapter B.

(Agenda Exhibit) IV-1

REPORTS OF COMMITTEES REGARDING AGENDA ITEMS POSTED FOR DISCUSSION ON COMMITTEE AGENDAS
Committee chairs may provide an update about discussion items considered during the current meeting by any standing committee or ad hoc committee.

REPORTS OF OTHER STATE BOARD OF EDUCATION MEMBERS REGARDING AGENDA ITEMS AND EDUCATIONAL ACTIVITIES AND CONCERNS IN INDIVIDUAL DISTRICTS
Members of the State Board of Education may present information regarding agenda items or other relevant information about public education.

Information Materials

1. **State Board of Education Operating Rules, September 13, 2019**
    Public testimony information begins on page V-8.
    (Board agenda page V-1)

2. **Current Status of the Permanent School Fund**
    (Board agenda page V-24)

3. **2017-2021 Rule Review Plan for State Board of Education Rules**
    (Board agenda page V-25)

    This item outlines the rule review plan for State Board of Education (SBOE) rules during the period of September 2017 through August 2021. Texas Government Code, §2001.039, requires an ongoing four-year rule review of existing state agency rules, including SBOE rules. The rule review requirement is designed to ensure that the reason for initially adopting or readopting a rule continues to exist.

4. **Review of Annual Audit Plan of the Division of Financial Compliance for 2020-2021 School Year**
    (Board agenda page V-32)

    This item covers the annual audit plan of the Division of Financial Compliance for the 2020-2021 school year for field and independent financial reviews as specifically described in 19 TAC Chapter 109, Texas Education Agency Audit Functions, §109.21, Annual Audit Plan.

CONSENT AGENDA
STATE BOARD OF EDUCATION
July 2, 2020

(1) **Ratification of *Proclamation 2021* Deadline Extension for Publishers Affected by COVID-19**

The State Board of Education issued *Proclamation 2021* in June 2019. This item gives the board the opportunity to ratify a deadline extension for publishers unable to meet the published deadline for providing pre-adoption samples, final correlations to the Texas Prekindergarten Guidelines, *Certification of Editorial Review*, *Affidavit of Authorship or Contribution*, and *Report on Interoperability and Ease of Use* due to closures and business disruptions related to COVID-19. The published April 6, 2020, deadline was extended to April 20, 2020 for submitting deliverables to the Texas Education Agency. In response to requests from the field, the deadline for providing pre-adoption samples and final correlations to the education service centers was extended to May 6, 2020. Statutory authority for this action is the Texas Education Code (TEC), §31.022.

(Agenda Exhibit) I-10

(2) **Review and Adoption of the Long-Term Strategic Asset Allocation Plan of the Permanent School Fund of the State Board of Education and the Permanent School Fund Liquid Account**

This item provides an opportunity for the board to review and adopt the long-term strategic asset allocation plan of the Permanent School Fund of the State Board of Education (SBOE) and the Permanent School Fund (PSF) Liquid Account. Statutory authority for this action is the Texas Constitution, Article VII, §2 and §5 and 19 Texas Administrative Code (TAC) Chapter 33.

(Agenda Exhibit) I-11

(3) **Review of the Report on Permanent School Fund Percentage Distribution Rates Under Consideration for Fiscal Years 2022 and 2023**

This item provides an opportunity for the board to evaluate and approve the report on Permanent School Fund (PSF) percentage distribution rates under consideration for fiscal years 2022 and 2023. The board will consider various factors associated with the distribution rate such as expected returns, inflation, and student growth. Additionally, this item provides the opportunity for the board to discuss anticipated instructional material needs for the 2022-2023 biennium. Statutory authority for this action is the Texas Constitution, Article VII, §2 and §5 and 19 Texas Administrative Code (TAC) Chapter 33.

(Agenda Exhibit) I-12

(4) **Ratification of the Purchases and Sales of the Investment Portfolio of the Permanent School Fund for the Months of March and April 2020**

This item provides an opportunity for the committee and board to consider approval of the purchases and sales of investments executed in the portfolio of the Permanent School Fund for the months of March and April 2020. Statutory authority for this action is the Texas Constitution, Article VII, §2 and §5, and 19 Texas Administrative Code (TAC) Chapter 33.

(Agenda Exhibit) III-10

(5) **Adoption of an Annual Report on the Status of the Bond Guarantee Program**

This item provides an opportunity for the committee and board to adopt an annual report on the status of the Bond Guarantee Program. Statutory authority for this action is the Texas Constitution, Article VII, §2 and §5, and Texas Education Code, (TEC) §45.053(c).

(Agenda Exhibit) III-12

(6) **Review of the Bond Guarantee Program Charter Capacity**

This item provides an opportunity for the committee and board to receive a presentation on bond guarantee program's charter capacity. Statutory authority for this action is the Texas Constitution, Article VII, §2 and §5, Texas Education Code, (TEC) §45.0532; and 19 Texas Administrative Code (TAC) Chapter 33.

(Agenda Exhibit) III-13

(7) **Approval of the Selection of a Legal Counsel for the Bond Guarantee Program as outlined in RFQ 701-20-006 for the Texas Permanent School Fund and Authorization for Contract Execution by the Commissioner of Education**

This item provides the opportunity for the committee and board to approve the selection of a legal counsel for the Bond Guarantee Program (BGP) of the Texas Permanent School Fund (PSF) as outlined in Request for Qualifications (RFQ) 701-20-006 and authorization for contract execution by the Commissioner of Education. Statutory authority for this action is the Texas Constitution, Article VII, §2 and §5; and 19 Texas Administrative Code (TAC) Chapter 33.

(Agenda Exhibit) III-14

(8) **Recommendation for Appointment to the Lackland Independent School District Board of Trustees**

This item provides an opportunity for board consideration of one reappointment to the board of trustees of the Lackland Independent School District (ISD). The reappointment is necessary due to the expiration of a term of office. Statutory authority for this action is the Texas Education Code (TEC), §11.352, and 19 Texas Administrative Code (TAC) §61.2.

(Agenda Exhibit) IV-27

COMMITTEE OF THE FULL BOARD

Public Hearing on Proposed Revisions to 19 TAC Chapter 116, <u>Texas Essential Knowledge and Skills for Physical Education</u>

COMMITTEE OF THE FULL BOARD: DISCUSSION
STATE BOARD OF EDUCATION: NO ACTION

SUMMARY: A public hearing before the State Board of Education (SBOE) is scheduled for Monday, June 29, 2020. Testimony will be presented virtually regarding proposed revisions to 19 Texas Administrative Code (TAC) Chapter 116, <u>Texas Essential Knowledge and</u> Skills for Physical Education, Subchapter A, <u>Elementary</u>; Subchapter B, <u>Middle School</u>; and Subchapter C, <u>High School</u>. Due to the anticipated volume of testimony, testimony will be limited to two minutes per person.

STATUTORY AUTHORITY: Texas Education Code (TEC), §§7.102(c)(4); 28.002(a), (c), and (d); and 28.025(a).

TEC, §7.102(c)(4), requires the SBOE to establish curriculum and graduation requirements.

TEC, §28.002(a), identifies the subjects of the required curriculum.

TEC, §28.002(c), requires the SBOE to by rule identify the essential knowledge and skills of each subject in the required curriculum that all students should be able to demonstrate and that will be used in evaluating instructional materials and addressed on the state assessment instruments.

TEC, §28.002(d), requires the SBOE by rule to adopt essential knowledge and skills for the physical education curriculum.

TEC, §28.025(a), requires the SBOE to by rule determine the curriculum requirements for the foundation high school graduation program that are consistent with the required curriculum under TEC, §28.002.

The full text of statutory citations can be found in the statutory authority section of this agenda.

BACKGROUND INFORMATION AND JUSTIFICATION: In accordance with statutory requirements that the SBOE by rule identify the essential knowledge and skills of each subject in the required curriculum, the SBOE follows a board-approved cycle to review and revise the essential knowledge and skills for each subject.

The review of the physical education Texas Essential Knowledge and Skills (TEKS) is taking place concurrently with the review of the health education TEKS. In March 2019, applications to serve on the physical education TEKS review work groups were posted on the Texas Education Agency (TEA) website. At the April 2019 meeting, SBOE members were asked to designate content advisors for the physical education TEKS review. In May 2019, TEA distributed a survey to collect information from educators regarding the review and revision of the physical education TEKS. TEA staff provided applications for the physical education review work groups to SBOE members on a monthly basis from June 2019 to May 2020.

In August 2019, content advisors met in a face-to-face meeting to develop consensus recommendations regarding revisions to the physical education TEKS to share with future work groups. At that time, the content advisors met with representatives from Work Group A to discuss the consensus recommendations. Work Group A convened in September 2019 to review survey results and recommend specific topics that should be included in the proposed framework developed by the content advisors. The work group was also charged with identifying where student expectations from the current TEKS would fit into the proposed framework. Work Group B was convened in October 2019 and was charged with identifying the grade levels where topics developed by Work Group A should be taught. Work Group C was convened in December 2019 to draft recommendations for student expectations for two of the six strands in the proposed framework. Work Group D was convened at the end of February 2020 to draft recommendations for the remaining strands. Work Group E was convened in for a face-to-face meeting in March 2020 and in subsequent virtual meetings in April-May 2020 to review the vertical alignment of the strands across all grade levels and to ensure horizontal alignment with the health education TEKS. In May 2020, content advisors were sent the draft recommendations for review and met virtually to develop consensus recommendations to be provided to the SBOE.

Discussion of proposed revisions to 19 TAC Chapter 116, <u>Texas Essential Knowledge and Skills for Physical Education</u>, Subchapter A, <u>Elementary</u>; Subchapter B, <u>Middle School</u>; and Subchapter C, <u>High School</u>, is presented as a separate item in this agenda.

Staff Members Responsible:
Monica Martinez, Associate Commissioner, Standards and Support Services
Shelly Ramos, Senior Director, Curriculum Standards and Student Support

Public Hearing on Proposed Revisions to 19 TAC Chapter 115, <u>Texas Essential Knowledge and Skills for Health Education</u>

June 29, 2020

COMMITTEE OF THE FULL BOARD: DISCUSSION
STATE BOARD OF EDUCATION: NO ACTION

SUMMARY: A public hearing before the State Board of Education (SBOE) is scheduled for Monday, June 29, 2020. Testimony will be presented virtually regarding proposed revisions to 19 Texas Administrative Code (TAC) Chapter 115, <u>Texas Essential Knowledge and Skills for Health Education</u>, Subchapter A, <u>Elementary</u>; Subchapter B, <u>Middle School</u>; and Subchapter C, <u>High School</u>. Due to the anticipated volume of testimony, testimony will be limited to two minutes per person.

STATUTORY AUTHORITY: Texas Education Code (TEC), §§7.102(c)(4); 28.002(a), (c), (r) and (s); and 28.025(a).

TEC, §7.102(c)(4), requires the SBOE to establish curriculum and graduation requirements.

TEC, §28.002(a), identifies the subjects of the required curriculum.

TEC, §28.002(c), requires the SBOE to by rule identify the essential knowledge and skills of each subject in the required curriculum that all students should be able to demonstrate and that will be used in evaluating instructional materials and addressed on the state assessment instruments.

TEC, §28.002(r), requires the SBOE by rule to adopt essential knowledge and skills for the health curriculum that address substance abuse.

TEC, §28.002(s), requires the SBOE by rule to adopt essential knowledge and skills for the health curriculum that address bullying.

TEC, §28.025(a), requires the SBOE to by rule determine the curriculum requirements for the foundation high school graduation program that are consistent with the required curriculum under the TEC, §28.002.

The full text of statutory citations can be found in the statutory authority section of this agenda.

BACKGROUND INFORMATION AND JUSTIFICATION: In accordance with statutory requirements that the SBOE by rule identify the essential knowledge and skills of each subject in the required curriculum, the SBOE follows a board-approved cycle to review and revise the essential knowledge and skills for each subject.

In preparation for the review and revision of the Texas Essential Knowledge and Skills (TEKS) for health education, the board in September 2017 requested that the commissioner of education convene a group of experts to develop a study to provide guidance for the development of revised health education TEKS. At that time, the SBOE also approved parameters for the recommendations of the commissioner's committee to include a framework for what the strands should be for Kindergarten-Grade 12, distinctions regarding grade levels and/or grade bands at which health concepts are most appropriately taught, and a

summary of all statutory requirements related to health education and suggestions regarding the most appropriate way to integrate those requirements into the framework. In 2018, Texas Education Agency (TEA) convened a group of experts to develop recommendations to address the SBOE's charge related to the health education TEKS. This health education advisory committee drafted a response to the SBOE's charge, and the response was submitted to the commissioner of education. Based on the response, the commissioner provided recommendations to the SBOE at the June 2019 meeting.

The review of the health education TEKS is taking place concurrently with the review of the physical education TEKS. In March 2019, applications to serve on the health education TEKS review work groups were posted on the TEA website. At the April 2019 meeting, SBOE members were asked to designate content advisors for the health education TEKS reviews. In May 2019, TEA distributed a survey to collect information from educators regarding the review and revision of the health education TEKS. TEA staff provided applications for the health education review work groups to SBOE members on a monthly basis from June 2019 to May 2020.

In August 2019, content advisors met in a face-to-face meeting to develop consensus recommendations regarding revisions to the health education TEKS to share with future work groups. At that time, the content advisors met with representatives from Work Group A to discuss the consensus recommendations. Work Group A convened in September 2019 to review survey results and recommend specific topics that should be included in the proposed framework. The work group was also charged with identifying where student expectations from the current TEKS would fit into the proposed framework. The work group completed recommendations for Kindergarten only. Work Group B was convened in October 2019 and was charged with identifying where student expectations would fit into the proposed framework for all other grade levels and identifying the grade levels where topics developed by Work Group A should be taught. Work Group C was convened in December 2019 and again in early February 2020 to draft recommendations for student expectations in three of the six strands in the proposed framework. Work Group D was convened at the end of February 2020 to draft recommendations for the remaining strands in the proposed framework. Work Group E was convened for a face-to-face meeting in March 2020 and in subsequent virtual meetings in April-May 2020 to review the vertical alignment of the strands across all grade levels, ensure horizontal alignment with the physical education TEKS, and make other recommendations to finalize the draft revisions. In May 2020, content advisors were sent the draft recommendations for review and met virtually to develop consensus recommendations to be provided to the SBOE.

Discussion of proposed revisions to 19 TAC Chapter 115, Texas Essential Knowledge and Skills for Health Education, Subchapter A, Elementary; Subchapter B, Middle School; and Subchapter C, High School, is presented as a separate item in this agenda.

Staff Members Responsible:
Monica Martinez, Associate Commissioner, Standards and Support Services
Shelly Ramos, Senior Director, Curriculum Standards and Student Support

Discussion of Proposed Revisions to 19 TAC Chapter 116, <u>Texas Essential Knowledge and Skills for Physical Education</u>

June 29, 2020

COMMITTEE OF THE FULL BOARD: DISCUSSION
STATE BOARD OF EDUCATION: NO ACTION

SUMMARY: This item provides an opportunity for the committee to discuss proposed revisions to 19 Texas Administrative Code (TAC) Chapter 116, <u>Texas Essential Knowledge and Skills for Physical Education</u>, Subchapter A, <u>Elementary</u>; Subchapter B, <u>Middle School</u>; and Subchapter C, <u>High School</u>. The proposed revisions would update the standards to reflect current physical education research and best practices and to align with changes to requirements in state statute.

STATUTORY AUTHORITY: Texas Education Code (TEC), §§7.102(c)(4); 28.002(a), (c), and (d); and 28.025(a).

TEC, §7.102(c)(4), requires the State Board of Education (SBOE) to establish curriculum and graduation requirements.

TEC, §28.002(a), identifies the subjects of the required curriculum.

TEC, §28.002(c), requires the SBOE to by rule identify the essential knowledge and skills of each subject in the required curriculum that all students should be able to demonstrate and that will be used in evaluating instructional materials and addressed on the state assessment instruments.

TEC, §28.002(d), requires the SBOE to by rule adopt essential knowledge and skills for the physical education curriculum.

TEC, §28.025(a), requires the SBOE to by rule determine the curriculum requirements for the foundation high school graduation program that are consistent with the required curriculum under TEC, §28.002.

The full text of statutory citations can be found in the statutory authority section of this agenda.

FUTURE ACTION EXPECTED: First reading and filing authorization of proposed revisions to 19 TAC Chapter 116 will be presented at a future SBOE meeting.

BACKGROUND INFORMATION AND JUSTIFICATION: In accordance with statutory requirements that the SBOE by rule identify the essential knowledge and skills of each subject in the required curriculum, the SBOE follows a board-approved cycle to review and revise the essential knowledge and skills for each subject.

The review of the Texas Essential Knowledge and Skills (TEKS) for physical education is taking place concurrently with the review of the health education TEKS. In March 2019, applications to serve on the physical education TEKS review work groups were posted on the Texas Education Agency (TEA) website. At the April 2019 meeting, SBOE members were asked to designate content advisors for the physical education TEKS review. In May 2019, TEA distributed a survey to collect information from educators regarding the review and revision of the physical education TEKS. TEA staff provided

applications for the physical education review work groups to SBOE members on a monthly basis from June 2019 to May 2020.

In August 2019, physical education TEKS review content advisors met in a face-to-face meeting to develop consensus recommendations regarding revisions to the physical education TEKS to share with future work groups. At that time, the content advisors met with representatives from Work Group A to discuss the consensus recommendations. Work Group A convened in September 2019 to review survey results and recommend specific topics that should be included in the proposed framework developed by the content advisors. The work group was also charged with identifying where student expectations from the current TEKS would fit into the proposed framework. Work Group B was convened in October 2019 and was charged with identifying the grade levels where topics developed by Work Group A should be taught. Work Group C was convened in December 2019 to draft recommendations for student expectations for two of the six strands in the proposed framework. Work Group D was convened at the end of February 2020 to draft recommendations for the remaining strands. Work Group E was convened for a face-to-face meeting in March 2020 and in subsequent virtual meetings in April-May 2020 to review the vertical alignment of the strands across all grade levels and to ensure horizontal alignment with the health education TEKS. In May 2020, content advisors were sent the draft recommendations for review and met virtually to develop consensus recommendations to be provided to the SBOE.

A public hearing on proposed revisions to 19 TAC Chapter 116 is presented as a separate item in this agenda.

Staff Members Responsible:
Monica Martinez, Associate Commissioner, Standards and Support Services
Shelly Ramos, Senior Director, Curriculum Standards and Student Support

Separate Exhibit:
Text of Proposed Revisions to 19 TAC Chapter 116, Texas Essential Knowledge and Skills for Physical Education, Subchapter A, Elementary; Subchapter B, Middle School; and Subchapter C, High School (to be provided at the June-July 2020 SBOE meeting)

Discussion of Proposed Revisions to 19 TAC Chapter 115, Texas Essential Knowledge and Skills for Health Education

June 29, 2020

COMMITTEE OF THE FULL BOARD: DISCUSSION
STATE BOARD OF EDUCATION: NO ACTION

SUMMARY: This item provides an opportunity for the committee to discuss proposed revisions to 19 Texas Administrative Code (TAC) Chapter 115, Texas Essential Knowledge and Skills for Health Education, Subchapter A, Elementary; Subchapter B, Middle School; and Subchapter C, High School. The proposed revisions would update the standards to reflect current health education research and best practices and to align with changes to requirements in state statute.

STATUTORY AUTHORITY: Texas Education Code (TEC), §§7.102(c)(4); 28.002(a), (c), (r), and (s); and 28.025(a).

TEC, §7.102(c)(4), requires the State Board of Education (SBOE) to establish curriculum and graduation requirements.

TEC, §28.002(a), identifies the subjects of the required curriculum.

TEC, §28.002(c), requires the SBOE to by rule identify the essential knowledge and skills of each subject in the required curriculum that all students should be able to demonstrate and that will be used in evaluating instructional materials and addressed on the state assessment instruments.

TEC, §28.002(r), requires the SBOE to by rule adopt essential knowledge and skills for the health curriculum that address substance abuse.

TEC, §28.002(s), requires the SBOE to by rule adopt essential knowledge and skills for the health curriculum that address bullying.

TEC, §28.025(a), requires the SBOE to by rule determine the curriculum requirements for the foundation high school graduation program that are consistent with the required curriculum under TEC, §28.002.

The full text of statutory citations can be found in the statutory authority section of this agenda.

FUTURE ACTION EXPECTED: First reading and filing authorization of proposed revisions to 19 TAC Chapter 115 will be presented at a future SBOE meeting.

BACKGROUND INFORMATION AND JUSTIFICATION: In accordance with statutory requirements that the SBOE by rule identify the essential knowledge and skills of each subject in the required curriculum, the SBOE follows a board-approved cycle to review and revise the essential knowledge and skills for each subject.

In preparation for the review and revision of the Texas Essential Knowledge and Skills (TEKS) for health education, the board in September 2017 requested that the commissioner of education convene a group of experts to develop a study to provide guidance for the development of revised health education TEKS. At

that time, the SBOE also approved parameters for the recommendations of the commissioner's committee to include a framework for what the strands should be for Kindergarten-Grade 12, distinctions regarding grade levels and/or grade bands at which health concepts are most appropriately taught, and a summary of all statutory requirements related to health education and suggestions regarding the most appropriate way to integrate those requirements into the framework. In 2018, Texas Education Agency (TEA) convened a group of experts to develop recommendations to address the SBOE's charge related to the health education TEKS. This health education advisory committee drafted a response to the SBOE's charge, and the response was submitted to the commissioner. Based on the response, the commissioner provided recommendations to the SBOE at the June 2019 meeting.

The review of the health education TEKS is taking place concurrently with the review of the physical education TEKS. In March 2019, applications to serve on the health education TEKS review work groups were posted on the TEA website. At the April 2019 meeting, SBOE members were asked to designate content advisors for the health education TEKS review. In May 2019, TEA distributed a survey to collect information from educators regarding the review and revision of the health education TEKS. TEA staff provided applications for the health education review work groups to SBOE members on a monthly basis from June 2019 to May 2020.

In August 2019, content advisors met in a face-to-face meeting to develop consensus recommendations regarding revisions to the health education TEKS to share with future work groups. At that time, the content advisors met with representatives from Work Group A to discuss the consensus recommendations. Work Group A convened in September 2019 to review survey results and recommend specific topics that should be included in the proposed framework. The work group was also charged with identifying where student expectations from the current TEKS would fit into the proposed framework. The work group completed recommendations for Kindergarten only. Work Group B was convened in October 2019 and was charged with identifying where student expectations would fit into the proposed framework for all other grade levels and identifying the grade levels where topics developed by Work Group A should be taught. Work Group C was convened in December 2019 and again in early February 2020 to draft recommendations for student expectations in three of the six strands in the proposed framework. Work Group D was convened at the end of February 2020 to draft recommendations for the remaining strands in the proposed framework. Work Group E was convened for a face-to-face meeting in March 2020 and in subsequent virtual meetings in April-May 2020 to review the vertical alignment of the strands across all grade levels, ensure horizontal alignment with the physical education TEKS, and make other recommendations to finalize the draft revisions. In May 2020, content advisors were sent the draft recommendations for review and met virtually to develop consensus recommendations to be provided to the SBOE.

A public hearing on proposed revisions to 19 TAC Chapter 115 is presented as a separate item in this agenda.

Staff Members Responsible:
Monica Martinez, Associate Commissioner, Standards and Support Services
Shelly Ramos, Senior Director, Curriculum Standards and Student Support

Separate Exhibit:
Text of Proposed Revisions to 19 TAC Chapter 115, Texas Essential Knowledge and Skills for Health Education, Subchapter A, Elementary; Subchapter B, Middle School; and Subchapter C, High School (to be provided at the June-July 2020 SBOE meeting)

June 30, 2020

COMMITTEE OF THE FULL BOARD: DISCUSSION
STATE BOARD OF EDUCATION: NO ACTION

SUMMARY: This item provides an opportunity for the board to be briefed on current agenda items, agency operations, policy implementation, and public education-related legislation.

BOARD RESPONSE: Review and comment.

BACKGROUND INFORMATION AND JUSTIFICATION: On an as needed basis, the board will be briefed on significant public education issues and events.

Staff Member Responsible:
Monica Martinez, Associate Commissioner, Standards and Support Services

Ratification of *Proclamation 2021* Deadline Extension for Publishers Affected by COVID-19

July 2, 2020

COMMITTEE OF THE FULL BOARD: ACTION
STATE BOARD OF EDUCATION: CONSENT

SUMMARY: The State Board of Education issued *Proclamation 2021* in June 2019. This item gives the board the opportunity to ratify a deadline extension for publishers unable to meet the published deadline for providing pre-adoption samples, final correlations to the Texas Prekindergarten Guidelines, *Certification of Editorial Review*, *Affidavit of Authorship or Contribution*, and *Report on Interoperability and Ease of Use* due to closures and business disruptions related to COVID-19. The published April 6, 2020, deadline was extended to April 20, 2020, for submitting deliverables to the Texas Education Agency. In response to requests from the field, the deadline for providing pre-adoption samples and final correlations to the education service centers was extended to May 6, 2020.

STATUTORY AUTHORITY: Texas Education Code (TEC), §31.022.

TEC, §31.022 requires the SBOE to adopt rules to provide for a full and complete investigation of instructional materials for each subject in the foundation curriculum and for each subject in the enrichment curriculum.

The full text of statutory citations can be found in the statutory authority section of this agenda.

PREVIOUS BOARD ACTION: *Proclamation 2021* was issued by the SBOE in June 2019 and amended in January 2020.

BACKGROUND INFORMATION AND JUSTIFICATION: Publishers participating in *Proclamation 2021* expressed concerns about meeting the published April 6, 2020, deadline for submitting pre-adoption samples, final correlations to the Texas Prekindergarten Guidelines, *Certification of Editorial Review*, *Affidavit of Authorship or Contribution*, and *Report on Interoperability and Ease of Use* due to the COVID-19 closures and business disruptions. The board chair gave tentative approval to extend the deadlines on March 19, 2020. This item gives the board the opportunity to ratify the deadline extensions.

PUBLIC BENEFIT AND COST TO PERSONS: Benefits include the availability of instructional materials aligned to new and revised standards in the year in which new and revised standards are implemented.

MOTION TO BE CONSIDERED: The State Board of Education:

> Ratify the *Proclamation 2021* deadline extensions for publishers to provide pre-adoption samples, final correlations to the Texas Prekindergarten Guidelines, *Certification of Editorial Review*, *Affidavit of Authorship or Contribution*, and *Report on Interoperability and Ease of Use.*

Staff Members Responsible:
Kristen Hole, Associate Commissioner, Instructional Strategy
Melissa Lautenschlager, Director, Instructional Materials and Implementation
Amie Williams, Director, Review and Adoption

**Review and Adoption of the Long-Term Strategic Asset Allocation Plan
of the Permanent School Fund of the State Board of Education and
the Permanent School Fund Liquid Account**

July 2, 2020

**COMMITTEE OF THE FULL BOARD: ACTION
COMMITTEE ON SCHOOL FNANCE/PERMANENT SCHOOL FUND: ACTION
STATE BOARD OF EDUCATION: CONSENT**

SUMMARY: This item provides an opportunity for the board to review and adopt the long-term
strategic asset allocation plan of the Permanent School Fund of the State Board of Education
(SBOE) and the Permanent School Fund (PSF) Liquid Account.

STATUTORY AUTHORITY: Texas Constitution, Article VII, §2 and §5; and 19 Texas
Administrative Code (TAC) Chapter 33.

The full text of statutory citations can be found in the statutory authority section of this agenda.

PREVIOUS BOARD ACTION: In July 2018, the board reviewed and adopted the PSF long-
term strategic asset allocation plan.

FUTURE ACTION EXPECTED: None.

BACKGROUND INFORMATION AND SIGNIFICANT ISSUES: One of the primary duties
of the board in its oversight of the PSF is to establish the long-term asset allocation policy of the
Fund. The allocation of the Fund's assets among various classes of securities will explain
approximately 85% of the Fund's variation of returns. The overall risk assumed by the Fund is
managed through the diversification of asset classes in which the Fund is invested.

House Bill (HB) 4388, 86th Legislature, 2019, provided the authority to the PSF of the SBOE to
manage the PSF Liquid Account.

PUBLIC AND STUDENT BENEFIT: The distribution of the PSF will flow to the school
districts and reduce the tax burden to the public and the state of Texas.

PUBLIC COMMENTS: None.

OTHER COMMENTS AND RELATED ISSUES: None.

Staff Member Responsible:
Holland Timmins, Executive Administrator and Chief Investment Officer of the Texas Permanent
School Fund

**Review of the Report on Permanent School Fund Percentage Distribution Rates
Under Consideration for Fiscal Years 2022 and 2023**

July 2, 2020

COMMITTEE OF THE FULL BOARD: ACTION
COMMITTEE ON SCHOOL FNANCE/PERMANENT SCHOOL FUND: ACTION
STATE BOARD OF EDUCATION: CONSENT

SUMMARY: This item provides an opportunity for the board to evaluate and approve the report on Permanent School Fund (PSF) percentage distribution rates under consideration for fiscal years 2022 and 2023. The board will consider various factors associated with the distribution rate such as expected returns, inflation, and student growth. Additionally, this item provides the opportunity for the board to discuss anticipated instructional materials needs for the 2022-2023 biennium.

STATUTORY AUTHORITY: Texas Constitution, Article VII, §2 and §5; and 19 Texas Administrative Code (TAC) Chapter 33.

The full text of statutory citations can be found in the statutory authority section of this agenda.

PREVIOUS BOARD ACTION: At the July 2018 meeting, the board approved the percentage distribution rate to the Available School Fund from the PSF for fiscal years 2020 and 2021 to be between 2.39% and 4.01%.

BACKGROUND INFORMATION AND SIGNIFICANT ISSUES: The amendment to Article VII of the Texas Constitution changed the PSF distribution from an income-based policy to a total return policy. This distribution rate is to be determined by a vote of two-thirds of the total membership of the State Board of Education (SBOE) taken before the regular session of the legislature convenes. If the SBOE does not adopt a rate, then the legislature will adopt a rate by general law or appropriation. The current rate is 2.974% of the average market value for the trailing 16 state fiscal quarters ending November 30, 2018.

According to the General Appropriations Act (HB 1), PSF Distribution Rate, at least 45 days prior to the adoption of the distribution rate from the PSF to the Available School Fund by the SBOE, the Texas Education Agency shall report to the Legislative Budget Board and the Governor on the following:

    a. The distribution rate or rates under consideration
    b. The assumptions and methodology used in determining the rate or rates under consideration
    c. The annual amount the distribution rate or rates under consideration are estimated to provide, and the difference between them and the annual distribution amounts for the preceding three biennia
    d. The optimal distribution amount for the preceding biennium, based on an analysis of intergenerational equity, and the difference between it and the actual distribution amount

Staff Member Responsible:
Holland Timmins, Executive Administrator and Chief Investment Officer of the Texas Permanent School Fund

Proposed New 19 TAC Chapter 61, <u>School Districts</u>, Subchapter B, <u>Special Purpose School Districts</u>, §61.101, <u>Applicability of State Law for Special Purpose School Districts</u>
(First Reading and Filing Authorization)

July 2, 2020

COMMITTEE OF THE FULL BOARD: ACTION
STATE BOARD OF EDUCATION: ACTION

SUMMARY: This item presents for first reading and filing authorization proposed new 19 Texas Administrative Code (TAC) Chapter 61, <u>School Districts</u>, Subchapter B, <u>Special Purpose School Districts</u>, §61.101, <u>Applicability of State Law for Special Purpose School Districts</u>, to identify provisions of the Texas Education Code (TEC) that are not applicable to the special-purpose school districts operated by Texas Tech University (TTU) and The University of Texas at Austin (UT Austin).

STATUTORY AUTHORITY: Texas Education Code (TEC), §11.351.

TEC, §11.351, permits the State Board of Education (SBOE) to establish a special-purpose school district for the education of students in special situations whose educational needs are not adequately met by regular school districts. The board is also permitted to impose duties or limitations on the school district as necessary for the special purpose of the district.

The full text of statutory citations can be found in the statutory authority section of this agenda.

EFFECTIVE DATE: The proposed effective date of the proposed new section is 20 days after filing as adopted with the Texas Register. Under TEC, §7.102(f), the SBOE must approve the rule action at second reading and final adoption by a vote of two-thirds of its members to specify an effective date earlier than the beginning of the 2021-2022 school year. The earlier effective date would allow the special purpose districts to begin planning for implementation before the beginning of the 2021-2022 school year.

PREVIOUS BOARD ACTION: The SBOE approved the TTU Independent Study by Correspondence High School Program in September 1993. The SBOE approved the UT High School program in November 1998. For both special purpose districts, the SBOE established the following conditions: no state funds shall be used to support the program; transcripts awarded to students enrolled in the program shall be consistent with the academic achievement record required by the TAC; courses offered shall be consistent with courses required by the TAC; requirements for a high school diploma shall be consistent with the state graduation requirements and with exit-level assessment requirements in the TAC; state required testing will be implemented in accordance with existing rules and schedules; and other SBOE rules for curriculum shall be applicable as appropriate. A discussion item regarding the special-purpose districts was presented to the committee at its November 2019 meeting. Proposed new 19 TAC Chapter 61, <u>School Districts</u>, Subchapter B, <u>Special Purpose School Districts</u>, §61.101, <u>Applicability of State Law for Special Purpose School Districts</u>, was presented to the SBOE for first reading and filing authorization at the January 2020 meeting. The SBOE postponed action until the April 2020 meeting to allow time for an ad hoc committee to work with TTU Independent School District and UT High School on adjustments to the proposal. This item was not presented at the April 2020 meeting because the meeting agenda was streamlined to accommodate a remote format due to disruptions resulting from the COVID-19 pandemic.

BACKGROUND INFORMATION AND JUSTIFICATION: The 86th Texas Legislature, 2019, passed House Bill 3, which entitled a special-purpose school district operated by TTU or UT Austin to funding under TEC, Chapter 48. If TTU or UT Austin receives state funding for a school year, the special-purpose district may not charge tuition or fees to students enrolled in the district who are residents of Texas for that school year, other than fees authorized under the TEC.

The proposed new section would specify duties or limitations to be imposed on the special-purpose school districts if they opt to receive state funding.

The text of proposed new §61.101 for consideration by the SBOE for first reading and filing authorization will be presented as a separate exhibit.

FISCAL IMPACT: The Texas Education Agency (TEA) has determined that there are no additional costs to state or local government required to comply with the proposal.

LOCAL EMPLOYMENT IMPACT: The proposal has no effect on local economy; therefore, no local employment impact statement is required under Texas Government Code, §2001.022.

SMALL BUSINESS, MICROBUSINESS, AND RURAL COMMUNITY IMPACT: The proposal has no direct adverse economic impact for small businesses, microbusinesses, or rural communities; therefore, no regulatory flexibility analysis specified in Texas Government Code, §2006.002, is required.

COST INCREASE TO REGULATED PERSONS: The proposal does not impose a cost on regulated persons, another state agency, a special district, or a local government and, therefore, is not subject to Texas Government Code, §2001.0045.

TAKINGS IMPACT ASSESSMENT: The proposal does not impose a burden on private real property and, therefore, does not constitute a taking under Texas Government Code, §2007.043.

GOVERNMENT GROWTH IMPACT: TEA staff prepared a Government Growth Impact Statement assessment for this proposed rulemaking. The proposed rulemaking would create a new regulation. The new rule would identify provisions of the TEC that are not applicable to the special-purpose school districts operated by TTU and UT Austin.

The proposed rulemaking would not create or eliminate a government program; would not require the creation of new employee positions or elimination of existing employee positions; would not require an increase or decrease in future legislative appropriations to the agency; would not require an increase or decrease in fees paid to the agency; would not expand, limit, or repeal an existing regulation; would not increase or decrease the number of individuals subject to its applicability; and would not positively or adversely affect the state's economy.

PUBLIC BENEFIT AND COST TO PERSONS: The proposal would clarify which provisions of the TEC are not applicable to the special-purpose school districts operated by TTU and UT Austin. There is no anticipated economic cost to persons who are required to comply with the proposal.

DATA AND REPORTING IMPACT: The proposal would have no data and reporting impact.

PRINCIPAL AND CLASSROOM TEACHER PAPERWORK REQUIREMENTS: The TEA has determined that the proposal would not require a written report or other paperwork to be completed by a principal or classroom teacher.

PUBLIC COMMENTS: The public comment period on the proposal begins July 31, 2020, and ends September 4, 2020. The SBOE will take registered oral and written comments on the proposal at the appropriate committee meeting in September 2020 in accordance with the SBOE board operating policies and procedures. A request for a public hearing on the proposal submitted under the Administrative Procedure Act must be received by the commissioner of education not more than 14 calendar days after notice of the proposal has been published in the *Texas Register* on July 31, 2020.

MOTION TO BE CONSIDERED: The State Board of Education:

> Approve for first reading and filing authorization proposed new 19 TAC Chapter 61, <u>School Districts</u>, Subchapter B, <u>Special Purpose School Districts</u>, §61.101, <u>Applicability of State Law for Special Purpose School Districts</u>.

Staff Members Responsible:
Monica Martinez, Associate Commissioner, Standards and Support Services

Separate Exhibit: Text of Proposed New 19 TAC Chapter 61, <u>School Districts</u>, Subchapter B, <u>Special Purpose School Districts</u>, §61.101, <u>Applicability of State Law for Special Purpose School Districts</u>

(to be provided at the June-July 2020 SBOE meeting)

Discussion of Proposed Revisions to 19 TAC Chapter 112, <u>Texas Essential Knowledge and Skills for Science</u>

June 30, 2020

COMMITTEE OF THE FULL BOARD: DISCUSSION
STATE BOARD OF EDUCATION: NO ACTION

SUMMARY: This item provides an opportunity for the committee to discuss proposed revisions to 19 Texas Administrative Code (TAC) Chapter 112, <u>Texas Essential Knowledge and Skills for Science</u>, Subchapter A, <u>Elementary</u>; Subchapter B, <u>Middle School</u>; and Subchapter C, <u>High School</u>. The proposed revisions would update the standards to ensure they remain current.

STATUTORY AUTHORITY: Texas Education Code (TEC), §§7.102(c)(4); 28.002(a), (c), (j), and (n); and 28.025(a).

TEC, §7.102(c)(4), requires the State Board of Education (SBOE) to establish curriculum and graduation requirements.

TEC, §28.002(a), identifies the subjects of the required curriculum.

TEC, §28.002(c), requires the SBOE to by rule identify the essential knowledge and skills of each subject in the required curriculum that all students should be able to demonstrate and that will be used in evaluating instructional materials and addressed on the state assessment instruments.

TEC, §28.002(j), allows the SBOE to require laboratory instruction in secondary science courses and require a specific amount or percentage of time in a secondary science course that must be laboratory instruction.

TEC, §28.002(n), allows the SBOE to by rule develop and implement a plan designed to incorporate foundation curriculum requirements into the career and technical education curriculum required in TEC, §28.002.

TEC, §28.025(a), requires the SBOE to by rule determine the curriculum requirements for the foundation high school graduation program that are consistent with the required curriculum under TEC, §28.002.

The full text of statutory citations can be found in the statutory authority section of this agenda.

FUTURE ACTION EXPECTED: First reading and filing authorization of proposed revisions to 19 TAC Chapter 112 will be presented at a future SBOE meeting.

BACKGROUND INFORMATION AND JUSTIFICATION: In accordance with statutory requirements that the SBOE by rule identify the essential knowledge and skills of each subject in the required curriculum, the SBOE follows a board-approved cycle to review and revise the essential knowledge and skills for each subject.

At the September 2019 meeting, SBOE members were asked to designate content advisors for the review and revision of the science Texas Essential Knowledge and Skills (TEKS). In December 2019,

applications to serve on science TEKS review work groups were posted on the Texas Education Agency (TEA) website. Additionally in December 2019, TEA distributed a survey to collect information from educators regarding the review and revision of the science TEKS. TEA staff provided applications for the science review work groups to SBOE members on a monthly basis from December 2019 to June 2020. At the January 2020 SBOE meeting, the SBOE provided specific guidance for the TEKS review work groups.

Also in January 2020, science TEKS review content advisors met in a face-to-face meeting to develop consensus recommendations regarding revisions to the science TEKS to share with future work groups. At that time, the content advisors met with representatives from Work Group A to discuss the consensus recommendations. Work Group A convened in February 2020 to review survey results, content advisor consensus recommendations, and the SBOE's guidance to work groups to develop recommendations for how science TEKS review work groups can address these areas. Work Group B was convened virtually in June 2020 to develop recommendations four high school science courses: Biology, Chemistry, Physics, and Integrated Physics and Chemistry.

Staff Members Responsible:
Monica Martinez, Associate Commissioner, Standards and Support Services
Shelly Ramos, Senior Director, Curriculum Standards and Student Support

Ethics Training

June 30, 2020

COMMITTEE OF THE FULL BOARD: DISCUSSION
STATE BOARD OF EDUCATION: NO ACTION

SUMMARY: This item provides an opportunity for the State Board of Education (SBOE) to discuss ethics statutes and rules that apply to SBOE members.

STATUTORY AUTHORITY: Texas Education Code (TEC), §43.0031 and 19 Texas Administrative Code (TAC), §33.5(s).

TEC, §43.0031 requires the SBOE to adopt an ethics policy.

The full text of statutory citations can be found in the statutory authority section of this agenda.

BACKGROUND INFORMATION AND JUSTIFICATION: Under the Permanent School Fund (PSF) Code of Ethics, the SBOE is required to participate in yearly ethics training.

Staff Members Responsible:
Von Byer, General Counsel, Legal Services
Christopher Maska, TEA Ethics Advisor, Legal Services

Attachment I: A Guide to Ethics Laws for State Officers and Employees

Attachment II: Can I Take It?

Attachment III: Can I Take This Trip?

Attachment IV: Revolving Door

TEXAS ETHICS COMMISSION

A GUIDE TO ETHICS LAWS
FOR STATE OFFICERS AND EMPLOYEES

Revised September 15, 2015

Texas Ethics Commission, P.O. Box 12070, Austin, Texas 78711
(512) 463-5800   FAX (512) 463-5777   TDD 1-800-735-2989

Visit us at *http://www.ethics.state.tx.us* on the Internet.

A GUIDE TO ETHICS LAWS
FOR STATE OFFICERS AND EMPLOYEES

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INTRODUCTION

As a public servant, you owe a responsibility to the people of Texas in the performance of your official duties. This guide sets out laws that govern your conduct as a public servant. As you read this guide, you should bear in mind that ethical conduct involves more than merely following these laws. As a public servant, you should act fairly and honestly and should avoid creating even the appearance of impropriety.

Laws Interpreted by the Texas Ethics Commission

The Texas Ethics Commission interprets various laws governing the conduct of state officers and employees: the provisions in chapter 572 of the Government Code; the restrictions on benefits, gifts, and honoraria in chapter 36 of the Penal Code and in the lobby law, chapter 305 of the Government Code; and the restrictions on the use of government resources in chapter 39 of the Penal Code.

Some laws governing public servants, such as the nepotism law, are not under the jurisdiction of the Ethics Commission. Also, officers and employees of particular state agencies may be subject to statutes, rules, or personnel guidelines specifically applicable to that agency. Your general counsel or the Office of the Attorney General are the appropriate sources for advice about such laws.

Advisory Opinions

If you are concerned about how any of the laws subject to interpretation by the Ethics Commission apply to you, you may request an advisory opinion. The request must be about the application of one or more of those laws to a specific factual situation, either existing or hypothetical. Gov't Code § 571.091. Unless you waive confidentiality in writing, the Ethics Commission must keep your name confidential.

The legal effect of an Ethics Commission advisory opinion is described in section 571.097 of the Government Code as follows:

> It is a defense to prosecution or to imposition of a civil penalty that the person reasonably relied on a written advisory opinion of the commission relating to the provision of the law the person is alleged to have violated or relating to a fact situation that is substantially similar to the fact situation in which the person is involved.

Copies of Ethics Advisory Opinions are available from the Ethics Commission at (512) 463-5800 or at *http://www.ethics.state.tx.us* on the Internet.

PART I. STANDARDS OF CONDUCT
AND CONFLICT OF INTEREST

The "Should Nots"

The legislature has adopted the following standards of conduct for state employees:

A state officer or employee should not:

(1) accept or solicit any gift, favor, or service that might reasonably tend to influence the officer or employee in the discharge of official duties or that the officer or employee knows or should know is being offered with the intent to influence the officer's or employee's official conduct;

(2) accept other employment or engage in a business or professional activity that the officer or employee might reasonably expect would require or induce the officer or employee to disclose confidential information acquired by reason of the official position;

(3) accept other employment or compensation that could reasonably be expected to impair the officer's or employee's independence of judgment in the performance of the officer's or employee's official duties;

(4) make personal investments that could reasonably be expected to create a substantial conflict between the officer's or employee's private interest and the public interest; or

(5) intentionally or knowingly solicit, accept, or agree to accept any benefit for having exercised the officer's or employee's official powers or performed the officer's or employee's official duties in favor of another.

Gov't Code § 572.051. A state agency may not use appropriated funds to compensate a state employee who violates those standards. Gov't Code § 2113.014. Also, in some cases failure to follow the standards of conduct will violate one of the criminal statutes discussed in this guide.

Private Interest in Measure or Decision

If a board member has a private or personal interest in a measure, proposal, or decision pending before the board, the board member must disclose that fact to the rest of the board in an open meeting and must refrain from voting or otherwise participating in the matter. Gov't Code § 572.058. The law specifies that a person does not have a "private or personal interest" in a matter if the person is engaged in a profession, trade, or occupation, and the person's interest in the matter is the same as others similarly engaged.

Note: This guide addresses only the laws that the Ethics Commission interprets. Other laws may contain additional "conflict of interest" provisions. In particular, state agency counsels should be aware of the common-law rule restricting a contract between agencies and agency board members. *See* Attorney General Opinion JM-671 (1987).

PART II. ACCEPTANCE OF BENEFITS

Chapter 36 of the Penal Code prohibits public servants from accepting certain gifts or benefits. Violations of the laws in this chapter carry criminal penalties, and complaints alleging such violations are handled by local prosecutors, not by the Texas Ethics Commission.

Bribery

As a public servant, you commit the offense of bribery if you solicit, offer, or accept a "benefit" in exchange for your decision, opinion, recommendation, vote, or other exercise of official discretion. Penal Code § 36.02. Common sense should tell you if something is a bribe. If it is, don't take it.

Honoraria

You may not solicit, agree to accept, or accept an honorarium in consideration for services you would not have been asked to provide but for your official position. Penal Code § 36.07. Thus, for example, you may not take a speaker's fee for speaking if your position with the state is one of the reasons you were asked to speak. The honorarium law does not, however, prohibit acceptance of food, transportation, and lodging in connection with a speech that is more than merely perfunctory. If a state officer or the executive head of an agency accepts food, transportation, or lodging under these circumstances, the officer must report it on Part XIII of the annual personal financial statement. (A travel regulation provides that a state employee may not accept money for a travel expense reimbursement from a person that the employee's employing state agency intends to audit, examine, or investigate or is auditing, examining, or investigating. Gov't Code § 660.016.)

Prohibitions on Gifts

Most public servants are subject to one or more prohibitions on the acceptance of "benefits" from persons subject to their jurisdiction. Penal Code § 36.08. For example, a public servant in an agency performing regulatory functions or conducting inspections or investigations may not accept a benefit from a person the public servant "knows to be subject to regulation, inspection, or investigation by the public servant or his agency." *Id.* § 36.08(a). Similarly, a public servant who "exercises discretion in connection with contracts, purchases, payments, claims, or other pecuniary transactions" of the agency may not accept a benefit from a person the public servant knows is interested in or likely to become interested in such a transaction. *Id.* § 36.08(d). (The Appendix contains the full text of section 36.08.) *These prohibitions apply regardless of whether the donor is asking for something in return.*

The statutory definition of "benefit" is "anything reasonably regarded as pecuniary gain or pecuniary advantage." Penal Code § 36.01(3). In advisory opinions, the Ethics Commission has stated that the following gifts are benefits: a $50 clock, a hotel room, a hunting trip, football tickets, a $160 rifle, and a $60 restaurant meal. Ethics Advisory Opinion Nos. 97, 94, 90, 69, 60 (1992).

Exceptions to Gift Prohibitions

There are exceptions to the prohibitions set out in Penal Code section 36.08. These exceptions are exceptions to criminal liability under that section. You should also make sure that the laws and rules specifically applicable to your agency permit you to accept a benefit permitted under the Penal Code. Even if the acceptance of a gift is legally permissible, you should consider whether the gift raises the appearance of impropriety.

The following exceptions are most likely to be relevant to state officers or employees. (The Appendix contains the full text of section 36.10, which sets out the exceptions to section 36.08.)

- You may accept non-cash items of less than $50 in value. Penal Code § 36.10(a)(6). If a *lobbyist* provides you with food, beverages, entertainment, lodging, or transportation, however, the lobbyist must be present at the event.

- You may accept benefits in the form of food, lodging, transportation, or entertainment in any amount if you accept them as a "guest" and report them if there is an applicable reporting requirement. Penal Code § 36.10(b). In order for you to accept something as a "guest," the donor must be present.

  Lobbyists may provide you with transportation and lodging only in connection with a fact-finding trip related to your official duties or in connection with an event, such as a conference, at which you will be providing "more than perfunctory" services in your official capacity.

  State officers and agency heads: You will be required to report on your personal financial statement the acceptance of gifts worth more than $250, except for gifts from a member of your immediate family or from a lobbyist required to report the gift. You must also report on your personal financial statement your acceptance of meals, transportation, or lodging provided in connection with a speech or other services you provided in your official capacity. (*See* above discussion on "Honoraria.")

- You may accept a benefit from a person such as a friend, relative, or business associate with whom you have a relationship independent of your official status *if the benefit is given on account of that relationship rather than your official status*. Penal Code § 36.10(a)(2).

- You may accept a payment for which you give legitimate consideration *in a capacity other than as a public servant*. Penal Code § 36.10(a)(1). The use of the term "legitimate consideration" means that the payment you receive must reflect the actual value of the services or goods you provide in exchange for the payment. Ethics Advisory Opinion No. 41 n.1 (1992).

- You may accept certain gifts, awards, and mementos from persons required to register as lobbyists. "Gift" in this context does not include food, entertainment, transportation, or lodging, which are discussed above. Penal Code § 36.10(a)(5). (*See* discussion of "Gifts Prohibited by the Lobby Statute" below.)

Gifts Prohibited by the Lobby Statute

The lobby law, chapter 305 of the Government Code, contains restrictions on gifts from a person required to register under that chapter. For the most part, the lobby statute is stricter than the Penal Code. For instance, you may not accept transportation and lodging in connection with a pleasure trip from a lobbyist. There is, however, one exception to the general rule that the lobby law is stricter than the Penal Code: Under section 36.10(a)(5) of the Penal Code, there is an exception from the Penal Code prohibition on the acceptance of benefits for a gift, award, or memento that is required to be reported by a lobbyist. Because of this exception, there are circumstances in which it is permissible for you to accept a gift from a lobbyist that you could not accept from a non-lobbyist. If you are thinking about relying on this exception, you should ask the Ethics Commission for advice before you do so.

Gifts to State Agencies

The Ethics Commission has issued several opinions in response to questions about the acceptance of gifts by a state agency. Ethics Advisory Opinion Nos. 118 (1993), 63, 62, 51, 31 (1992). Chapter 305 of the Government Code, which regulates lobbying, and chapter 36 of the Penal Code, which regulates gifts to public officers and employees, do not apply to gifts given to a state agency. Ethics Advisory Opinion Nos. 62, 31 (1992). The statutes applicable to a specific state agency determine whether the agency has authority to accept gifts. *Id*. Also, even if an agency has authority to accept gifts, it may do so only in accordance with the provisions of Government Code chapter 575.

Although questions about the specific authority of a state agency to accept gifts are outside the Ethics Commission's advisory opinion authority, previous ethics advisory opinions have set out some general guidelines about the acceptance of gifts by a state agency. First, the commission has noted that even if a state agency has authority to accept gifts generally, the agency may accept gifts on behalf of the agency only if the gifts can be used in carrying out the agency's powers and duties. A gift to a state agency becomes state property, and an officer or employee of the agency cannot be permitted to use it for private purposes. Consequently, acceptance of gifts by a state agency is not a permissible way of acquiring gifts for the personal enjoyment of individual state officers and employees.

Gifts to state agencies, even if legally permissible, may raise questions about impropriety. If the donor is subject to agency regulation or oversight, or engages in a business that can be affected by agency action, then it may be that the donor hopes or expects to gain favor with the agency. Even if that is not the case, it may appear to be so, especially to someone whose interests are different from those of the donor and who may feel at a disadvantage because of the donor's generosity.

Donation of Gifts to Charity

What should you do if someone sends you an unsolicited gift that you may not accept? Often public servants would prefer to donate such gifts to charity or to a governmental body, rather than returning them to the donor. A provision of the Penal Code allows such donations in specified circumstances:

> A public servant who receives an unsolicited benefit that the public servant is prohibited from accepting under [section 36.08] may donate the benefit to a governmental entity that has the authority to accept the gift or may donate the benefit to a recognized tax-exempt charitable organization formed for educational, religious, or scientific purposes.

Penal Code § 36.08(i).

PART III. ABUSE OF OFFICE

Chapter 39 of the Penal Code contains several provisions prohibiting a public servant from using his or her official position in various ways for non-governmental purposes.

Misuse of Government Property

As a public servant, you commit an offense if, with intent to obtain a benefit or harm another, you *misapply any thing of value belonging to the government* that has come into your custody or possession by virtue of your public office or employment. Penal Code § 39.02(a)(2). Simply stated, this means that you are to use government property for governmental purposes, not for personal or private purposes.

Frequent Flyer Miles: Penal Code section 39.02(d) specifically provides that travel discount awards such as "frequent flyer" miles, hotel or rental car discounts, or food coupons are not things of value belonging to the government for purposes of the criminal law prohibiting misapplication of a thing of value belonging to the government. This means that personal or private use of travel awards accrued on state business is not a crime. The law does not, however, prevent a particular agency from adopting a policy requiring that such travel awards be used for agency purposes.

Political Campaigns: Do not use state time or state equipment to work on an individual's political campaign. *See* Ethics Advisory Opinion No. 172 (1993). Also, chapter 556 of the Government Code prohibits a state agency from using appropriated funds in connection with a political campaign. Further, it prohibits a state officer or employee from using official authority to interfere with or attempt to influence the result of an election. Gov't Code § 556.004. The Ethics Commission does not have authority to interpret chapter 556 of the Government Code.

Misuse of Official Information

As a public servant, you may have access to information that has not been made public. Chapter 39 of the Penal Code restricts your use of such information in the following ways:

- You may not use the information to acquire or help another person to acquire a pecuniary interest in any property, transaction, or enterprise affected by the information. Penal Code § 39.06(a)(1).

- You may not speculate or aid another to speculate on the basis of the information. Penal Code § 39.06(a)(2).

- You may not disclose or use the information with the intent to obtain a benefit or to harm another. Penal Code § 39.06(b).

PART IV. OTHER EMPLOYMENT

Concurrent Employment

Some of the laws under the jurisdiction of the Ethics Commission are relevant to questions about other employment by a state officer or employee. For example, under the bribery law, you may not solicit or accept a "benefit" in exchange for your decision, opinion, recommendation, vote, or other exercise of discretion as a public servant. Penal Code § 36.02. A salary is a benefit. *See generally* Ethics Advisory Opinion No. 155 (1993). Therefore, the crime of bribery occurs if a state officer accepts other employment in exchange for official action or inaction. In addition, under the honorarium law a state officer may not accept an honorarium for performing services that he or she would not have been asked to provide but for his or her official status. Other laws outside the Ethics Commission's jurisdiction may also restrict your employment. For information about such laws, consult your general counsel or the Office of the Attorney General.

Future Employment

If you are about to leave your position with the state, you should be aware of laws that might restrict your future employment. Chapter 572 of the Government Code contains three "revolving door" provisions. Each provision applies to different groups of former officers and employees of state agencies.

Note: If other law restricts you from representing a person before an agency after you leave your position, that law prevails over the second and third Government Code provisions (in section 572.054) discussed below.

Revolving Door #1

The first revolving door provision will apply to you if you are a former state officer or employee of a state agency. For two years after you cease to be a state officer or employee of an agency, you may not accept employment from a person if you participated on behalf of the state agency in a procurement or contract negotiation involving that person.

Note: The first revolving door provision only applies to a state officer or employee whose service or employment with a state agency ceases on or after September 1, 2015.

Revolving Door #2

The second revolving door provision will apply to you if you are a former board member or executive director of a regulatory agency. For two years after you cease to be a member of the board, you may not make any communication to or appearance before an officer or employee of the board on behalf of any person with the intent to influence agency action in connection with any matter on which that person seeks official action. The restriction applies even if the agency initiates the contact and even if you are communicating on your own behalf (subject to your due process rights). It does not, however, prevent you from merely providing information to the agency, as long as you are not doing so with the intent to influence agency action on behalf of a person.

Revolving Door #3

The third revolving door provision applies to all former board members and executive directors of regulatory agencies. It also applies to former employees who, at the time of leaving the agency, were compensated at or above a certain salary level. The law applies to a former employee whose compensation at the time of leaving state employment was at or above the level prescribed by the general appropriations act for step 1, salary group A17, of the position classification salary schedule. (The 2015 General Appropriations Act prescribed the minimum annual salary for salary group A17 to be $36,976 for fiscal years 2016 and 2017.)

A former board member or employee covered by the third provision may *never* represent a person or receive compensation for services rendered on behalf of any person regarding a "particular matter" in which he or she "participated" while serving with the agency. A "particular matter" is a *specific* matter before the agency, such as an investigation, application, contract, rulemaking proceeding, administrative proceeding, request for a ruling, etc. This revolving door provision prohibits you from representing a person, or getting paid to help a person, regarding a *specific* matter in which you were either personally involved or that was a matter within your official responsibility while a state officer or employee. It does not prohibit you from working on the *type of matters* you worked on at the agency. *This restriction lasts forever.*

Note: For purposes of the Government Code revolving door statutes, a "person" is an individual or business entity. Gov't Code § 572.002(7). The statutes do not restrict former state officers or employees from representing or providing services on behalf of nonprofit or governmental entities. Ethics Advisory Opinion No. 232 (1994).

Violation of either of the second or third revolving door provisions is a Class A misdemeanor. The Texas Ethics Commission may assess a civil penalty for a violation of any of the three revolving door laws.

PART V. PERSONAL FINANCIAL STATEMENTS

Board members and executive directors of most state agencies are required to file a personal financial statement with the commission on or before April 30 each year if they served at any time

beginning on January 1 and continuing through April 30 of that year. Gov't Code § 572.026(a). If your term as a board member is ending or if you plan to resign from a board, you should be aware of the "holdover" provision of the Texas Constitution. Under this provision, a state officer "holds over" in office until replaced. A person who no longer attends meetings may nonetheless "holdover" as a board member. Thus, if you resign or your term expires before January 1 of a given year, you will still be required to file a financial statement for that year if your successor was not appointed before January 1.

However, if you are an appointed officer, as defined by section 572.002 of the Government Code, you are not required to file a personal financial statement if the following criteria are met before January 1 of the year the statement is due: (1) your term expired, you resigned, your agency was abolished, or your agency functions were transferred to another agency; and (2) you ceased to participate in the state agency's functions. If your term expired or if you resigned, you are required to provide written notice of your intent to not participate in the agency's functions to the Office of the Governor and to the Texas Ethics Commission.

Anyone who asks for extra time to file by April 30 is entitled to a one-time, 60-day extension. Call the Ethics Commission legal staff at (512) 463-5800 if you have questions when completing the form.

Note: New state law requires a personal financial statement filed with the Ethics Commission to be filed electronically. Please visit the Ethics Commission website at *www.ethics.state.tx.us* for information regarding the filing application and instructions.

Note: The commission imposes a civil penalty of $500 for late filings. The commission has the authority to raise this penalty. There are criminal penalties for failing to file at all.

PART VI. LOBBYING BY STATE OFFICERS AND EMPLOYEES

The provisions of Government Code chapter 556 prohibit the use of appropriated funds to influence legislation. Those provisions are not under the Ethics Commission's jurisdiction. The lobby law, chapter 305 of the Government Code, is not applicable in this context. Note, however, that a *gift* from a state agency to a legislator may be prohibited under the Penal Code.

SUMMARY

This guide is intended to make you familiar with the laws interpreted by the Texas Ethics Commission that govern your conduct as a state officer. For further guidance, you should consult your agency's ethics advisor or general counsel. Also, feel free to call the Ethics Commission at (512) 463-5800 for advice or visit our Internet site at *http://www.ethics.state.tx.us.*

APPENDIX

Penal Code Provisions Regarding Gifts to a Public Servant

§ 36.08. Gift to Public Servant by Person Subject to His Jurisdiction

(a) A public servant in an agency performing regulatory functions or conducting inspections or investigations commits an offense if he solicits, accepts, or agrees to accept any benefit from a person the public servant knows to be subject to regulation, inspection, or investigation by the public servant or his agency.

(b) A public servant in an agency having custody of prisoners commits an offense if he solicits, accepts, or agrees to accept any benefit from a person the public servant knows to be in his custody or the custody of his agency.

(c) A public servant in an agency carrying on civil or criminal litigation on behalf of government commits an offense if he solicits, accepts, or agrees to accept any benefit from a person against whom the public servant knows litigation is pending or contemplated by the public servant or his agency.

(d) A public servant who exercises discretion in connection with contracts, purchases, payments, claims, or other pecuniary transactions of government commits an offense if he solicits, accepts, or agrees to accept any benefit from a person the public servant knows is interested in or likely to become interested in any contract, purchase, payment, claim, or transaction involving the exercise of his discretion.

(e) A public servant who has judicial or administrative authority, who is employed by or in a tribunal having judicial or administrative authority, or who participates in the enforcement of the tribunal's decision, commits an offense if he solicits, accepts, or agrees to accept any benefit from a person the public servant knows is interested in or likely to become interested in any matter before the public servant or tribunal.

(f) A member of the legislature, the governor, the lieutenant governor, or a person employed by a member of the legislature, the governor, the lieutenant governor, or an agency of the legislature commits an offense if he solicits, accepts, or agrees to accept any benefit from any person.

(g) A public servant who is a hearing examiner employed by an agency performing regulatory functions and who conducts hearings in contested cases commits an offense if the public servant solicits, accepts, or agrees to accept any benefit from any person who is appearing before the agency in a contested case, who is doing business with the agency, or who the public servant knows is interested in any matter before the public servant. The exception provided by Section 36.10(b) does not apply to a benefit under this subsection.

(h) An offense under this section is a Class A misdemeanor.

(i) A public servant who receives an unsolicited benefit that the public servant is prohibited from accepting under this section may donate the benefit to a governmental entity that has the authority to accept the gift or may donate the benefit to a recognized tax-exempt charitable organization formed for educational, religious, or scientific purposes.

§ 36.09. Offering Gift to Public Servant

(a) A person commits an offense if he offers, confers, or agrees to confer any benefit on a public servant that he knows the public servant is prohibited by law from accepting.

(b) An offense under this section is a Class A misdemeanor.

§ 36.10. Non-Applicable

(a) Sections 36.08 (Gift to Public Servant) and 36.09 (Offering Gift to Public Servant) do not apply to:

(1) a fee prescribed by law to be received by a public servant or any other benefit to which the public servant is lawfully entitled or for which he gives legitimate consideration in a capacity other than as a public servant;

(2) a gift or other benefit conferred on account of kinship or a personal, professional, or business relationship independent of the official status of the recipient;

(3) a benefit to a public servant required to file a statement under Chapter 572, Government Code, or a report under Title 15, Election Code, that is derived from a function in honor or appreciation of the recipient if:

(A) the benefit and the source of any benefit in excess of $50 is reported in the statement; and

(B) the benefit is used solely to defray the expenses that accrue in the performance of duties or activities in connection with the office which are nonreimbursable by the state or political subdivision;

(4) a political contribution as defined by Title 15, Election Code;

(5) a gift, award, or memento to a member of the legislative or executive branch that is required to be reported under Chapter 305, Government Code;

(6) an item with a value less than $50, excluding cash or a negotiable instrument as described by Section 3.104, Business & Commerce Code;

(7) an item issued by a governmental entity that allows the use of property or facilities owned, leased, or operated by the governmental entity;

(8) transportation, lodging, and meals described by Section 36.07(b); or

(9) complimentary legal advice or legal services relating to a will, power of attorney, advance directive, or other estate planning document rendered:

    (A) to a public servant who is a first responder; and

    (B) through a program or clinic that is:

        (i) operated by a local bar association or the State Bar of Texas; and

        (ii) approved by the head of the agency employing the public servant, if the public servant is employed by an agency.

(b) Section 36.08 (Gift to Public Servant) does not apply to food, lodging, transportation, or entertainment accepted as a guest and, if the donee is required by law to report those items, reported by the donee in accordance with that law.

(c) Section 36.09 (Offering Gift to Public Servant) does not apply to food, lodging, transportation, or entertainment accepted as a guest and, if the donor is required by law to report those items, reported by the donor in accordance with that law.

(d) Section 36.08 (Gift to Public Servant) does not apply to a gratuity accepted and reported in accordance with Section 11.0262, Parks and Wildlife Code. Section 36.09 (Offering Gift to Public Servant) does not apply to a gratuity that is offered in accordance with Section 11.0262, Parks and Wildlife Code.

(e) In this section, "first responder" means:

(1) a peace officer whose duties include responding rapidly to an emergency;

(2) fire protection personnel, as that term is defined by Section 419.021, Government Code;

(3) a volunteer firefighter who performs firefighting duties on behalf of a political subdivision and who is not serving as a member of the Texas Legislature or holding a statewide elected office;

(4) an ambulance driver; or

(5) an individual certified as emergency medical services personnel by the Department of State Health Services.

✓ FEES FOR SERVICES: You may accept a payment to which you are lawfully entitled in a capacity other than your official status. In this case you may accept the offer without restriction. Remember, you may not take an honorarium for a service that you would not have been asked to provide but for your official status.

✓ POLITICAL CONTRIBUTIONS: You may accept a political contribution as a candidate or officeholder .

✓ GOVERNMENT PROPERTY: You may accept an item issued by a governmental entity that allows the use of property or facilities owned, leased, or operated by the entity.

✓ FOOD, ENTERTAINMENT, TRANSPORTA-TION, & LODGING: Benefits in the form of food, lodging, transportation, or entertainment are permissible if accepted as a "guest" and reported in accordance with any applicable reporting requirement. To accept something as a guest, the donor must be present. As to reporting requirements, certain elected officeholders, state agency board members, and state agency heads are required to file annual personal financial statements on which they must report certain gifts worth more than $250. For most state *employees,* there is no applicable reporting requirement.

DONATIONS TO CHARITY

If you receive an unsolicited benefit that you are prohibited from accepting, you may donate the benefit to a recognized tax exempt charitable organization formed for educational, religious, or scientific purposes.

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Visit us at *http://www.ethics.state.tx.us* on the Internet.

Can I Take It?

A Guide for Officers and Employees in the Executive Branch of State Government.

Note: Employees of the Governor or Lieutenant Governor should refer to the "Can I Take It?" brochure specifically applicable to those offices.

Revised January 3, 2019

Can I Take It?

RULE NO. 1
YOU MAY NEVER TAKE ANYTHING AS CONSIDERATION FOR AN OFFICIAL ACT

The bribery law prohibits payments or gifts made in exchange for an official act. An official act includes a vote, a recommendation, and any other exercise of official discretion.

RULE NO. 2
YOU MAY NOT ACCEPT AN HONORARIUM FOR SERVICES YOU WOULD NOT HAVE BEEN ASKED TO PROVIDE BUT FOR YOUR OFFICIAL STATUS

This means, for example, that you may not accept a gift or payment for giving a speech if your official position was a reason for your being asked to give the speech. You may, however, accept meals, transportation, and lodging in connection with a speech as long as your speech is more than merely perfunctory. Also, you may accept a gift that is not a "benefit" such as a plaque or something of minimal value like a coffee cup, key chain, or "gimme" cap.

THE OTHER RULES: If acceptance of a gift or payment is permissible under Rule Nos. 1 and 2, the next step is to determine whether or not the person making the offer is a registered lobbyist.

A. IF THE PERSON MAKING THE OFFER IS A REGISTERED LOBBYIST:

1. You may not accept:
- ✗ Loans, cash, or negotiable instruments other than political contributions.
- ✗ Travel or lodging for a pleasure trip. (Incidental transportation such as a short ride in a car or taxi is permissible.)

2. You may accept:
- ✓ Political contributions as a candidate or officeholder.
- ✓ Food and beverages if the lobbyist is with you. There is no annual limit on the value of food and beverages you may accept from a lobbyist.
- ✓ Entertainment worth up to $500 in a calendar year. (Entertainment includes, for example, sports events and concerts.) The lobbyist providing the entertainment must be present for the event.
- ✓ Gifts, other than awards and mementos, that together do not exceed $500 in value during a calendar year.
- ✓ Awards and mementos worth not more than $500. This is not an annual cap, but a cap on the value of each individual award or memento.
- ✓ Travel and lodging in connection with a fact-finding trip or to a seminar or conference at which you are providing services, such as speaking, and the services are more than perfunctory. Any lobbyist who is providing travel or lodging must be present at the event.
- ✓ Tickets or other expenditures for attendance at a political fundraiser or charitable event if the lobbyist is present at the event.

Note: You can find out if someone is a registered lobbyist by calling the disclosure filings section of the Texas Ethics Commission at 512-463-5800 or by going to *www.ethics.state.tx.us/dfs/search_LOBBY.html*.

PLEASE NOTE
Your name will appear on a lobbyist's activities report:
- if expenditures for your food, lodging, transportation, or entertainment in a day exceed $132.60,* which is 60 percent of the amount of the legislative per diem;
- if expenditures for a gift, award, or memento exceed $50; or
- each time an expenditure is made for you to attend political fundraisers or charity events, regardless of the amount spent.
  * effective January 6, 2019

B. IF THE PERSON MAKING THE OFFER IS *NOT* A REGISTERED LOBBYIST:
A state officer or employee may not take any benefit from a person subject to the regulation, inspection, or investigation by that person or that person's agency. (A "benefit" is anything reasonably regarded as pecuniary gain or advantage.) There are, however, many exceptions to this general rule. **You may accept a gift, payment, or contribution as long as the gift, payment, or contribution fits into *any one* of the following categories.**

- ✓ ITEMS WORTH LESS THAN $50: You may accept an item with a value of less than $50. This exception does not apply to cash, checks, or negotiable instruments.
- ✓ INDEPENDENT RELATIONSHIP: There is an exception from the general prohibition on the acceptance of benefits for a gift based on
  - kinship
  - a personal relationship independent of your official status
  - a professional relationship independent of your official status
  - a business relationship independent of your official status.

(over)

HONORARIUM LAW

As a public servant, you may not accept an honorarium in consideration for services that you would not have been requested to provide but for your official position or duties. You may, however, accept food, transportation, and lodging in connection with services rendered at a conference or seminar.

CAMPAIGN AND OFFICEHOLDER CONTRIBUTIONS

A candidate or elected officeholder must report all campaign or officeholder contributions, this includes contributions in the form of transportation or lodging.

No corporate contributions. A candidate may not accept a campaign contribution, nor may an officeholder accept an officeholder contribution, from a corporation or labor union.

FINANCIAL STATEMENT

Some government officials are required to file an annual personal financial statement. A filer must report any gifts, including trips, that exceed $250 in value, except gifts reportable as a political contribution, or a lobby expenditure, or a gift received from an individual related within the second degree by consanguinity or affinity. Also, a filer must report transportation, meals, or lodging provided by a third party in connection with a conference or similar event, unless a lobbyist reports the expenditures.
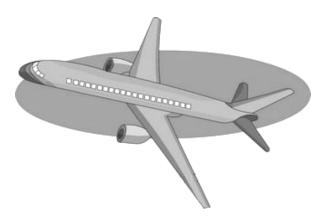
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Can I Take This Trip?

A Texas Ethics Commission guide
to the acceptance of trips by
government officers and employees.

Revised February 24, 1997

Can I Take This Trip?

Officers and employees of governmental bodies often ask the Ethics Commission whether it is permissible to take a trip paid for by a third party. To answer such questions, it is first necessary to determine whether the third party is providing the trip to the governmental body or to the individual. If the trip is being provided to an individual government officer or employee, rather than to the governmental body itself, the individual must consider the restrictions and reporting requirements in *all* of the following laws:

- the lobby law in chapter 305, Government Code

- the gift laws in chapter 36, Penal Code

- the honorarium law in chapter 36, Penal Code

- the campaign finance law in title 15, Election Code

- the law requiring certain government officials to file an annual personal financial statement in chapter 572, Government Code.

It is important to review the restrictions in all of those laws because what is permissible under one law may not be permissible under another.

GIFTS TO THE GOVERNMENT

Under the appropriate circumstances, a governmental body may accept an offer by a third party to pay travel expenses for a government officer or employee to conduct government business.

Whether a governmental body may accept a gift depends on the laws specifically applicable to the governmental body, not on the laws under the jurisdiction of the Texas Ethics Commission. Individual employees may not make decisions about accepting gifts on behalf of a governmental body; only the governing board may make such decisions.

An individual government officer or employee who intends to accept a trip for himself or herself should first review the restrictions and reporting requirements in the laws discussed below.

LOBBY LAW

Under the lobby law, an officer or employee in the legislative or executive branch *of state government* is subject to a general prohibition on the acceptance of transportation and lodging from a registered lobbyist. There are exceptions to this rule: one for transportation and lodging in connection with a fact-finding trip, one for transportation and lodging in connection with a conference or similar event, and one for incidental transportation.

Fact-finding trips. There is an exception to the prohibition on lobbyist-paid trips for necessary expenditures for transportation and lodging when the purpose of the travel is to explore matters directly related to the duties of a member of the legislative or executive branch, such as fact-finding trips, but not including attendance at merely ceremonial events or pleasure trips. A lobbyist who provides transportation or lodging in connection with a fact-finding trip must be present at the event.

Conferences or similar events. There is also an exception for necessary expenditures for transportation and lodging provided in connection with a conference or similar event in which the member renders services, such as addressing an audience or engaging in a seminar, to the extent that those services are more than merely perfunctory. A lobbyist who provides transportation or lodging in connection with a conference or similar event must be present at the event.

Incidental transportation. The prohibition on lobbyist-paid transportation does not apply to transportation of incidental value, such as a short ride in a car or taxi.

Note: A lobbyist is required to report lobby expenditures, including expenditures for transportation and lodging.

GIFT LAWS

Under chapter 36 of the Penal Code, most public servants, at both the state and local level, are subject to a prohibition on the acceptance of a benefit from someone subject to their jurisdiction. (The Governor and the Governor's employees, the Lieutenant Governor and the Lieutenant Governor's employees, and members of the legislature and legislative employees are subject to a prohibition on the acceptance of a benefit from anyone.) There are, however, exceptions to those prohibitions, including an exception for something worth less than $50 and an exception for something from a close friend or family member. There is also a specific exception for benefits in the form of transportation and lodging accepted as a "guest" and reported in accordance with any applicable reporting requirement. In order for something to be accepted as a guest, the donor must be present.

Revolving Door

A GUIDE TO THE REVOLVING DOOR PROVISIONS

THIS GUIDE IS FOR former board members, officers, and employees of certain agencies in the executive branch of state government. Chapter 572 of the Government Code contains three revolving door provisions. Each provision applies to different groups of former members, officers, and employees.

The revolving door provisions do not apply to former officers or employees of the legislative or judicial branches of state government.

Caveat: Other law "that restricts the representation of a person before a particular state agency by a former state officer or employee of that agency" prevails over the second and third provisions in section 572.054. For example, a former employee of the Public Utility Commission is not subject to the second or third revolving door provisions because the Public Utilities Regulatory Act contains a specific revolving door provision that applies to former employees of the Public Utility Commission.

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The First Revolving Door Rule

Two-year Prohibition
Applicable to Former State Officers
and Employees

The first revolving door rule applies to all former state officers and employees of a state agency.

With respect to a contract for which a state agency first advertises or otherwise solicits bids, proposals, offers, or qualifications between September 1, 2015, and August 31, 2017, if a state officer or employee has participated on behalf of the agency in a procurement or contract negotiation involving any person, then he or she may not accept employment from that person for two years after the date he or she leaves the agency.

With respect to a contract for which a state agency first advertises or otherwise solicits bids, proposals, offers, or qualifications on or qualifications on or after September 1, 2017, if a state officer or employee of a state agency participated on behalf of the agency in a procurement or contract negotiation involving any person, then he or she may not accept employment from that person for two years after the date the contract is signed or the procurement is terminated or withdrawn.

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The Second Revolving Door Rule

Two-year Prohibition
Applicable to Former Board Members
and Executive Directors

The second revolving door rule applies to all former board members and former executive heads of regulatory agencies. For two years after a board member or executive head leaves a regulatory agency, he or she *may not* appear before or communicate with officers or employees of the agency with the intent to influence the board on behalf of any person in connection with any matter on which the person seeks official action.

The law is not an absolute prohibition on communications to an agency by a former board member or former executive head of the agency. *The restriction applies only to communications and appearances intended to influence agency action.* If, for example, a current board member calls a former board member to get information about past board activities, the former board member is free to provide information -- as long as the former board member does not try to influence the actions of the current board. This restriction applies regardless of who initiated the contact and even if a former board member or executive head is communicating on their "own behalf" with the intent to influence agency action, subject to any constitutional due process right to be heard by the agency.

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The Third Revolving Door Rule

Continual Prohibition
Applicable to Former Board Members
and Upper-level Employees

The third revolving door rule deals with work on specific "matters" and applies to all former officers and certain former employees of regulatory agencies.

Former Officers. The provision applies to a former "officer" of a regulatory agency. Board members of state agencies are officers. An individual elected or appointed as the head of an agency that does not have a board is an officer.

For example, the Agriculture Commissioner and the Insurance Commissioner are state officers.

Former Employees Paid at or Above Certain Level. The provision applies to a former employee of a regulatory agency whose ending pay was at or above the amount prescribed for salary group A17, of the state position classification salary schedule. (The 2020-2021 General Appropriations Act prescribed the minimum annual salary for that salary group (A17) as $36,976 for fiscal years 2020 and 2021.) A former employee who received that amount or more at the time of leaving state employment is subject to the third revolving door rule, regardless of whether the former employee held a classified position or a position exempt from the classification schedule.

An officer or employee subject to the third revolving door prohibition *may never* represent a person or receive compensation for services rendered on behalf of any person regarding a "particular matter" in which he or she "participated" while serving with the agency, either through personal involvement or because the matter was within his or her official responsibility. In this context, "participated" means to have taken action as an officer or employee through decision, approval, disapproval, recommendation, giving advice, investigation, or similar action.

The most common question raised about the third revolving door rule is whether proposed future employment would involve work on a "particular matter" that a person participated in as a state officer or employee. A "particular matter" is defined narrowly to mean something quite specific, such as an investigation, application, contract, rulemaking, or other administrative proceeding.

This means a person subject to the third revolving door prohibition may work on matters similar to matters he or she worked on as a state employee, but not on exactly the same matters. For example, a former employee of a regulatory agency who worked on Permit Application X at the agency could not leave the agency and work on Permit Application X on behalf of the applicant. The former employee could, however, work on Permit Application Z, even if Permit Application Z involved issues similar to the issues raised in connection with Permit Application X.

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Representation of Nonprofit Organizations or Governmental Bodies

All of the revolving door laws apply to activity on behalf of a "person." Under the revolving door laws, a "person" is an individual or business entity. It does not include a nonprofit organization or governmental body.

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Penalties

A violation of the second or third revolving door provisions is a Class A misdemeanor.

The Texas Ethics Commission may assess a civil penalty for a violation of any of the three revolving door laws.

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Revised October 3, 2019

REVOLVING DOOR

LEAVING A STATE AGENCY?

A Texas Ethics Commission Guide to the Revolving Door Provisions in Chapter 572 of the Texas Government Code

Update on Texas Essential Knowledge and Skills (TEKS) Review

June 30, 2020

COMMITTEE OF THE FULL BOARD: DISCUSSION
STATE BOARD OF EDUCATION: NO ACTION

SUMMARY: This item provides the opportunity for staff to present an update on the review of the Texas Essential Knowledge and Skills (TEKS) and the English Language Proficiency Standards (ELPS).

STATUTORY AUTHORITY: Texas Education Code (TEC), §§7.102(c)(4); 28.002(a) and (c); and 28.025(a).

TEC, §7.102(c)(4), requires the State Board of Education (SBOE) to establish curriculum and graduation requirements.

TEC, §28.002(a), identifies the subjects of the required curriculum.

TEC, §28.002(c), requires the SBOE to by rule identify the essential knowledge and skills of each subject in the required curriculum that all students should be able to demonstrate and that will be used in evaluating instructional materials and addressed on the state assessment instruments.

TEC, §28.025(a), requires the SBOE to by rule determine the curriculum requirements for the foundation high school graduation program that are consistent with the required curriculum under the TEC, §28.002.

The full text of statutory citations can be found in the statutory authority section of this agenda.

PREVIOUS BOARD ACTION: The SBOE adopted the TEKS for all subjects effective September 1, 1998. The English language arts and reading TEKS were amended effective September 4, 2008. The Spanish language arts and reading TEKS were amended effective November 26, 2008. The TEKS for high school English elective courses were amended effective August 23, 2010. In May 2017, the SBOE gave final approval to revisions to the English and Spanish language arts and reading TEKS for Kindergarten-Grade 8 with a scheduled implementation date of the 2019-2020 school year. The SBOE gave final approval to revisions to the English language arts and reading and English as a second language (ESL) TEKS for high school with a scheduled implementation date of the 2020-2021 school year. The mathematics TEKS were amended effective August 1, 2006. The secondary mathematics TEKS were amended effective February 22, 2009. The mathematics TEKS were again amended effective September 12, 2012. The science TEKS were amended effective August 4, 2009 and were amended again to streamline the science TEKS effective August 27, 2018. The social studies TEKS were amended effective August 23, 2010 and were amended again to streamline the social studies TEKS in 2018. The streamlined social studies TEKS for middle and high school social studies were effective August 1, 2019 for implementation beginning with the 2019-2020 school year. The streamlined Kindergarten-Grade 5 social studies TEKS are scheduled for implementation in the 2020-2021 school year. The career and technical education (CTE) TEKS were amended effective August 23, 2010. The CTE TEKS were again amended effective August 28, 2017 and implemented in the 2017-2018 school year. The fine arts TEKS were amended effective August 24, 2015. The TEKS for languages other than English (LOTE) were amended effective July 15, 2014, and December 31, 2014, and were implemented in the 2017-2018 school year. The technology applications TEKS were amended effective September 26, 2011.

At the June 2019 SBOE meeting, the board held a work session to discuss updating the TEKS and instructional materials review and adoption schedule. At the September 2019 meeting, the board approved the schedule through the 2028-2029 school year.

BACKGROUND INFORMATION AND JUSTIFICATION: The board received training from a standards writing advisor at the July 2014 meeting. The standards writing advisor provided additional training to Texas Education Agency (TEA) staff in October 2014 to support future facilitation of the TEKS review committees.

The 2017 TEKS review and revision process was used for the streamlining of the social studies TEKS. At the November 2018 meeting, the SBOE approved updates to the 2017 TEKS review and revision process to better clarify the process. The complete updated process will be used for the review of the physical education, health education, and science TEKS.

The SBOE began the review of the English Language Proficiency Standards (ELPS) in early 2019, in accordance with the SBOE's approved TEKS and instructional materials review schedule. Applications to serve on ELPS review work groups were posted on the TEA website in December 2018. Also in December 2018, TEA distributed a survey to collect information from educators regarding the review and revision of the ELPS.

In preparation for the review and revision of the health education TEKS, the board in September 2017 requested that the commissioner convene a group of experts to develop a study to provide guidance for the development of revised health education TEKS. At that time, the SBOE also approved parameters for the recommendations of the commissioner's committee to include a framework for what the strands should be for Kindergarten-Grade 12, distinctions regarding grade levels and/or grade bands at which health concepts are most appropriately taught, and a summary of all statutory requirements related to health education and suggestions regarding the most appropriate way to integrate those requirements into the framework. In 2018, TEA convened a group of experts to develop recommendations to address the SBOE's charge related to the health education TEKS. This health education advisory committee drafted a response to the SBOE's charge, and the response was submitted to the commissioner of education. Based on the response, the commissioner of education provided recommendations to the SBOE at the June 2019 meeting.

The review of the health education TEKS is taking place concurrently with the review of the physical education TEKS. In March 2019, applications to serve on health education and physical education TEKS review work groups were posted on the TEA website. At the April meeting, SBOE members were asked to designate content advisors for the health education and physical education TEKS reviews. Names of content advisors were due May 1, 2019. In May 2019, TEA distributed surveys to collect information from educators regarding the review and revision of the health education and physical education TEKS. TEA staff provided applications for the health education and physical education review work groups to SBOE members on a monthly or bimonthly basis from June 2019 to May 2020.

In preparation for the review of the science TEKS, SBOE members were asked at the September 2019 meeting to designate science content advisors. Applications to serve on the science TEKS review work groups were posted on the TEA website in November 2019, and in December 2019, TEA distributed a survey to collect information from educators regarding the review and revision of the science TEKS. TEA staff sent applications for approval by SBOE members in January, February, March, and May 2020.

PUBLIC BENEFIT AND COST TO PERSONS: Benefits include better alignment of the ELPS and TEKS and coordination of the standards with the adoption of instructional materials.

Staff Members Responsible:
Monica Martinez, Associate Commissioner, Standards and Support Services
Shelly Ramos, Senior Director, Curriculum Standards and Student Support

Discussion of Pending Litigation

June 30, 2020

COMMITTEE OF THE FULL BOARD: DISCUSSION
STATE BOARD OF EDUCATION: NO ACTION

SUMMARY: The State Board of Education (SBOE) may enter executive session in accordance with the Texas Government Code, §551.071(1)(A), to discuss pending and contemplated litigation with the general counsel, legal staff, and, if necessary, attorney(s) from the Attorney General's Office. The Committee of the Full Board will meet in Room 1-103 to discuss this item.

Cases to be discussed may include:

> *Tribune Company,* No. 08-13141*; The Official Committee of Unsecured Creditors of Tribune Company v. Fitzsimmons, Adv. Pro.* No. 10-54010 *(Bankr. D. Del);*

> *Deutsche Bank v Bank of America,* No. 3:11-CV-01175-F *(N. D. Tex., Dallas Div.) and Deutsche Bank v. Employees Retirement Fund of the City of Dallas,* No. 3:11-CV-1167-F*; (N. D. Tex. Dallas Div.) CONSOLIDATED in: In re: Tribune Company Fraudulent Conveyance Litigation;* No. 11-MD-2296 *Consolidated Multidistrict Action (S.D.N.Y.);* and

> any other litigation arising after the date of posting or reasonably contemplated as of the date of the board meeting.

BOARD RESPONSE: Board may advise and comment.

BACKGROUND INFORMATION AND JUSTIFICATION: At every regularly scheduled meeting, the SBOE has the opportunity to be apprised of pending litigation as the need arises. The SBOE may also receive continued briefing on procedural developments.

Staff Member Responsible:
Von Byer, General Counsel, Legal Services

COMMITTEE ON INSTRUCTION

Proposed Amendments to 19 TAC Chapter 74, <u>Curriculum Requirements</u>, Subchapter A, <u>Required Curriculum</u>, §74.1, <u>Essential Knowledge and Skills</u>, and §74.3, <u>Description of a Required Secondary Curriculum</u>
(First Reading and Filing Authorization)

July 2, 2020

COMMITTEE ON INSTRUCTION: ACTION
STATE BOARD OF EDUCATION: ACTION

SUMMARY: This item presents for first reading and filing authorization proposed amendments to 19 Texas Administrative Code (TAC) Chapter 74, <u>Curriculum Requirements</u>, Subchapter A, <u>Required Curriculum</u>, §74.1, <u>Essential Knowledge and Skills</u>, and §74.3, <u>Description of a Required Secondary Curriculum</u>. The proposed amendments would update the rules to align with recent legislation and with changes to the technology applications and career and technical education (CTE) Texas Essential Knowledge and Skills (TEKS).

STATUTORY AUTHORITY: Texas Education Code (TEC), §7.102(c)(4); and §28.002(a), as amended by Senate Bill (SB) 11 and House Bill (HB) 18, 86th Texas Legislature, 2019.

TEC, §7.102(c)(4), requires the State Board of Education (SBOE) to establish curriculum and graduation requirements.

TEC, §28.002(a), as amended by SB 11 and HB 18, 86th Texas Legislature, 2019, identifies the subjects of the required curriculum.

The full text of statutory citations can be found in the statutory authority section of this agenda.

EFFECTIVE DATE: The proposed effective date of the proposed amendments is 20 days after filing as adopted with the Texas Register. Under TEC, §7.102(f), the SBOE must approve the rule action at second reading and final adoption by a vote of two-thirds of its members to specify an effective date earlier than the beginning of the 2021-2022 school year. The earlier effective date would align the rules with legislation and updates to technology applications and CTE courses as soon as possible.

PREVIOUS BOARD ACTION: The SBOE adopted 19 TAC Chapter 74, Subchapter A, effective September 1, 1996. Section 74.1 was last amended effective June 18, 2014. Section 74.3 was last amended effective October 23, 2016. A discussion item regarding Chapter 74, Subchapter A, was included on the agenda for the Committee on Instruction during the January 2020 SBOE meeting.

BACKGROUND INFORMATION AND JUSTIFICATION: The 86th Texas Legislature, 2019, passed HB 963, which required the SBOE no later than March 1, 2020, to amend its rules in order to consolidate the TEKS for high school for technology application courses with the TEKS for CTE courses and to eliminate duplicative courses. A discussion item regarding proposed revisions to 19 TAC Chapter 126, <u>Texas Essential Knowledge and Skills for Technology Applications</u>, and Chapter 130, <u>Texas Essential Knowledge and Skills for Career and Technical Education</u>, was presented to the Committee of the Full Board at the November 2019 SBOE meeting, and at the January 2020 meeting the board approved the proposed revisions for first reading and filing authorization. At the April 2020 SBOE meeting, the board approved the proposed revisions for second reading and final adoption. With the

update to the courses for technology applications and the addition of a new CTE career cluster in energy, the SBOE will need to align the courses that districts and charter schools are required to make available to students.

Additionally, SB 11 and HB 18, 86th Texas Legislature, 2019, amended the required curriculum in TEC, §28.002, to add suicide prevention to the topics included in health education. The statutory changes also clarify that health education must include physical health, including the importance of proper nutrition and exercise, and mental health, including instruction about mental health conditions, substance abuse, skills to manage emotions, establishing and maintaining positive relationships, and responsible decision-making.

At the January 2020 meeting, a discussion item on proposed amendments to 19 TAC §74.1 and §74.3 was presented to the Committee on Instruction. The committee requested that Texas Education Agency (TEA) staff prepare proposed amendments for consideration by the SBOE at its April 2020 meeting and indicated that districts should no longer be required to offer specific technology applications courses since they will be included in CTE. This item was not presented at the April 2020 meeting because the meeting agenda was streamlined to accommodate a remote format due to disruptions resulting from the COVID-19 pandemic.

The proposed amendments would align the required secondary curriculum with the changes to the technology applications and CTE TEKS and reflect recent legislation.

The attachment to this item reflects the text of proposed amendments to 19 TAC §74.1 and §74.3 for consideration by the SBOE for first reading and filing authorization.

FISCAL IMPACT: TEA has determined that there are no additional costs to state or local government required to comply with the proposal.

LOCAL EMPLOYMENT IMPACT: The proposal has no effect on local economy; therefore, no local employment impact statement is required under Texas Government Code, §2001.022.

SMALL BUSINESS, MICROBUSINESS, AND RURAL COMMUNITY IMPACT: The proposal has no direct adverse economic impact for small businesses, microbusinesses, or rural communities; therefore, no regulatory flexibility analysis specified in Texas Government Code, §2006.002, is required.

COST INCREASE TO REGULATED PERSONS: The proposal does not impose a cost on regulated persons, another state agency, a special district, or a local government and, therefore, is not subject to Texas Government Code, §2001.0045.

TAKINGS IMPACT ASSESSMENT: The proposal does not impose a burden on private real property and, therefore, does not constitute a taking under Texas Government Code, §2007.043.

GOVERNMENT GROWTH IMPACT: TEA staff prepared a Government Growth Impact Statement assessment for this proposed rulemaking. The proposed rulemaking would expand and limit existing regulations by revising the high school courses required to be offered by school districts and charter schools and eliminating certain technology applications courses from the list of high school courses required to be offered.

The proposed rulemaking would not create or eliminate a government program; would not require the creation of new employee positions or elimination of existing employee positions; would not require an

increase or decrease in future legislative appropriations to the agency; would not require an increase or decrease in fees paid to the agency; would not create a new regulation; would not repeal an existing regulation; would not increase or decrease the number of individuals subject to its applicability; and would not positively or adversely affect the state's economy.

PUBLIC BENEFIT AND COST TO PERSONS: The proposal would update and clarify the rules regarding secondary courses required to be offered in order to avoid confusion for districts and schools. There is no anticipated economic cost to persons who are required to comply with the proposal.

DATA AND REPORTING IMPACT: The proposal would have no new data and reporting impact.

PRINCIPAL AND CLASSROOM TEACHER PAPERWORK REQUIREMENTS: TEA has determined that the proposal would not require a written report or other paperwork to be completed by a principal or classroom teacher.

PUBLIC COMMENTS: The public comment period on the proposal begins July 31, 2020, and ends September 4, 2020. The SBOE will take registered oral and written comments on the proposal at the appropriate committee meeting in September 2020 in accordance with the SBOE board operating policies and procedures. A request for a public hearing on the proposal submitted under the Administrative Procedure Act must be received by the commissioner of education not more than 14 calendar days after notice of the proposal has been published in the *Texas Register* on July 31, 2020.

MOTION TO BE CONSIDERED: The State Board of Education:

> Approve for first reading and filing authorization the proposed amendments to 19 TAC Chapter 74, Curriculum Requirements, Subchapter A, Required Curriculum, §74.1, Essential Knowledge and Skills, and §74.3, Description of a Required Secondary Curriculum.

Staff Members Responsible:
Monica Martinez, Associate Commissioner, Standards and Support Services
Shelly Ramos, Senior Director, Curriculum Standards and Student Support

Attachment: Text of Proposed Amendments to 19 TAC Chapter 74, Curriculum Requirements, Subchapter A, Required Curriculum, §74.1, Essential Knowledge and Skills, and §74.3, Description of a Required Secondary Curriculum

ATTACHMENT
Text of Proposed Amendments to 19 TAC

Chapter 74. Curriculum Requirements

Subchapter A. Required Curriculum

§74.1. Essential Knowledge and Skills.

(a)   A school district that offers kindergarten through Grade 12 must offer the following as a required curriculum:

    (1)   a foundation curriculum that includes:

        (A)   English language arts;

        (B)   mathematics;

        (C)   science; and

        (D)   social studies, consisting of Texas, United States and world history, government, geography, and economics, with emphasis on the free enterprise system and its benefits; and

    (2)   an enrichment curriculum that includes:

        (A)   to the extent possible, languages other than English;

        (B)   health, with emphasis on : [the importance of proper nutrition and exercise;]

            (i)   physical health, including the importance of proper nutrition and exercise;

            (ii)   mental health, including instruction about mental health conditions, substance abuse, skills to manage emotions, establishing and maintaining positive relationships, and responsible decision-making; and

            (iii)   suicide prevention, including recognizing suicide-related risk factors and warning signs;

        (C)   physical education;

        (D)   fine arts;

        (E)   career and technical education;

        (F)   technology applications;

        (G)   religious literature, including the Hebrew Scriptures (Old Testament) and New Testament, and its impact on history and literature; and

        (H)   personal financial literacy.

(b)   A school district must provide instruction in the essential knowledge and skills of the appropriate grade levels in the foundation and enrichment curriculum as specified in paragraphs (1)-(12) [(1)-(13)] of this subsection. A school district may add elements at its discretion but must not delete or omit instruction in the foundation and enrichment curriculum specified in subsection (a) of this section.

    (1)   Chapter 110 of this title (relating to Texas Essential Knowledge and Skills for English Language Arts and Reading) . [;]

    (2)   Chapter 111 of this title (relating to Texas Essential Knowledge and Skills for Mathematics) . [;]

    (3)   Chapter 112 of this title (relating to Texas Essential Knowledge and Skills for Science) . [;]

    (4)   Chapter 113 of this title (relating to Texas Essential Knowledge and Skills for Social Studies) . [;]

(5)   Chapter 114 of this title (relating to Texas Essential Knowledge and Skills for Languages Other Than English) . [;]

(6)   Chapter 115 of this title (relating to Texas Essential Knowledge and Skills for Health Education) . [;]

(7)   Chapter 116 of this title (relating to Texas Essential Knowledge and Skills for Physical Education) . [;]

(8)   Chapter 117 of this title (relating to Texas Essential Knowledge and Skills for Fine Arts) . [;]

[(9)   Chapter 118 of this title (relating to Texas Essential Knowledge and Skills for Economics with Emphasis on the Free Enterprise System and Its Benefits);]

(9) [(10)]   Chapter 126 of this title (relating to Texas Essential Knowledge and Skills for Technology Applications) . [;]

(10) [(11)]   Chapter 127 of this title (relating to Texas Essential Knowledge and Skills for Career Development) . [;]

(11) [(12)]   Chapter 128 of this title (relating to Texas Essential Knowledge and Skills for Spanish Language Arts and English as a Second Language) . [; and]

(12) [(13)]   Chapter 130 of this title (relating to Texas Essential Knowledge and Skills for Career and Technical Education).

§74.3. Description of a Required Secondary Curriculum.

(a)   (No change.)

(b)   Secondary Grades 9-12.

(1)   A school district that offers Grades 9-12 must provide instruction in the required curriculum as specified in §74.1 of this title. The district must ensure that sufficient time is provided for teachers to teach and for students to learn the subjects in the required curriculum. The school district may provide instruction in a variety of arrangements and settings, including mixed-age programs designed to permit flexible learning arrangements for developmentally appropriate instruction for all student populations to support student attainment of course and grade level standards.

(2)   The school district must offer the courses listed in this paragraph and maintain evidence that students have the opportunity to take these courses:

(A)   English language arts--English I, II, III, and IV and at least one additional advanced English course;

(B)   mathematics--Algebra I, Algebra II, Geometry, Precalculus, and Mathematical Models with Applications;

(C)   science--Integrated Physics and Chemistry, Biology, Chemistry, Physics, and at least two additional science courses selected from Aquatic Science, Astronomy, Earth and Space Science, Environmental Systems, Advanced Animal Science, Advanced Biotechnology, Advanced Plant and Soil Science, Anatomy and Physiology, Engineering Design and Problem Solving, Food Science, Forensic Science, Medical Microbiology, Pathophysiology, Scientific Research and Design, and Principles of Engineering. The requirement to offer two additional courses may be reduced to one by the commissioner of education upon application of a school district with a total high school enrollment of less than 500 students. Science courses shall include at least 40% hands-on laboratory investigations and field work using appropriate scientific inquiry;

(D)   social studies--United States History Studies Since 1877, World History Studies, United States Government, World Geography Studies, Personal Financial Literacy, and Economics with Emphasis on the Free Enterprise System and Its Benefits;

(E)   physical education--at least two courses selected from Foundations of Personal Fitness, Adventure/Outdoor Education, Aerobic Activities, or Team or Individual Sports;

(F)   fine arts--courses selected from at least two of the four fine arts areas (art, music, theatre, and dance)--Art I, II, III, IV; Music I, II, III, IV; Theatre I, II, III, IV; or Dance I, II, III, IV;

(G)   career and technical education-- three or more career and technical education courses for four or more credits with at least one advanced course aligned with a specified number of Texas Education Agency-designated programs of study determined by enrollment as follows [coherent sequences of courses selected from at least three of the following seventeen [sixteen] career clusters] :

    (i)   one program of study for a district with fewer than 500 students enrolled;

    (ii)   two programs of study for a district with 501-1,000 students enrolled;

    (iii)   three programs of study for a district with 1,001-2,000 students enrolled;

    (iv)   four programs of study for a district with 1,001-5,000 students enrolled;

    (v)   five programs of study for a district with 5,001-10,000 students enrolled; and

    (vi)   six programs of study for a district with more than 10,000 students enrolled.

    [(i)   Agriculture, Food, and Natural Resources;]

    [(ii)   Architecture and Construction;]

    [(iii)   Arts, Audio/Video Technology, and Communications;]

    [(iv)   Business Management and Administration;]

    [(v)   Education and Training;]

    [(vi)   Finance;]

    [(vii) Government and Public Administration;]

    [(viii) Health Science;]

    [(ix)   Hospitality and Tourism;]

    [(x)   Human Services;]

    [(xi)   Information Technology;]

    [(xii) Law, Public Safety, Corrections, and Security;]

    [(xiii) Manufacturing;]

    [(xiv) Marketing;]

    [(xv)   Science, Technology, Engineering, and Mathematics; and]

    [(xvi) Transportation, Distribution, and Logistics;]

(H)   languages other than English--Levels I, II, and III or higher of the same language; and

[(I)   technology applications--Computer Science I and Computer Science II or Advanced Placement (AP) Computer Science and at least two courses selected from Computer Science III, Digital Art and Animation, Digital Communications in the 21st Century, Digital Design and Media Production, Digital Forensics, Digital Video and Audio Design, Discrete Mathematics for Computer Science, Fundamentals of Computer Science, Game Programming and Design, Independent Study in Evolving/Emerging Technologies, Independent Study in Technology Applications, Mobile Application Development, Robotics Programming and Design, 3-D Modeling and Animation, Web Communications, Web Design, and Web Game Development; and]

    (I) [(J)] speech--Communication Applications.

  (3) Districts may offer additional courses from the complete list of courses approved by the State Board of Education to satisfy graduation requirements as referenced in this chapter.

  (4) The school district must provide each student the opportunity to participate in all courses listed in subsection (b)(2) of this section. The district must provide students the opportunity each year to select courses in which they intend to participate from a list that includes all courses required to be offered in subsection (b)(2) of this section. If the school district will not offer the required courses every year, but intends to offer particular courses only every other year, it must notify all enrolled students of that fact. A school district must teach a course that is specifically required for high school graduation at least once in any two consecutive school years. For a subject that has an end-of-course assessment, the district must either teach the course every year or employ options described in Subchapter C of this chapter (relating to Other Provisions) to enable students to earn credit for the course and must maintain evidence that it is employing those options.

  (5) For students entering Grade 9 beginning with the 2007-2008 school year, districts must ensure that one or more courses offered in the required curriculum for the recommended and advanced high school programs include a research writing component.

(c) (No change.)

**Proposed New 19 TAC Chapter 120, <u>Other Essential Knowledge and Skills</u>,
Subchapter A, <u>Character Traits</u>
(First Reading and Filing Authorization)**

July 2, 2020

**COMMITTEE OF THE FULL BOARD: ACTION
STATE BOARD OF EDUCATION: ACTION**

SUMMARY: This item presents for first reading and filing authorization proposed new 19 Texas Administrative Code (TAC) Chapter 120, <u>Other Essential Knowledge and Skills</u>, Subchapter A, <u>Character Traits</u>. The proposed new subchapter would add new Texas Essential Knowledge and Skills (TEKS) for positive character traits for Kindergarten-Grade 12 in accordance with House Bill (HB) 1026, 86th Texas Legislature, 2019.

STATUTORY AUTHORITY: Texas Education Code (TEC), §§7.102(c)(4); 28.002(a) and (c); and 29.906, as amended by HB 1026, 86th Texas Legislature, 2019.

TEC, §7.102(c)(4), requires the State Board of Education (SBOE) to establish curriculum and graduation requirements.

TEC, §28.002(a), identifies the subjects of the required curriculum.

TEC, §28.002(c), requires the SBOE to by rule identify the essential knowledge and skills of each subject in the required curriculum that all students should be able to demonstrate and that will be used in evaluating instructional materials and addressed on the state assessment instruments.

TEC, §29.906, as amended by HB 1026, 86th Texas Legislature, 2019, requires the SBOE to integrate positive character traits into the essential knowledge and skills adopted for Kindergarten-Grade 12, as appropriate.

The full text of statutory citations can be found in the statutory authority section of this agenda.

EFFECTIVE DATE: The proposed effective date of the proposed new sections is August 1, 2021. Under TEC, §7.102(f), the SBOE must approve the rule action at second reading and final adoption by a vote of two-thirds of its members to specify an effective date earlier than the beginning of the 2021-2022 school year. The earlier effective date will allow districts of innovation that begin school prior to the statutorily required start date to implement the proposed rulemaking when they begin their school year.

PREVIOUS BOARD ACTION: A discussion item on character traits instruction was presented to the Committee of the Full Board at the January 2020 SBOE meeting.

BACKGROUND INFORMATION AND JUSTIFICATION: In 2019, the 86th Texas Legislature passed HB 1026, requiring the SBOE to integrate positive character traits into the essential knowledge and skills adopted for Kindergarten-Grade 12, as appropriate. The legislation requires the SBOE to include the following positive character education traits in the standards: courage; trustworthiness, including honesty, reliability, punctuality, and loyalty; integrity; respect and courtesy; responsibility, including accountability, diligence, perseverance, and self-control; fairness, including justice and freedom from prejudice; caring,

including kindness, empathy, compassion, consideration, patience, generosity, and charity; good citizenship, including patriotism, concern for the common good and the community, and respect for authority and the law; school pride; and gratitude. The legislation also requires school districts and open-enrollment charter schools to adopt a character education program that includes the required positive character traits.

At the January 2020 SBOE meeting, a discussion item on character traits instruction was presented to the Committee of the Full Board. The committee requested that staff prepare a proposal to add essential knowledge and skills for positive character traits as a new chapter in the TAC. First reading and filing authorization of this item was delayed from April 2020 because the meeting agenda was streamlined to accommodate a remote format due to disruptions resulting from the COVID-19 pandemic. Due to the delay in this rulemaking, an implementation date of the 2021-2022 school year is recommended.

The proposed new sections would implement HB 1026, 86th Texas Legislature, 2019, by establishing TEKS for positive character traits for Kindergarten-Grade 12. The standards would address requirements by grade bands, including Kindergarten-Grade 2, Grades 3-5, Grades 6-8, and Grades 9-12. A proposed new section on implementation would also be added to specify the required frequency of the instruction and how the instruction may be provided.

The attachment to this item reflects the text of proposed new 19 TAC Chapter 120, Subchapter A, for consideration by the SBOE for first reading and filing authorization.

FISCAL IMPACT: Texas Education Agency (TEA) has determined that there are no additional costs to state or local government required to comply with the proposal.

LOCAL EMPLOYMENT IMPACT: The proposal has no effect on local economy; therefore, no local employment impact statement is required under Texas Government Code, §2001.022.

SMALL BUSINESS, MICROBUSINESS, AND RURAL COMMUNITY IMPACT: The proposal has no direct adverse economic impact for small businesses, microbusinesses, or rural communities; therefore, no regulatory flexibility analysis specified in Texas Government Code, §2006.002, is required.

COST INCREASE TO REGULATED PERSONS: The proposal does not impose a cost on regulated persons, another state agency, a special district, or a local government and, therefore, is not subject to Texas Government Code, §2001.0045.

TAKINGS IMPACT ASSESSMENT: The proposal does not impose a burden on private real property and, therefore, does not constitute a taking under Texas Government Code, §2007.043.

GOVERNMENT GROWTH IMPACT: TEA staff prepared a Government Growth Impact Statement assessment for this proposed rulemaking. The proposed rulemaking would create a new regulation by adding essential knowledge and skills for positive character traits as a new chapter in the TAC.

The proposed rulemaking would not create or eliminate a government program; would not require the creation of new employee positions or elimination of existing employee positions; would not require an increase or decrease in future legislative appropriations to the agency; would not require an increase or decrease in fees paid to the agency; would not expand, limit, or repeal an existing regulation; would not increase or decrease the number of individuals subject to its applicability; and would not positively or adversely affect the state's economy.

PUBLIC BENEFIT AND COST TO PERSONS: The proposed new rules would identify essential knowledge and skills in positive character traits for Kindergarten-Grade 12 in accordance with HB 1026, 86th Texas Legislature, 2019. There is no anticipated economic cost to persons who are required to comply with the proposal.

DATA AND REPORTING IMPACT: The proposal would have no data and reporting impact.

PRINCIPAL AND CLASSROOM TEACHER PAPERWORK REQUIREMENTS: TEA has determined that the proposal would not require a written report or other paperwork to be completed by a principal or classroom teacher.

PUBLIC COMMENTS: The public comment period on the proposal begins July 31, 2020, and ends September 4, 2020. The SBOE will take registered oral and written comments on the proposal at the appropriate committee meeting in September 2020 in accordance with the SBOE board operating policies and procedures. A request for a public hearing on the proposal submitted under the Administrative Procedure Act must be received by the commissioner of education not more than 14 calendar days after notice of the proposal has been published in the *Texas Register* on July 31, 2020.

MOTION TO BE CONSIDERED: The State Board of Education:

> Approve for first reading and filing authorization proposed new 19 TAC Chapter 120, Other Essential Knowledge and Skills, Subchapter A, Character Traits.

Staff Members Responsible:
Monica Martinez, Associate Commissioner, Standards and Support Services
Shelly Ramos, Senior Director, Curriculum Standards and Student Support

Attachment: Text of Proposed New 19 TAC Chapter 120, Other Essential Knowledge and Skills, Subchapter A, Character Traits

Chapter 120. Other Texas Essential Knowledge and Skills

Subchapter A. Character Traits

§120.1. Implementation of Texas Essential Knowledge and Skills for Positive Character Traits.

(a)   The provisions of this subchapter shall be implemented by school districts beginning with the 2021-2022 school year.

(b)   School districts and open-enrollment charter schools are required to provide instruction in the essential knowledge and skills for positive character traits outlined in this subchapter at least once in the following grade bands: Kindergarten-Grade 2, Grades 3-5, Grades 6-8, and Grades 9-12.

(c)   School districts may provide the required instruction in a variety of arrangements, including through a stand-alone course or by integrating the positive character traits standards in the essential knowledge and skills for one or more courses or subject areas at the appropriate grade levels.

§120.3. Texas Essential Knowledge and Skills for Positive Character Traits, Kindergarten-Grade 2, Adopted 2020.

(a)   Introduction.

   (1)   Character education introduces students to character traits that empower them to be good citizens who are trustworthy, responsible, and caring. The character traits reflect positive beliefs, attitudes, and mindsets; provide opportunities for self-reflection; and permit students to apply effective strategies to make decisions, solve problems, and behave responsibly.

   (2)   The standards for positive character traits are comprised of four strands: trustworthiness, responsibility, caring, and citizenship. Each strand consists of the following character traits.

      (A)   Trustworthiness: loyalty, integrity, reliability, and punctuality.

      (B)   Responsibility: accountability, perseverance, diligence, and self-control.

      (C)   Caring: kindness, empathy, charity, generosity, patience, consideration, and compassion.

      (D)   Citizenship: respect, courtesy, concern for the common good and the community, fairness, freedom from prejudice, justice, patriotism, school pride, respect for authority and law, and gratitude.

   (3)   Students are expected to develop an awareness of self-identity as well as recognize multiple perspectives, difference and diversity, biases, and the social and cultural context in which they live.

   (4)   The knowledge and skills for positive character traits are organized in the following grade bands: Kindergarten-Grade 2, Grades 3-5, Grades 6-8, and Grades 9-12. However, due to the complexity of the concepts, student expectations and knowledge and skills statements cannot be taught, discussed, or viewed in isolation.

   (5)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(b)   Knowledge and skills.

   (1)   Trustworthiness. The student understands how personal choices and actions relate to character building. The student is expected to:

      (A)   describe how personal choices lead to personal actions;

      (B)   explain what it means to be trustworthy; and

(C)   identify personal actions that build trustworthiness, including being honest and punctual.

(2)   Responsibility. The student understands the concept of responsibility and how personal actions demonstrate responsibility. The student is expected to:

    (A)   describe and give examples of how feelings and beliefs influence personal actions;

    (B)   describe how to make personal choices before speaking and acting; and

    (C)   define self-control and identify instances in which self-control is important.

(3)   Caring. The student understands how personal actions demonstrate characteristics of caring. The student is expected to:

    (A)   define patience and identify actions that demonstrate patience; and

    (B)   explain and identify examples of how actions can demonstrate kindness to others.

(4)   Citizenship. The student understands how personal actions can demonstrate good citizenship. The student is expected to:

    (A)   define fairness and identify examples of fairness in a variety of situations;

    (B)   define and identify examples of patriotism;

    (C)   explain what it means to demonstrate respect and courtesy and why it is important to demonstrate respect and courtesy to others; and

    (D)   define good citizenship.

§120.5. Texas Essential Knowledge and Skills for Positive Character Traits, Grades 3-5, Adopted 2020.

(a)   Introduction.

(1)   Character education introduces students to character traits that empower them to be good citizens who are trustworthy, responsible, and caring. The character traits reflect positive beliefs, attitudes, and mindsets; provide opportunities for self-reflection; and permit students to apply effective strategies to make decisions, solve problems, and behave responsibly.

(2)   The standards for positive character traits are comprised of four strands: trustworthiness, responsibility, caring, and citizenship. Each strand consists of the following character traits.

    (A)   Trustworthiness: loyalty, integrity, reliability, and punctuality.

    (B)   Responsibility: accountability, perseverance, diligence, and self-control.

    (C)   Caring: kindness, empathy, charity, generosity, patience, consideration, and compassion.

    (D)   Citizenship: respect, courtesy, concern for the common good and the community, fairness, freedom from prejudice, justice, patriotism, school pride, respect for authority and law, and gratitude.

(3)   Students are expected to develop an awareness of self-identity as well as recognize multiple perspectives, difference and diversity, biases, and the social and cultural context in which they live.

(4)   The knowledge and skills for positive character traits are organized in the following grade bands: Kindergarten-Grade 2, Grades 3-5, Grades 6-8, and Grades 9-12. However, due to the complexity of the concepts, student expectations and knowledge and skills statements cannot be taught, discussed, or viewed in isolation.

(5)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(b)   Knowledge and skills.

(1)   Trustworthiness. The student understands how personal responsibility relates to being trustworthy. The student is expected to:

    (A)   identify and define traits of trustworthiness, including reliability and loyalty;

    (B)   identify and practice strategies for being honest and punctual; and

    (C)   define and identify examples of unethical behavior.

(2)   Responsibility. The student understands how personal choices are associated with responsibility. The student is expected to:

    (A)   explain what it means to be responsible for personal decisions and actions;

    (B)   describe positive and negative consequences of personal decisions and actions;

    (C)   identify and demonstrate ways to practice self-control; and

    (D)   describe the relationship between being responsible and being accountable.

(3)   Caring. The student understands how personal actions demonstrate characteristics of caring. The student is expected to:

    (A)   describe how feelings impact decision making and behaviors;

    (B)   explain how one can show patience, consideration, and compassion; and

    (C)   define empathy and discuss the connection between empathy and charity.

(4)   Citizenship. The student understands that personal responsibility is associated with citizenship. The student is expected to:

    (A)   describe the differences and similarities among gratitude, respect, and courtesy;

    (B)   compare fairness and justice; and

    (C)   discuss the importance of obeying laws and rules.

§120.7. Texas Essential Knowledge and Skills for Positive Character Traits, Grades 6-8, Adopted 2020.

(a)   Introduction.

(1)   Character education introduces students to character traits that empower them to be good citizens who are trustworthy, responsible, and caring. The character traits reflect positive beliefs, attitudes, and mindsets; provide opportunities for self-reflection; and permit students to apply effective strategies to make decisions, solve problems, and behave responsibly.

(2)   The standards for positive character traits are comprised of four strands: trustworthiness, responsibility, caring, and citizenship. Each strand consists of the following character traits.

    (A)   Trustworthiness: loyalty, integrity, reliability, and punctuality.

    (B)   Responsibility: accountability, perseverance, diligence, and self-control.

    (C)   Caring: kindness, empathy, charity, generosity, patience, consideration, and compassion.

    (D)   Citizenship: respect, courtesy, concern for the common good and the community, fairness, freedom from prejudice, justice, patriotism, school pride, respect for authority and law, and gratitude.

(3)   Students are expected to develop an awareness of self-identity as well as recognize multiple perspectives, difference and diversity, biases, and the social and cultural context in which they live.

(4)   The knowledge and skills for positive character traits are organized in the following grade bands: Kindergarten-Grade 2, Grades 3-5, Grades 6-8, and Grades 9-12. However, due to the complexity of the concepts, student expectations and knowledge and skills statements cannot be taught, discussed, or viewed in isolation.

(b)   Knowledge and skills.

(1)   Trustworthiness. The student understands how personal choices and actions build trustworthiness. The student is expected to:

(A)   describe what it means to be reliable and loyal;

(B)   define and give examples of integrity;

(C)   examine the benefits of being trustworthy; and

(D)   describe personal actions that demonstrate trustworthiness at school, home, with peers, and within the community.

(2)   Responsibility. The student understands how personal beliefs and feelings influence our sense of responsibility. The student is expected to:

(A)   examine how personal beliefs, thoughts, and feelings about self can build responsibility;

(B)   identify and describe personal role models who demonstrate what it means to be accountable for words and actions;

(C)   discuss the benefits of practicing self-control; and

(D)   compare the benefits of responsible behavior with the consequences of irresponsible behavior.

(3)   Caring. The student understands how characteristics of caring impact personal relationships. The student is expected to:

(A)   evaluate one's personal attitudes and mindsets about self and others;

(B)   discuss how feelings, decision making, and personal behaviors can influence relationships with others; and

(C)   explain and identify examples of how a person can demonstrate empathy through kindness, charity, generosity, and courtesy.

(4)   Citizenship. The student understands how the character trait of citizenship impacts personal relationships. The student is expected to:

(A)   discuss the roles and responsibilities of citizens;

(B)   explain how one's personal actions can impact the perception of others;

(C)   describe how justice, fairness, and freedom are related; and

(D)   identify and practice a variety of conflict-resolution skills and strategies.

§120.9. Texas Essential Knowledge and Skills for Positive Character Traits, Grades 9-12, Adopted 2020.

(a)   Introduction.

(1)   Character education introduces students to character traits that empower them to be good citizens who are trustworthy, responsible, and caring. The character traits reflect positive beliefs, attitudes, and mindsets; provide opportunities for self-reflection; and permit students to apply effective strategies to make decisions, solve problems, and behave responsibly.

(2)   The standards for positive character traits are comprised of four strands: trustworthiness, responsibility, caring, and citizenship. Each strand consists of the following character traits.

(A)   Trustworthiness: loyalty, integrity, reliability, and punctuality.

(B)   Responsibility: accountability, perseverance, diligence, and self-control.

<blockquote>

(C)   Caring: kindness, empathy, charity, generosity, patience, consideration, and compassion.

(D)   Citizenship: respect, courtesy, concern for the common good and the community, fairness, freedom from prejudice, justice, patriotism, school pride, respect for authority and law, and gratitude.

</blockquote>

(3)   Students are expected to develop an awareness of self-identity as well as recognize multiple perspectives, difference and diversity, biases, and the social and cultural context in which they live.

(4)   The knowledge and skills for positive character traits are organized in the following grade bands: Kindergarten-Grade 2, Grades 3-5, Grades 6-8, and Grades 9-12. However, due to the complexity of the concepts, student expectations and knowledge and skills statements cannot be taught, discussed, or viewed in isolation.

(5)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(b)   Knowledge and skills.

(1)   Trustworthiness. The student understands how trustworthiness is viewed in society, politics, and the local and global community. The student is expected to:

     (A)   examine how the power to make decisions relates to personal actions;

     (B)   analyze how the decisions and actions of leaders in society, politics, and the local and global community demonstrate integrity; and

     (C)   examine the legal and social consequences of unethical behavior.

(2)   Responsibility. The student understands how leaders demonstrate responsibility in relationships, families, societies, politics, and the global community. The student is expected to:

     (A)   identify and describe personal role models who demonstrate what it means to be accountable for words and actions;

     (B)   identify and discuss real-world examples of taking personal responsibility for one's words and actions;

     (C)   identify and evaluate strategies for practicing self-control in a variety of situations; and

     (D)   define perseverance and identify strategies for demonstrating perseverance.

(3)   Caring. The student understands how characteristics of caring influence society and impact the global community. The student is expected to:

     (A)   evaluate one's personal attitudes and mindsets about self and others;

     (B)   discuss how feelings, decision making, and personal behaviors impact relationships within society; and

     (C)   identify strategies for how a person can show empathy through one's actions.

(4)   Citizenship. The student understands how character traits of citizenship influence our personal view of society and the local and global community. The student is expected to:

     (A)   explain the impact of personal actions on the family, school, and local and global community;

     (B)   practice the roles and responsibilities of citizenship in a variety of settings;

     (C)   apply conflict resolutions skills; and

     (D)   participate in constructive dialogues with those of differing viewpoints.

Proposed Approval of Innovative Courses

July 2, 2020

COMMITTEE ON INSTRUCTION: ACTION
STATE BOARD OF EDUCATION: ACTION

SUMMARY: This item recommends approval of innovative courses that do not fall within any of the subject areas of the foundation or enrichment curriculum.

STATUTORY AUTHORITY: Texas Education Code (TEC), §28.002(f).

TEC, §28.002(f), authorizes local school districts to offer courses in addition to those in the required curriculum for local credit and requires the State Board of Education (SBOE) to be flexible in approving a course for credit for high school graduation.

The full text of statutory citations can be found in the statutory authority section of this agenda.

PREVIOUS BOARD ACTION: The SBOE adopted 19 TAC §74.27, Innovative Courses and Programs, to be effective September 1, 1996, with amendments to be effective September 1, 1998, and December 25, 2007. In November 2019, the SBOE adopted additional amendments to 19 TAC §74.27 to be effective December 25, 2019.

From May 1998 through July 2003, the SBOE approved a total of 45 new innovative courses that do not fall within any of the subject areas of the foundation or enrichment curriculum through the annual approval process. In May 2004, July 2007, July 2009, January 2011, January 2012, January 2013, and July 2014 the SBOE approved the renewal of innovative courses in addition to approving new courses. In April 2005, April 2006, May 2008, May 2010, and April 2014 the SBOE approved renewal of innovative courses. In July 2010, the SBOE approved one new course. In April 2015, the SBOE approved for a period of five years three expiring course series submitted for renewal. In April 2016, the SBOE approved one new course for a period of three years and one new course for a one-year period. The SBOE approved for a period of five years each the renewal of three expiring innovative courses in November 2016. At the January-February 2017 meeting, the SBOE approved for renewal two expiring innovative courses for a period of five years, and at the April 2017 SBOE meeting, the SBOE approved for renewal three additional courses for a period of five years each. At the June 2017 SBOE meeting, the SBOE approved two new courses for a period of five years each. At the April 2018 SBOE meeting, the SBOE approved one new course for a period of five years. At the January-February 2019 SBOE meeting, the SBOE renewed one course for a period of three years and granted one course a one-year extension. At the April 2019 SBOE meeting, the board approved for renewal two courses for a period of three years and one course for a period of five years. At the June 2019 SBOE meeting, the board approved renewal of one course for a period of three years and one new course for a period of two years. The board approved renewal of eight innovative courses for a period of five years at the January 2020 SBOE meeting.

BACKGROUND INFORMATION AND JUSTIFICATION: After the board adopted new rules concerning graduation requirements, the experimental courses previously approved were phased out as of August 31, 1998. As a result of the adoption of the Texas Essential Knowledge and Skills (TEKS), districts now submit new requests for innovative course approval for courses that do not have TEKS.

The process outlined in 19 TAC §74.27 provides authority for the commissioner of education to approve discipline-based courses, but reserves for SBOE review and approval those courses that do not fall within any of the subject areas of the foundation or enrichment curriculum.

A brief description of the courses submitted for SBOE review and consideration will be provided to SBOE members at the April 2020 meeting. If approved, the recommended effective date for the courses would be August 1, 2020. With the approval of the local board of trustees, the courses would be available for school districts' use beginning with the 2020-2021 school year.

PUBLIC BENEFIT AND COST TO PERSONS: Students would have access to courses that meet local district needs.

MOTION TO BE CONSIDERED: The State Board of Education:

> Approve the innovative courses that do not fall within any of the subject areas of the foundation or enrichment curriculum as shown in the separate exhibit.

Staff Members Responsible:
Monica Martinez, Associate Commissioner, Standards and Support Services
Shelly Ramos, Senior Director, Curriculum Standards and Student Support

Attachment: Text of 19 TAC §74.27, Innovative Courses and Programs

Separate Exhibit: Innovative Courses Recommended for Approval
                         (to be provided at the June-July 2020 SBOE meeting)

Chapter 74. Curriculum Requirements

Subchapter C. Other Provisions

§74.27. Innovative Courses and Programs.

(a)   A school district may offer innovative courses to enable students to master knowledge, skills, and competencies not included in the essential knowledge and skills of the required curriculum.

    (1)   The State Board of Education (SBOE) may approve any course that does not fall within any of the subject areas listed in the foundation and enrichment curricula when the applying school district or organization demonstrates that the proposed course is academically rigorous and addresses documented student needs.

    (2)   The commissioner of education may approve a discipline-based course in the foundation or enrichment curriculum when the applying school district or organization demonstrates that the proposed course is academically challenging and addresses documented student needs.

    (3)   Applications shall not be approved if the proposed course significantly duplicates the content of a Texas Essential Knowledge and Skills (TEKS)-based course or can reasonably be taught within an existing TEKS-based course.

    (4)   To request approval from the SBOE or the commissioner of education, the applying school district or organization must submit a request for approval at least six months before planned implementation that includes:

        (A)   a description of the course and its essential knowledge and skills;

        (B)   the rationale and justification for the request in terms of student need;

        (C)   data that demonstrates successful implementation or piloting of the course;

        (D)   a description of activities, major resources, and materials to be used;

        (E)   the methods of evaluating student outcomes;

        (F)   the qualifications of the teacher;

        (G)   any training required in order to teach the course and any associated costs; and

        (H)   the amount of credit requested.

    (5)   To request approval from the commissioner for a career and technical education innovative course, the applying school district or organization must submit with its request for approval evidence that the course is aligned with state and/or regional labor market data.

    (6)   With the approval of the local board of trustees, a school district may offer, without modifications, any state-approved innovative course.

(b)   An ethnic studies course that has been approved by the commissioner as an innovative course shall be presented to the SBOE for discussion and consideration for inclusion in the TEKS.

(1)   Only comprehensive ethnic studies courses in Native American studies, Latino studies, African American studies, and/or Asian Pacific Islander studies, inclusive of history, government, economics, civic engagement, culture, and science and technology, shall be presented to the SBOE for consideration.

(2)   The chair of the Committee on Instruction, in accordance with SBOE Operating Rule 2.5(b) shall collaborate with the board chair to place the item on the next available Committee on Instruction agenda following commissioner approval of the innovative course.

Update Regarding Origo Education

July 2, 2020

COMMITTEE ON INSTRUCTION: ACTION
STATE BOARD OF EDUCATION: ACTION

SUMMARY: This item provides the opportunity for the committee to receive an update regarding Origo Education and consider further action including possible amendments to administrative rules in 19 TAC Chapter 66 if necessary.

STATUTORY AUTHORITY: Texas Education Code (TEC), §§31.003, 31.022, and 31.151.

TEC, §31.003, permits the State Board of Education (SBOE) to adopt rules for the adoption, requisition, distribution, care, use, and disposal of instructional materials.

TEC, §31.022(b), requires the SBOE to adopt rules to provide for a full and complete investigation of instructional materials for each subject in the foundation curriculum and for each subject in the enrichment curriculum.

TEC, §31.151(a), defines the duties of publishers and manufacturers of instructional materials, including the duty to deliver materials to school districts or charter schools and to provide an accurate shipping date for materials that are back-ordered.

TEC, §31.151(b), authorizes the SBOE to impose a reasonable administrative penalty against a publisher who knowingly violates subsection (a).

The full text of statutory citations can be found in the statutory authority section of this agenda.

PREVIOUS BOARD ACTION: Math instructional materials from Origo Education were adopted in November 2013 under *Proclamation 2014*. At the April 2020 meeting, the SBOE approved content changes submitted by Origo Education. The board also assessed liquidated damages in the amount of $113,494 with a payment due date of June 1, 2020.

BACKGROUND INFORMATION AND JUSTIFICATION: The SBOE issued *Proclamation 2014* in April 2012.

Texas Administrative Code (TAC), §66.75 permits a publisher to submit a request for approval to substitute an updated edition of state-adopted instructional materials. This section also requires that all requests for updates involving content in state-adopted instructional materials be approved by the SBOE prior to their introduction into state-adopted instructional materials.

During the April 2020 meeting, the SBOE requested that an update be presented at the June 2020 meeting. At the April meeting SBOE members also expressed concern about publishers making changes to adopted products without obtaining SBOE approval and asked staff to provide options to address this concern. TEC, §31.151(b) authorizes the SBOE to impose a reasonable administrative penalty against a publisher who knowingly violates a requirement imposed on a publisher or manufacturer of instructional materials by TEC, §31.151(a). Administrative penalties are addressed in 19 TAC Chapter 66, State

Adoption and Distribution of Instructional Materials, Subchapter A, General Provisions. The SBOE may wish to amend administrative rules in Chapter 66, Subchapter A.

PUBLIC BENEFIT AND COST TO PERSONS: Product updates provide more accurate student and teacher instructional materials. There is no anticipated economic cost to persons who are required to comply with the proposal.

Staff Members Responsible:
Kristen Hole, Associate Commissioner, Instructional Strategy
Melissa Lautenschlager, Director, Instructional Materials and Implementation
Amie Williams, Director, Review and Adoption

COMMITTEE ON SCHOOL FINANCE/
PERMANENT SCHOOL FUND

Per Capita Apportionment Rate for the 2019-2020 School Year

July 1, 2020

COMMITTEE ON SCHOOL FINANCE/PERMANENT SCHOOL FUND: DISCUSSION
STATE BOARD OF EDUCATION: NO ACTION

SUMMARY: A per capita apportionment rate for each school year is set based on an estimate of the amount available for expenditure from the Available School Fund. A preliminary 2019–2020 per capita apportionment rate of $ $259.207 was set in September 2019. A final per capita apportionment rate is set by the commissioner of education based on actual funds available for expenditure. Agency staff will present the final rate for the 2019–2020 school year at the June meeting of the Committee on School Finance/ Permanent School Fund.

STATUTORY AUTHORITY: Texas Education Code (TEC), §§48.004, 48.251(c), and 43.001(b).

TEC, §48.004, requires the commissioner to implement and administer the Foundation School Program.

TEC, §48.251(c), requires the Foundation School Program to be financed with state available school funds distributed in accordance with the law.

TEC, §43.001(b), describes the appropriations that make up the Available School Fund.

The full text of statutory citations can be found in the statutory authority section of this agenda.

PREVIOUS BOARD ACTION: A preliminary 2019–2020 per capita apportionment rate of $259.207 was established in September 2019.

BACKGROUND INFORMATION AND JUSTIFICATION: House Bill (HB) 1, the General Appropriations Bill enacted by the 86th Texas Legislature, 2019, contains an estimate of the amount that will be available for expenditures from the Available School Fund for the 2019-2020 school year. The per capita apportionment will include distributions from the Permanent School Fund and funds from state occupation taxes and from the Motor Fuels Tax. The preliminary per capita apportionment rate set by the commissioner of education is based on an estimate of the funds available for expenditure. A final rate is established later in the school year by the commissioner based on actual funds available for expenditure.

FISCAL IMPACT: The per capita apportionment rate finances part of the cost of the Foundation School Program. State aid comes from the Available School Fund and the Foundation School Fund. The per capita apportionment rate determines how much of each district's total state aid is paid from the Available School Fund. The part that is not financed by the Available School Fund must be paid from the Foundation School Fund.

Staff Members Responsible:
Leo Lopez, Associate Commissioner, School Finance
Amy Copeland, Director, State Funding

Separate Exhibit: Final Per Capita Rate for 2019-2020
                          (to be provided at the June 2020 SBOE meeting)

Proposed Amendment to 19 TAC Chapter 109, <u>Budgeting, Accounting, and Auditing</u>, Subchapter B, <u>Texas Education Agency Audit Functions</u>, §109.23, <u>School District Independent Audits and Agreed-Upon Procedures</u> (Second Reading and Final Adoption)

July 2, 2020

COMMITTEE ON SCHOOL FINANCE/PERMANENT SCHOOL FUND: ACTION
STATE BOARD OF EDUCATION: ACTION

SUMMARY: This item presents for second reading and final adoption a proposed amendment to 19 Texas Administrative Code (TAC) Chapter 109, <u>Budgeting, Accounting, and Auditing</u>, Subchapter B, <u>Texas Education Agency Audit Functions</u>, §109.23, <u>School District Independent Audits and Agreed-Upon Procedures</u>. The proposed amendment would reflect changes made by House Bill (HB) 1520, 86th Texas Legislature, 2019, that eliminated the requirement for out-of-state certified public accountancy (CPA) firms to be licensed in Texas. No changes are recommended since approved for first reading.

STATUTORY AUTHORITY: Texas Education Code (TEC), §§7.102(c)(32), 44.001, 44.007, 44.008, and 44.010.

TEC, §7.102(c)(32), authorizes the State Board of Education (SBOE) to adopt rules concerning school district fiscal account audits and budgets.

TEC, §44.001, requires each school district to begin its fiscal year on July 1 or September 1 of each year, as determined by the board of trustees of the district.

TEC, §44.007, requires each school district to annually submit to Texas Education Agency (TEA) a report of its revenues and expenditures for the preceding fiscal year and authorizes the SBOE to prescribe the management, cost accounting, and financial information format to enable the board to monitor the funding process and determine educational system costs.

TEC, §44.008, authorizes the SBOE to establish the format and minimum requirements of the independent audit of school district fiscal accounts.

TEC, §44.010, requires the school district budgets, fiscal reports, and audit reports filed with TEA to be reviewed and analyzed by TEA to determine whether all legal requirements have been met and to collect fiscal data needed in preparing school fiscal reports for the governor and the legislature.

The full text of statutory citations can be found in the statutory authority section of this agenda.

FFECTIVE DATE: The proposed effective date of the proposed amendment is August 31, 2020. Under TEC, §7.102(f), the SBOE must approve the rule action at second reading and final adoption by a vote of two-thirds of its members to specify an effective date earlier than the beginning of the 2021-2022 school year. The earlier effective date will align the rule with statutory changes in a timely manner.

PREVIOUS BOARD ACTION: The SBOE adopted §109.23 effective September 1, 1996. The SBOE adopted amendments to §109.23 effective October 13, 2002, and March 10, 2015.

A discussion item regarding §109.23 was presented to the committee at its January 2020 meeting. At the April 2020 SBOE meeting, the board approved for first reading and filing authorization the proposed amendment to §109.23.

BACKGROUND INFORMATION AND JUSTIFICATION: HB 1520, 86th Texas Legislature, 2019, updated Texas Occupations Code, §901.461, to eliminate the requirement for out-of-state CPA firms to be licensed in Texas. The amended statute took effect September 1, 2019. The text of Texas Occupations Code, §901.461, is provided for reference as Attachment I.

The proposed amendment to §109.23 would reflect the changes to Texas Occupations Code, §901.461. Subsection (d)(1)(A) would be modified to allow an independent auditor hired by a school district to be associated with a CPA firm that has a current valid license issued by a state licensing agency from another state.

No changes are recommended since approved for first reading.

FISCAL IMPACT: No changes have been made to this section since published as proposed.

TEA has determined that there are no additional costs to state or local government required to comply with the proposal.

LOCAL EMPLOYMENT IMPACT: No changes have been made to this section since published as proposed.

The proposal has no effect on local economy; therefore, no local employment impact statement is required under Texas Government Code, §2001.022.

SMALL BUSINESS, MICROBUSINESS, AND RURAL COMMUNITY IMPACT: No changes have been made to this section since published as proposed.

The proposal has no direct adverse economic impact for small businesses, microbusinesses, or rural communities; therefore, no regulatory flexibility analysis specified in Texas Government Code, §2006.002, is required.

COST INCREASE TO REGULATED PERSONS: No changes have been made to this section since published as proposed.

The proposal does not impose a cost on regulated persons, another state agency, a special district, or a local government and, therefore, is not subject to Texas Government Code, §2001.0045.

TAKINGS IMPACT ASSESSMENT: No changes have been made to this section since published as proposed.

The proposal does not impose a burden on private real property and, therefore, does not constitute a taking under Texas Government Code, §2007.043.

GOVERNMENT GROWTH IMPACT: No changes have been made to this section since published as proposed.

TEA staff prepared a Government Growth Impact Statement assessment for this proposed rulemaking. The proposed rulemaking would limit the effect of the rule by eliminating the requirement that out-of-state CPA firms must be licensed in Texas.

The proposed rulemaking would not create or eliminate a government program; would not require the creation of new employee positions or elimination of existing employee positions; would not require an increase or decrease in future legislative appropriations to the agency; would not require an increase or decrease in fees paid to the agency; would not create a new regulation; would not expand or repeal an existing regulation; would not increase or decrease the number of individuals subject to its applicability; and would not positively or adversely affect the state's economy.

PUBLIC BENEFIT AND COST TO PERSONS: No changes have been made to this section since published as proposed.

The proposal would allow an independent auditor hired by a school district to be associated with a CPA firm that has a current valid license issued by a state licensing agency from another state. There is no anticipated economic cost to persons who are required to comply with the proposal.

DATA AND REPORTING IMPACT: No changes have been made to this section since published as proposed.

The proposal would have no new data and reporting impact.

PRINCIPAL AND CLASSROOM TEACHER PAPERWORK REQUIREMENTS: No changes have been made to this section since published as proposed.

TEA has determined that the proposal would not require a written report or other paperwork to be completed by a principal or classroom teacher.

PUBLIC COMMENTS: Following the April 2020 SBOE meeting, notice of the proposed amendment to §109.23 was filed with the Texas Register, initiating the public comment period. The public comment period on the proposal began May 22, 2020, and ended June 26, 2020. No comments had been received at the time this item was prepared. A summary of any public comments received regarding the proposal will be provided to the SBOE during the June-July 2020 meeting. The SBOE will take registered oral and written comments on the proposal at the appropriate committee meeting in June-July 2020 in accordance with the SBOE board operating policies and procedures.

MOTION TO BE CONSIDERED: The State Board of Education:

> Approve for second reading and final adoption the proposed amendment to 19 TAC Chapter 109, Budgeting, Accounting, and Auditing, Subchapter B, Texas Education Agency Audit Functions, §109.23, School District Independent Audits and Agreed-Upon Procedures; and

> Make an affirmative finding that immediate adoption of 19 TAC Chapter 109, Budgeting, Accounting, and Auditing, Subchapter B, Texas Education Agency Audit Functions, §109.23, School District Independent Audits and Agreed-Upon Procedures, is necessary and shall have an effective date of August 31, 2020. *(Per TEC, §7.102(f), a vote of two-thirds of the members of the board is necessary for an earlier effective date.)*

Staff Members Responsible:
David Marx, Director, Financial Compliance

Attachment I: Texas Occupations Code, §901.461

Attachment II: Text of Proposed Amendment to 19 TAC Chapter 109, <u>Budgeting, Accounting, and Auditing</u>, Subchapter B, <u>Texas Education Agency Audit Functions</u>, §109.23, <u>School District Independent Audits and Agreed-Upon Procedures</u>

ATTACHMENT I

Texas Occupations Code, Title 5, <u>Regulation of Financial and Legal Services</u>, Subtitle A, <u>Financial Services</u>, Chapter 901, <u>Accountants</u>, Subchapter J, <u>Practice of Public Accountancy</u>

§901.461. <u>Practice by Certain Out-Of-State Firms</u>.

(a)   A certified public accountancy firm that is not licensed in this state but is licensed in another state may practice in this state without a firm license or notice to the board if the firm's practice in this state is performed by an individual who holds a license under this chapter or who practices under a privilege under Section 901.462.

(b)   A firm described by Subsection (a) may exercise all the practice privileges of a firm license holder, except that the firm may perform the services described by Section 901.002(a)(1) for an entity with its home office in this state only if:

     (1)   the firm meets the ownership requirements of Sections 901.354(a) and (b);

     (2)   the firm complies with the board's peer review program under Section 901.159; and

     (3)   the services are performed by an individual who holds a license under this chapter or practices under a privilege under Section 901.462.

(c)   A firm practicing under a privilege under this section, as a condition of the privilege of practicing without a firm license:

     (1)   is subject to the personal and subject matter jurisdiction and disciplinary authority of the board;

     (2)   must comply with this chapter and board rules; and

     (3)   is considered to have appointed the regulatory agency of the state that issued the firm's license as the firm's agent on whom process may be served in any action or proceeding by the board against the firm.

(d)   A firm practicing under a privilege under this section shall promptly cease offering or rendering professional services in this state if the firm's license to practice as a certified public accountancy firm in the state in which the firm's primary place of business is no longer valid.

Chapter 109. Budgeting, Accounting, and Auditing

Subchapter B. Texas Education Agency Audit Functions

§109.23. School District Independent Audits and Agreed-Upon Procedures.

(a)   A school district, governmental charter school, open-enrollment charter school, nonprofit service provider, county education district, or regional education service center must file with the Texas Education Agency (TEA) an annual financial and compliance report and, if applicable, a state compensatory agreed-upon procedures report. These reports must be audited by an independent auditor, and the audit must be reviewed by the TEA, including review of auditors' working papers, in accordance with the Financial Accountability System Resource Guide, as adopted by reference in §109.41 of this title (relating to Financial Accountability System Resource Guide).

(b)   The annual financial audit report and state compensatory agreed-upon procedures report are due 150 days after the end of the fiscal year.

(c)   Auditors from the TEA must review independent audit reports. The commissioner's designee must resolve audit findings.

(d)   The district or other educational entity must hire at its own expense an independent auditor to conduct an independent audit of its financial statements and provide an opinion on its annual financial and compliance report.

    (1)   The independent auditor must:

        (A)   be associated with a certified public accountancy (CPA) firm that has a current valid license issued by the Texas State Board of Public Accountancy <u>or a state licensing agency from another state</u> ;

        (B)   be a certified public accountant with a current valid license issued by the Texas State Board of Public Accountancy, as required under the Texas Education Code, §44.008; and

        (C)   adhere to the generally accepted auditing standards (GAAS), adopted by the American Institute of CPAs (AICPA), as amended, and the generally accepted government auditing standards (GAGAS), adopted by the US Government Accountability Office, as amended.

    (2)   The CPA firm must:

        (A)   be a member of the AICPA Governmental Audit Quality Center (GAQC);

        (B)   adhere to GAQC's membership requirements; and

        (C)   collectively have the knowledge, skills, and experience to be competent for the audit being conducted, including thorough knowledge of the government auditing requirements and:

            (i)   Texas public school district environment; [<u>or</u>]

            (ii)   public sector; or

            (iii)   nonprofit sector.

(e)   If at any time the TEA division responsible for financial compliance reviews an audit firm's working papers and finds that the firm or the quality of the work does not meet the standards required as stated in subsection (d) of this section, the division may require the district or other educational entity to change its audit firm.

(f)   To the extent that this section conflicts with any other rule regarding audits of school districts and other educational entities by independent auditors and the TEA, this section controls.

Review of Permanent School Fund Securities Transactions and the Investment Portfolio

July 1, 2020

COMMITTEE ON SCHOOL FINANCE/PERMANENT SCHOOL FUND: DISCUSSION
STATE BOARD OF EDUCATION: NO ACTION

SUMMARY: Investment staff will report on the transactions executed during the months of March and April 2020 in the investment portfolio of the Texas Permanent School Fund.

STATUTORY AUTHORITY: Texas Constitution, Article VII, §2 and §5, and 19 Texas Administrative Code (TAC) Chapter 33.

The Texas Constitution, Article VII, §2 and §5 establish the permanent school fund, the assets that comprise the permanent school fund, the bond guarantee program, the available school fund, and authorize the State Board of Education (SBOE) to manage and invest the permanent school fund in accordance with the prudent person standard.

Administrative rules found in 19 TAC Chapter 33 provide a statement of investment objectives, policies, and guidelines of the Texas Permanent School Fund and Bond Guarantee Program as adopted by the SBOE.

The full text of statutory citations can be found in the statutory authority section of this agenda.

BACKGROUND INFORMATION AND JUSTIFICATION: Specific actions that the committee must accomplish are found in 19 TAC Chapter 33, Statement of Investment Objectives, Policies, and Guidelines of the Texas Permanent School Fund.

Staff Members Responsible:
Holland Timmins, Executive Administrator and Chief Investment Officer, Texas Permanent School Fund

Ratification of the Purchases and Sales of the Investment Portfolio of the Permanent School Fund for the Months of March and April 2020

July 2, 2020

COMMITTEE ON SCHOOL FINANCE/PERMANENT SCHOOL FUND: ACTION
STATE BOARD OF EDUCATION: CONSENT

SUMMARY: This item provides an opportunity for the committee and board to consider approval of the purchases and sales of investments executed in the portfolio of the Permanent School Fund for the months of March and April 2020.

STATUTORY AUTHORITY: Texas Constitution, Article VII, §2 and §5, and 19 Texas Administrative Code (TAC) Chapter 33.

The Texas Constitution, Article VII, §2 and §5 establish the permanent school fund, the assets that comprise the permanent school fund, the bond guarantee program, the available school fund, and authorize the State Board of Education (SBOE) to manage and invest the permanent school fund in accordance with the prudent person standard.

Administrative rules found in 19 TAC Chapter 33 provide a statement of investment objectives, policies, and guidelines of the Texas Permanent School Fund and Bond Guarantee Program as adopted by the SBOE.

The full text of statutory citations can be found in the statutory authority section of this agenda.

PREVIOUS BOARD ACTION: At the April 2020 meeting, the board approved purchases in the amount of $1,167,603,588 and sales in the amount of $1,322,360,449 conducted in the investment portfolio of the Permanent School Fund for the months of December 2019 through February 2020.

BACKGROUND INFORMATION AND JUSTIFICATION: The purchases and sales of the investment portfolio are reviewed by the staff to ensure compliance with the Investment Guidelines, Policies, and Objectives of the Permanent School Fund. The specific amounts of the purchases and sales for the reporting period will be recommended to the board for ratification upon approval by the Committee on School Finance/Permanent School Fund.

Staff Members Responsible:
Holland Timmins, Executive Administrator and Chief Investment Officer, Texas Permanent School Fund

**Report by the State Auditor's Office on the Audit of the Permanent School Fund's
Financial Statements and Certification of the Bond Guarantee Program for the Fiscal Year
Ending August 31, 2019**

July 1, 2020

**COMMITTEE ON SCHOOL FINANCE/PERMANENT SCHOOL FUND: DISCUSSION
STATE BOARD OF EDUCATION: NO ACTION**

SUMMARY: This item provides an opportunity for representatives of the State Auditor's Office (SAO) to make a presentation regarding the Audit of the Permanent School Fund's Financial Statements and the certification of the Bond Guarantee Program for the Fiscal Year Ending August 31, 2019.

STATUTORY AUTHORITY: Texas Constitution, Article VII, §2 and §5; Texas Education Code, (TEC) §45.053(b).

The Texas Constitution, Article VII, §2 and §5 establish the permanent school fund, the assets that comprise the permanent school fund, the bond guarantee program, the available school fund, and authorize the State Board of Education (SBOE) to manage and invest the permanent school fund in accordance with the prudent person standard.

TEC, §45.053(b) requires the SAO to analyze the status of guaranteed bonds and certify that the amount of such bonds is within limits prescribed by law.

The full text of statutory citations can be found in the statutory authority section of this agenda.

BACKGROUND INFORMATION AND JUSTIFICATION: TEC, §45.053(b) states that, "Each year, the state auditor shall analyze the status of guaranteed bonds as compared to the cost value and market value of the permanent school fund. Based on that analysis, the state auditor shall certify whether the amount of bonds guaranteed is within the limit prescribed by this section."

Staff Members Responsible:
Holland Timmins, Executive Administrator and Chief Investment Officer, Texas Permanent School Fund

Adoption of an Annual Report on the Status of the Bond Guarantee Program

July 2, 2020

COMMITTEE ON SCHOOL FINANCE/PERMANENT SCHOOL FUND: ACTION
STATE BOARD OF EDUCATION: CONSENT

SUMMARY: This item provides an opportunity for the committee and board to adopt an annual report on the status of the Bond Guarantee Program.

STATUTORY AUTHORITY: Texas Constitution, Article VII, §2 and §5; Texas Education Code, (TEC) §45.053(c).

The Texas Constitution, Article VII, §2 and §5 establish the permanent school fund, the assets that comprise the permanent school fund, the bond guarantee program, the available school fund, and authorize the State Board of Education (SBOE) to manage and invest the permanent school fund in accordance with the prudent person standard.

TEC §45.053(c) requires the SBOE to adopt an annual report on the status of the guaranteed bond program.

The full text of statutory citations can be found in the statutory authority section of this agenda.

BACKGROUND INFORMATION AND JUSTIFICATION: TEC, §45.053(c) states, "The commissioner shall prepare and the board shall adopt an annual report on the status of the guaranteed bond program under this subchapter."

Staff Members Responsible:
Holland Timmins, Executive Administrator and Chief Investment Officer, Texas Permanent School Fund

Review of the Bond Guarantee Program Charter Capacity

July 2, 2020

COMMITTEE ON SCHOOL FINANCE/PERMANENT SCHOOL FUND: ACTION
STATE BOARD OF EDUCATION: CONSENT

SUMMARY: This item provides an opportunity for the committee and board to receive a presentation on the bond guarantee program's charter capacity.

STATUTORY AUTHORITY: Texas Constitution, Article VII, §2 and §5; Texas Education Code, (TEC) §45.0532; 19 Texas Administrative Code (TAC) Chapter 33.

The Texas Constitution, Article VII, §2 and §5 establish the permanent school fund, the assets that comprise the permanent school fund, the bond guarantee program, the available school fund, and authorize the State Board of Education (SBOE) to manage and invest the permanent school fund in accordance with the prudent person standard.

TEC §45.0532 provides limitations on charter district bonds that may be guaranteed under the bond guarantee program.

19 TAC Chapter 33 codifies administrative rules that provide a statement of investment objectives, policies, and guidelines of the Texas Permanent School Fund and Bond Guarantee Program as adopted by the SBOE.

The full text of statutory citations can be found in the statutory authority section of this agenda.

PREVIOUS BOARD ACTION: At the September 2017 meeting, the SBOE increased the charter guarantee capacity, and began the process to move management of the reserve fund to the SBOE. The SBOE established for Fiscal Year 2018 the capacity of the bond guarantee program for charter district bonds at the full twenty percent (20%) allowed by law. At the June 2018 and June 2019 meeting, the SBOE affirmed the annual implementation schedule as referenced in 19 TAC §33.67(d)(2) and took no additional action.

BACKGROUND INFORMATION AND JUSTIFICATION: None

Staff Members Responsible:
Holland Timmins, Executive Administrator and Chief Investment Officer, Texas Permanent School Fund

Approval of the Selection of a Legal Counsel for the Bond Guarantee Program as outlined in RFQ 701-20-006 for the Texas Permanent School Fund and Authorization for Contract Execution by the Commissioner of Education

July 2, 2020

COMMITTEE ON SCHOOL FINANCE/PERMANENT SCHOOL FUND: ACTION
STATE BOARD OF EDUCATION: CONSENT

SUMMARY: This item provides the opportunity for the committee and board to approve the selection of a legal counsel for the Bond Guarantee Program (BGP) of the Texas Permanent School Fund (PSF) as outlined in Request for Qualifications (RFQ) 701-20-006 and authorization for contract execution by the Commissioner of Education.

STATUTORY AUTHORITY: Texas Constitution, Article VII, §2 and §5; and 19 Texas Administrative Code (TAC) Chapter 33.

The Texas Constitution, Article VII, §2 and §5 establish the permanent school fund, the assets that comprise the permanent school fund, the bond guarantee program, the available school fund, and authorize the State Board of Education (SBOE) to manage and invest the permanent school fund in accordance with the prudent person standard.

Administrative rules found in 19 TAC Chapter 33 provide a statement of investment objectives, policies, and guidelines of the Texas Permanent School Fund and Bond Guarantee Program as adopted by the SBOE.

The full text of statutory citations can be found in the statutory authority section of this agenda.

PREVIOUS BOARD ACTION: At the November 2019 meeting, the board approved the issuance of a request for qualifications for bond guarantee program counsel.

BACKGROUND INFORMATION AND JUSTIFICATION: The scope provision of the current contracts for legal counsel is not broad enough to encompass the work related to the BGP Capacity calculation that is now needed.

Staff Members Responsible:
Holland Timmins, Executive Administrator and Chief Investment Officer, Texas Permanent School Fund

First Quarter 2020 Permanent School Fund Performance Report

July 1, 2020

**COMMITTEE ON SCHOOL FINANCE/PERMANENT SCHOOL FUND: DISCUSSION
STATE BOARD OF EDUCATION: NO ACTION**

SUMMARY: The performance measurement consultant to the Permanent School Fund, BNY Mellon Asset Servicing, will report on the investment performance during the first calendar quarter 2020 and cumulative investment performance of the various portfolios of the Fund. This item will allow the committee to discuss in depth, various issues related to portfolio management such as risk characteristics of portfolios and portfolio attributes.

STATUTORY AUTHORITY: Texas Constitution, Article VII, §2 and §5; and 19 Texas Administrative Code (TAC) Chapter 33.

The Texas Constitution, Article VII, §2 and §5 establish the permanent school fund, the assets that comprise the permanent school fund, the bond guarantee program, the available school fund, and authorize the State Board of Education (SBOE) to manage and invest the permanent school fund in accordance with the prudent person standard.

Administrative rules found in 19 TAC Chapter 33 provide a statement of investment objectives, policies, and guidelines of the Texas Permanent School Fund and Bond Guarantee Program as adopted by the SBOE.

The full text of statutory citations can be found in the statutory authority section of this agenda.

BACKGROUND INFORMATION AND JUSTIFICATION: An in-depth performance review at the committee level is intended to allow committee members to review not only the total return information for each managed portfolio, but to gain a more thorough understanding of the risk characteristics, portfolio attributes, and portfolio structures of each portfolio that contribute to the return.

Staff Members Responsible:
Holland Timmins, Executive Administrator and Chief Investment Officer, Texas Permanent School Fund

Review and Adoption of the Long-Term Strategic Asset Allocation Plan
of the Permanent School Fund of the State Board of Education and
the Permanent School Fund Liquid Account

July 2, 2020

COMMITTEE OF THE FULL BOARD: ACTION
COMMITTEE ON SCHOOL FNANCE/PERMANENT SCHOOL FUND: ACTION
STATE BOARD OF EDUCATION: CONSENT

SUMMARY: This item provides an opportunity for the board to review and adopt the long-term strategic asset allocation plan of the Permanent School Fund of the State Board of Education (SBOE) and the Permanent School Fund (PSF) Liquid Account.

STATUTORY AUTHORITY: Texas Constitution, Article VII, §2 and §5; and 19 Texas Administrative Code (TAC) Chapter 33.

The full text of statutory citations can be found in the statutory authority section of this agenda.

PREVIOUS BOARD ACTION: In July 2018, the board reviewed and adopted the PSF long-term strategic asset allocation plan.

FUTURE ACTION EXPECTED: None.

BACKGROUND INFORMATION AND SIGNIFICANT ISSUES: One of the primary duties of the board in its oversight of the PSF is to establish the long-term asset allocation policy of the Fund. The allocation of the Fund's assets among various classes of securities will explain approximately 85% of the Fund's variation of returns. The overall risk assumed by the Fund is managed through the diversification of asset classes in which the Fund is invested.

House Bill (HB) 4388, 86th Legislature, 2019, provided the authority to the PSF of the SBOE to manage the PSF Liquid Account.

PUBLIC AND STUDENT BENEFIT: The distribution of the PSF will flow to the school districts and reduce the tax burden to the public and the state of Texas.

PUBLIC COMMENTS: None.

OTHER COMMENTS AND RELATED ISSUES: None.

Staff Member Responsible:
Holland Timmins, Executive Administrator and Chief Investment Officer of the Texas Permanent School Fund

**Review of the Report on Permanent School Fund Percentage Distribution Rates
Under Consideration for Fiscal Years 2022 and 2023**

July 2, 2020

**COMMITTEE OF THE FULL BOARD: ACTION
COMMITTEE ON SCHOOL FNANCE/PERMANENT SCHOOL FUND: ACTION
STATE BOARD OF EDUCATION: CONSENT**

SUMMARY: This item provides an opportunity for the board to evaluate and approve the report on Permanent School Fund (PSF) percentage distribution rates under consideration for fiscal years 2022 and 2023. The board will consider various factors associated with the distribution rate such as expected returns, inflation, and student growth. Additionally, this item provides the opportunity for the board to discuss anticipated instructional materials needs for the 2022-2023 biennium.

STATUTORY AUTHORITY: Texas Constitution, Article VII, §2 and §5; and 19 Texas Administrative Code (TAC) Chapter 33.

The full text of statutory citations can be found in the statutory authority section of this agenda.

PREVIOUS BOARD ACTION: At the July 2018 meeting, the board approved the percentage distribution rate to the Available School Fund from the PSF for fiscal years 2020 and 2021 to be between 2.39% and 4.01%.

BACKGROUND INFORMATION AND SIGNIFICANT ISSUES: The amendment to Article VII of the Texas Constitution changed the PSF distribution from an income-based policy to a total return policy. This distribution rate is to be determined by a vote of two-thirds of the total membership of the State Board of Education (SBOE) taken before the regular session of the legislature convenes. If the SBOE does not adopt a rate, then the legislature will adopt a rate by general law or appropriation. The current rate is 2.974% of the average market value for the trailing 16 state fiscal quarters ending November 30, 2018.

According to the General Appropriations Act (HB 1), PSF Distribution Rate, at least 45 days prior to the adoption of the distribution rate from the PSF to the Available School Fund by the SBOE, the Texas Education Agency shall report to the Legislative Budget Board and the Governor on the following:

   a.   The distribution rate or rates under consideration
   b.   The assumptions and methodology used in determining the rate or rates under consideration
   c.   The annual amount the distribution rate or rates under consideration are estimated to provide, and the difference between them and the annual distribution amounts for the preceding three biennia
   d.   The optimal distribution amount for the preceding biennium, based on an analysis of intergenerational equity, and the difference between it and the actual distribution amount

Staff Member Responsible:
Holland Timmins, Executive Administrator and Chief Investment Officer of the Texas Permanent School Fund

**Report of the Permanent School Fund Executive Administrator and
Chief Investment Officer**

July 1, 2020

**COMMITTEE ON SCHOOL FINANCE/PERMANENT SCHOOL FUND: DISCUSSION
STATE BOARD OF EDUCATION: NO ACTION**

SUMMARY: The Permanent School Fund (PSF) executive administrator will report to the committee on matters relating to the management of the PSF and the Charter District Reserve Fund. The report may present information on historical and current status of Fund holdings, current and proposed investment policies and procedures, and historical and current Fund performance and compliance. The administrator may update the board on the bond guarantee program, the status of requests for proposal or for qualifications and current contracts for services and other administrative activities undertaken on behalf of the board. The administrator may provide an update on the PSF distribution or on the effect of legislation impacting the PSF. The administrator may provide an analysis of current and future investment market conditions, focusing upon the impact on the holdings of the PSF.

STATUTORY AUTHORITY: Texas Constitution, Article VII, §2 and §5; and 19 Texas Administrative Code (TAC) Chapter 33.

The Texas Constitution, Article VII, §2 and §5 establish the permanent school fund, the assets that comprise the permanent school fund, the bond guarantee program, the available school fund, and authorize the State Board of Education (SBOE) to manage and invest the permanent school fund in accordance with the prudent person standard.

Administrative rules found in 19 TAC Chapter 33 provide a statement of investment objectives, policies, and guidelines of the Texas Permanent School Fund and Bond Guarantee Program as adopted by the SBOE.

The full text of statutory citations can be found in the statutory authority section of this agenda.

BACKGROUND INFORMATION AND JUSTIFICATION: None

Staff Members Responsible:
Holland Timmins, Executive Administrator and Chief Investment Officer, Texas Permanent School Fund

COMMITTEE ON SCHOOL INITIATIVES

Review of Proposed Revisions to 19 TAC Chapter 232, <u>General Certification Provisions</u>

July 2, 2020

COMMITTEE ON SCHOOL INITIATIVES: ACTION
STATE BOARD OF EDUCATION: ACTION

SUMMARY: This item provides the State Board of Education (SBOE) an opportunity to review the State Board for Educator Certification (SBEC) rule actions that would propose revisions to 19 Texas Administrative Code (TAC) Chapter 232, <u>General Certification Provisions</u>. The proposed revisions would implement the statutory requirements of House Bills (HBs) 18 and 403 and Senate Bills (SBs) 11 and 37, 86th Texas Legislature, 2019. The proposed revisions would provide continuing professional education (CPE) instruction regarding mental health and substance abuse training; training requirements for superintendents regarding sexual abuse and human trafficking; and the removal of student loan default as grounds to deny the renewal of a certificate. Technical changes would also clarify processes and reorganize current provisions to improve readability and align citations.

STATUTORY AUTHORITY: The statutory authority for 19 TAC Chapter 232 is the Texas Education Code (TEC), §§21.003(a); 21.0031(f); 21.031; 21.041(b)(1)–(4) and (7)–(9); 21.054, as amended by SB 11 and HBs 18, 403, and 2424, 86th Texas Legislature, 2019; 21.0541; and 21.0543; and Texas Occupations Code (TOC), §55.002 and §55.003, for Subchapter A; and the TEC, §21.041(c) and §22.0831(f), for Subchapter B.

TEC, §21.003(a), states a person may not be employed as a teacher, teacher intern or teacher trainee, librarian, educational aide, administrator, educational diagnostician, or school counselor by a school district unless the person holds an appropriate certificate or permit issued as provided by the TEC, Chapter 21, Subchapter B.

TEC, §21.0031(f), clarifies and places certain limits on provisions authorizing termination of an educator's contract for failure to maintain a valid certificate.

TEC, §21.031, authorizes the SBEC to regulate and oversee all aspects of the certification, continuing education, and standards of conduct of public-school educators.

TEC, §21.041(b)(1)–(4), requires the SBEC to propose rules that provide for the regulation of educators and the general administration of the TEC, Chapter 21, Subchapter B, in a manner consistent with the TEC, Chapter 21, Subchapter B; require the SBEC to propose rules that specify the classes of educator certificates to be issued, including emergency certificates; the period for which each class of educator certificate is valid; and the requirements for the issuance and renewal of an educator certificate.

TEC, §21.041(b)(7)–(8), requires the SBEC to propose rules that provide for disciplinary proceedings, including the suspension or revocation of an educator certificate, as provided by Government Code, Chapter 2001; and provide for the adoption, amendment, and enforcement of an educator's code of ethics.

TEC, §21.041(b)(9), requires the SBEC to propose rules that provide for continuing education requirements.

TEC, §21.041(c), states the SBEC may adopt fees for the issuance and maintenance of an educator certification to adequately cover the cost of the administration.

TEC, §21.054, as amended by SB 11 and HBs 18, 403, and 2424, 86th Texas Legislature, 2019, requires the SBEC to propose rules establishing a process for identifying continuing education courses and programs that fulfill educators' continuing education requirements.

TEC, §21.0541, requires the SBEC to propose rules that allow an educator to receive credit towards the educator's continuing education requirements for completion of an instructional course on the use of an automated external defibrillator.

TEC, §21.0543, requires the SBEC to propose rules that provide for CPE credit related to digital technology instruction.

TEC, §22.0831(f)(1) and (2), state the SBEC may propose rules regarding the deadline for the national criminal history check and implement sanctions for persons failing to comply with the requirements.

TOC, §55.002, states a state agency that issues a license shall adopt rules to exempt an individual who holds a license issued by the agency from any increased fee or other penalty for failing to renew the license in a timely manner if the individual establishes the individual failed to renew the license in a timely manner because the individual was serving as a military service member.

TOC, §55.003, states a military service member who holds a license is entitled to two years of additional time to complete any continuing education requirements and any other requirement related to the renewal of the military service member's license.

PREVIOUS BOARD ACTION: None.

BACKGROUND INFORMATION AND JUSTIFICATION: The SBEC rules in 19 TAC Chapter 232 are organized as follows: Subchapter A, Certificate Renewal and Continuing Professional Education Requirements, and Subchapter B, National Criminal History Record Information Review of Active Certificate Holders. These subchapters provide for rules that establish the requirements relating to types and classes of certificates issued, certificate renewal, CPE, and national criminal history record information review.

There were several pieces of SBEC-related legislation regarding CPE as a result of the 86th Texas Legislature, 2019. To ensure aligned implementation of these bills for SBEC's consideration, Texas Education Agency (TEA) staff collaborated with other agency staff in the divisions of Special Populations and Special Education throughout the month of October 2019 and conducted a stakeholder meeting on October 24, 2019, in preparation of this item. Attachment II includes the SBEC-related legislation, timeline, action steps, and staff or stakeholders utilized in preparing the rule text for consideration.

Following is a description of topics for the SBEC's consideration for proposed revisions to 19 TAC Chapter 232 that incorporates the 2019 enabling legislation. The relevant rule text from 19 TAC Chapter 232 is presented in Attachment I. In addition to the following detailed descriptions, the proposed revisions would also remove outdated provisions; include technical edits to remove duplicity; provide technical clean-up edits for clarifications; provide formatting edits for clarifications; and provide relettering/renumbering to conform with the *Texas Register* style and formatting requirements.

<u>Subchapter A. Certificate Renewal and Continuing Professional Education Requirements</u>

<u>§232.1. General Provisions</u>

The proposed amendment in §232.1(d) would strike the phrase, "The SBEC may deny renewal if the" and add the phrase, "An educator may not renew a certificate if the individual," to clarify that SBEC rules determine compliance for certificate renewal purposes.

The proposed amendment in §232.1(e) would delete the provision related to deadlines and fees for certificate renewals, as it is duplicative since it appears in other sections of the chapter.

The proposed amendment in §232.1(f) would delete the provision to comply with SB 37, 86th Texas Legislature, 2019, which prohibits the use of student loan default as grounds to deny the issuance or renewal of an educator certificate.

The proposed amendment in §232.1(g) would delete the provisions related to failure to pay child support as grounds to deny or cancel the renewal of a certificate as it is already covered in §232.7(c).

The proposed amendment in §232.1(h) would delete the provisions related to the reissuance of a Texas lifetime certificate surrendered in lieu of revocation or revoked as certificates are not reissued. If certificates are surrendered or revoked, a new application must be submitted, pursuant to Chapter 230, <u>Professional Educator Preparation and Certification</u>.

The proposed amendment in §232.1(i) would reletter the provision to subsection (e) and write out "Texas Education Code" for technical formatting purposes.

<u>§232.3. Voluntary Renewal of Current Texas Educators</u>

Section 232.3 would be repealed as it is strictly voluntary and not enforceable.

<u>§232.5. Renewal Date for Certificates</u>

The proposed amendment in §232.5(c) would delete the provision relating to educational aide certificate holders qualifying for standard certificate. Educational aide certificates can no longer be renewed and; therefore, the expiration date of an individual who qualifies for a standard certificate would not be affected by an educational aide certificate date.

The proposed amendment in §232.5(d)–(f) would reletter the provisions to subsections (c)–(e) for technical formatting purposes.

<u>§232.7. Requirements for Certificate Renewal</u>

The proposed amendment in §232.7(a)(4) would strike the reference to paragraphs (2)–(6) to clarify all provisions in subsection (c) are required to be eligible for renewal.

The proposed amendment in §232.7(b)(4) would strike the phrase, "§232.25 of this title (relating to Fees Payable Upon Certificate Renewal or Reactivation)," and replace it with the phrase, "§230.101 of this title (relating to Schedule of Fees for Certification Services," to properly cross-reference the rule chapter regarding fees paid for certification purposes.

The proposed amendment in §232.7(c)(1) would provide a technical edit to align renewal requirements with the new provisions in §232.16(c).

The proposed amendment in §232.7(c)(5) would delete the provision to comply with SB 37, 86th Texas Legislature, 2019, which prohibits the use of student loan default as grounds to deny the issuance or renewal of an educator certificate.

The proposed amendment in proposed §232.7(c)(6) would strike the phrase, "pursuant to §232.25 of this title," and replace it with the phrase, "provided in §230.101 of this title," to properly cross-reference the rule chapter regarding fees paid for certification purposes.

The proposed amendment in §232.7(c)(6)–(8) would renumber the provisions to paragraphs (5)–(7) for technical formatting purposes.

§232.9. Inactive Status and Late Renewal

The proposed amendment in §232.9(b) would strike the phrases, "no more than six months" and "and also pay a reactivation fee," regarding the additional payment of a reactivation fee if renewal is longer than six months, as this does not align with practice and the language is in contradiction to §230.101, which prescribes that a reactivation fee cannot be incurred for late renewal purposes.

The proposed amendment in §232.9(d) would move the provision regarding auditing compliance with renewal requirements to proposed new §232.16, Verification of Renewal Requirements.

§232.11. Number and Content of Required Continuing Professional Education Hours and §232.13. Number of Required Continuing Professional Education Hours by Classes of Certificates

Section 232.11 and §232.13 would be repealed to combine and organize these sections in proposed new §232.11. Proposed new §232.11 would reorganize current requirements for CPE training by each certificate class; remove duplicative language; and implement recent legislation. These changes would provide greater readability and distinguish the requirements of professional development for each certificate class.

Proposed new §232.11(a), (b), and (c) would reflect current requirements regarding clock-hours, the renewal period, and the focus of professional development on the standards required for issuance of certificate(s).

Proposed new §232.11(d) would maintain the current CPE requirements for classroom teachers to complete 150 hours of CPE for renewal every five years. Proposed new §232.11(d)(2) complies with HB 18 and SB 11, 86th Texas Legislature, 2019, that:
- requires a minimum of 25% (37.5 hours) of total CPE hours in specific instructional areas, where two or more topics can be combined;
- elaborates on diverse student populations to include those in special education programs who receive services under the Rehabilitation Act of 1973, Section 504, students with mental health conditions or who engage in substance abuse, and students with intellectual or developmental disabilities; and
- includes how mental health conditions, including grief and trauma, affect student learning and behavior, with specific training requirements pursuant to TEC, §38.036(c)(1), and approved by the commissioner of education.

Proposed new §232.11(e) would maintain the current CPE requirements for principals and would add the requirement that a principal as instructional leader complete 200 hours of CPE for renewal every five years. Proposed new §232.11(e)(2) would comply with HB 18, 86th Texas Legislature, 2019, that:

- requires a minimum of 25% (50 hours) of total CPE hours in specific instructional areas;
- includes effective implementation of the Texas Model for Comprehensive School Counseling Programs;
- includes mental health programs addressing mental health conditions;
- elaborates on diverse student populations to include those in special education programs who receive services under the Rehabilitation Act of 1973, Section 504, students with mental health conditions or who engage in substance abuse, and students with intellectual or developmental disabilities; and
- includes how mental health conditions, including grief and trauma, affect student learning and behavior, with specific training requirements that are based on relevant best practice-based and research-based programs that are approved by the commissioner.

Proposed new §232.11(f) would maintain the current CPE requirements for school counselors to complete 200 hours of CPE for renewal every five years. Proposed new §232.11(f)(2) complies with HB 18, 86th Texas Legislature, 2019, that:

- requires a minimum of 25% (50 hours) of total CPE hours in specific instructional areas;
- includes counseling students concerning mental health conditions and substance abuse, including through the use of grief-informed and trauma-informed interventions and crisis management and suicide prevention strategies; and
- includes effective implementation of the Texas Model for Comprehensive School Counseling Programs.

Proposed new §232.11(g) would maintain the current CPE requirements for superintendents to complete 200 hours of CPE for renewal every five years. Proposed new §232.11(g)(2) would comply with HB 403, 86th Texas Legislature, 2019, that requires individuals who hold a superintendent certificate that is renewed on or after January 1, 2021, to complete at least 2.5 hours of CPE on identifying and reporting potential victims of sexual abuse, human trafficking, and other maltreatment of children.

Proposed new §232.11(h)–(j) would maintain the current CPE requirements for school librarians and learning resources specialists, educational diagnosticians, and reading specialists to complete 200 hours of CPE for renewal every five years.

Proposed new §232.11(k) would maintain the current CPE requirements for educators who teach students with dyslexia.

Proposed new §232.11(l) would maintain the current CPE optional activities for educators. To comply with HB 18, training in mental health first aid training must be through a classroom setting with in-person attendance, and the educator will obtain twice the number of hours, not to exceed 16 hours.

Proposed new §232.11(m) and (n) would maintain the current provisions regarding renewal requirements for educators who hold multiple classes of certificates.

§232.15. Types of Acceptable Continuing Professional Education Activities

The proposed amendment in §232.15(a)(1) and (2) would strike the phrase, "in content area knowledge and skills related to the certificate(s) being renewed," to provide clarity because some of the statutory requirements for CPE are not directly related to content area knowledge and skills.

The proposed amendment in §232.15(a)(4) would strike the phrase, "subsection or subsection (b) of this," to provide clarity that the phrase refers to the entire section.

§232.16. Verification of Renewal Requirements

Proposed new §232.16(a), (b), and (d) would maintain the current provisions in §232.23 regarding the verification of CPE requirements for educators to provide clarity and readability for educators. The proposed amendment in §232.16(b) would provide a technical edit to align verification requirements with proposed new §232.16(c). Proposed new §232.16(c) would provide clarity to educators that they are not required to satisfy CPE requirements that are implemented within one year prior to the renewal date. This would provide educators with adequate time to comply with any new CPE requirements for renewal purposes.

§232.17. Pre-Approved Professional Education Provider or Sponsor

The proposed amendment in §232.17 would add the word "Continuing" to the section title to clarify that the pre-approved providers or sponsors are for CPE purposes.

The proposed amendment in §232.17(a) would remove the word "Registration" to align with the proposed change to the section title of §232.21.

§232.19. Approval of Private Companies, Private Entities, and Individuals

The proposed amendment in §232.19 would add the phrase, "as Continuing Professional Education Providers," to the section title to clarify the approval of these entities is for the purpose of providing continuing education training.

The proposed amendment in §232.19 would clarify that entities seeking approval to apply for registration as a CPE provider must comply with the provisions set out in §232.21 regarding provider requirements. The proposed amendment in §232.19(1) would maintain the current requirements for CPE provider approval in §232.21. These provisions have been reorganized into this section to reflect application provisions for CPE providers, which is only applicable to entities not pre-approved.

§232.21. Provider Requirements

The proposed amendment in §232.21 would strike the word "Registration" in the section title to clarify the provider requirements are for pre-approved providers and entities that must apply for registration as CPE providers. This section maintains the current requirements for CPE providers and reorganizes the section for readability and clarity.

The proposed amendment in §232.21(a)(5) would delete the provision related to a CPE provider conducting a self-study due to vagueness and lack of enforceability of the provision.

The proposed amendment in §232.21(f) would change the reference from "section" to "chapter" to clarify that it would apply to related provisions in Chapter 232.

§232.23. Verification of Renewal Requirements

Section 232.23 would be repealed as it has been reorganized as §232.16 to move these provisions earlier in the chapter for readability.

§232.25. Fees Payable Upon Certificate Renewal or Reactivation

Section 232.25 would be repealed as it contradicts provisions in §230.101 regarding the schedule of fees for certification services.

Subchapter B. National Criminal History Record Information Review of Active Certificate Holders

§232.31. Purpose

The proposed amendment in §232.31(b)(4) would add a definition for *pre-enrollment* to provide clarification of the process for TEA to transmit identifiable information to the Texas Department of Public Safety (DPS) fingerprinting vendor for individuals to schedule a fingerprinting appointment.

The proposed amendment in §232.31(b)(4) and (5) would renumber the provisions to paragraphs (5) and (6) for technical formatting purposes.

§232.35. Submission of Required Information

The proposed amendment in §232.35(a)(1) would strike the phrase, "mailing addresses," to clarify TEA does not require the mailing addresses of educators from the school district for the purposes of fingerprinting.

The proposed amendment in §232.35(a)(3) would clarify TEA staff uses the identifiable information to return fingerprinting statuses to the school entity and to the DPS or its vendor to pre-enroll educators for the purpose of a national criminal history record information review.

The proposed amendment in §232.35(a)(4) would strike the phrase, "after it submits the names of all its certified educators to the TEA staff," to clarify the process used for educators to submit the required information and would add clarification of the provisions in 19 TAC §230.11(b)(2) or 19 TAC Chapter 153, Subchapter DD, for cross-reference purposes.

The proposed amendment in §232.35(b)(3)–(5) would be deleted to align with current practice of the school districts and TEA no longer performing these activities as they are no longer relevant given all new educators must submit a criminal background check. These rules were put in place originally to provide criminal background checks on all current educators prior to the requirement that all educators applying for certification be fingerprinted.

The proposed amendment in §232.35(c)(1) would strike the phrase, "and shall electronically obtain an authorization form from the TEA staff," to clarify procedures that this practice is not required given updates to the technical process of submissions.

The proposed amendment in §232.35(c)(2) would be deleted as this process is no longer used given all new educators must submit a criminal background check.

The proposed amendment in §232.35(c)(3) would renumber the provision to paragraph (2) for technical formatting purposes.

The attached reflects the proposed rule text changes.

SBOE Review of Proposed SBEC Rules

Under the TEC, §21.042, the SBEC must submit a written copy of each rule it proposes to adopt to the SBOE for review. The SBOE may reject the proposed rule by a vote of at least two-thirds of the members of the SBOE present and voting but may not modify a rule.

FISCAL IMPACT: No changes have been made to this section since published as proposed. The TEA staff has determined that there is no additional fiscal impact on state or local governments and that there are no additional costs to entities required to comply with the proposal.

LOCAL EMPLOYMENT IMPACT: No changes have been made to this section since published as proposed. The proposal has no effect on local economy; therefore, no local employment impact statement is required under Texas Government Code (TGC), §2001.002.

SMALL BUSINESS, MICROBUSINESS, AND RURAL COMMUNITY IMPACT: No changes have been made to this section since published as proposed. The proposal has no direct adverse economic impact for small businesses, microbusinesses, or rural communities; therefore, no regulatory flexibility analysis, specified in TGC, §2006.002, is required.

COST INCREASE TO REGULATED PERSONS: No changes have been made to this section since published as proposed. The proposal does not impose a cost on regulated persons, another state agency, a special district, or a local government and, therefore, is not subject to TGC, §2001.0045.

TAKINGS IMPACT ASSESSMENT: No changes have been made to this section since published as proposed. The proposal does not impose a burden on private real property and, therefore, does not constitute a taking under TGC, §2007.043.

GOVERNMENT GROWTH IMPACT: No changes have been made to this section since published as proposed. The TEA staff prepared a Government Growth Impact Statement assessment for this proposed rulemaking. During the first five years the proposed rulemaking would be in effect, the proposed rule in 19 TAC §232.11(g) would create a new regulation and increase the number of individuals subject to the rule's applicability by requiring superintendents to complete CPE activities in certain topics, as required by HB 403, 86th Texas Legislature, 2019.

The proposed rule in 19 TAC §232.11(d)–(f) would expand an existing regulation to require individuals who hold standard classroom teacher, principal, and/or school counselor certificates to complete CPE activities in certain additional topics, as required by SB 11 and HB 18, 86th Texas Legislature, 2019.

PUBLIC BENEFIT AND COST TO PERSONS: No changes have been made to this section since published as proposed. The public benefit anticipated as a result of the proposal would be clear guidance for applicants, educators, school districts, and providers on CPE requirements. The TEA staff has determined there is no anticipated cost to persons required to comply with the proposal.

DATA AND REPORTING IMPACT: No changes have been made to this section since published as proposed. The proposal would have no new data and reporting impact.

PRINCIPAL AND CLASSROOM TEACHER PAPERWORK REQUIREMENTS: No changes have been made to this section since published as proposed. The TEA staff has determined the proposal would not require a written report or other paperwork to be completed by a principal or classroom teacher.

PUBLIC COMMENTS: In accordance with the SBEC rulemaking process, a summary of comments received by the SBEC on its proposed rules is shared with the SBOE under separate cover prior to this SBOE meeting.

MOTION TO BE CONSIDERED: The State Board of Education:

Take no action on the proposed revisions to 19 TAC Chapter 232, General Certification Provisions.

Staff Members Responsible:
Ryan Franklin, Associate Commissioner, Educator Leadership and Quality
Christie Pogue, Director, EPP Accreditation and Policy Development
David Rodriguez, Director, Educator Investigations

Attachment I: Text of Proposed Revisions to 19 TAC Chapter 232, General Certification Provisions

Attachment II: SBEC-Related Legislation: Timeline, Action Steps, and Staff or Stakeholders

Chapter 232. General Certification Provisions

Subchapter A. Certificate Renewal and Continuing Professional Education Requirements

§232.1. General Provisions.

(a)   All educators should model the philosophy of life-long learning; therefore, participation in professional development activities is expected of all educators. Activities must focus on the need of each educator to continually update his or her knowledge of current content, best practices, research, and technology that is relevant to his or her individual role as an educator. The State Board for Educator Certification (SBEC) shall ensure that requirements for renewal and continuing professional education are flexible to allow each individual educator to identify the activities he or she will complete to satisfy the SBEC's requirements.

(b)   This chapter provides the minimum requirements necessary to renew any class of certificate issued by the SBEC.

(c)   Each individual who holds a standard certificate(s) is responsible for renewing the certificate(s) and paying a fee for late renewal. Failure to receive notice of the renewal requirement or deadline does not excuse the individual's obligation to renew or pay applicable fees.

(d)   [The SBEC may deny renewal if the] An educator may not renew a certificate if the individual fails to comply with the requirements of this subchapter.

[(e)   The deadlines established for renewal, late renewals, and fees are established by procedures approved by the SBEC and are subject to change.]

[(f)   The SBEC shall deny or cancel the renewal of an educator's certificate(s) if required by the Texas Education Code (TEC), §57.491, regarding defaults on guaranteed student loans, or pursuant to an interagency agreement with the Texas Higher Education Coordinating Board (THECB) relating to judgment debts for student loans owed to the THECB.]

[(g)   The SBEC shall deny or cancel the renewal of an educator's certificate(s) as provided by the Texas Family Code, Chapter 232, regarding failure to pay child support.]

[(h)   If reissued, Texas lifetime certificates surrendered in lieu of revocation or revoked at any time shall be reissued as standard certificates and subject to the requirements of this subchapter.]

(e) [(i)] Pursuant to the Texas Education Code [TEC] , §21.003(a), an educator employed by a Texas public school district who fails to satisfy each of the requirements to renew his or her standard certificate(s) by the renewal date moves to inactive status and is ineligible for employment in a Texas public school district in a position for which a certificate is required until all appropriate requirements are satisfied. However, if an educator has completed the requirements for renewal and submitted a renewal application prior to the expiration date of the certificate, the certificate will not be considered to have expired.

[§232.3. Voluntary Renewal of Current Texas Educators.]

[Educators holding a valid Texas lifetime certificate issued prior to September 1, 1999, may voluntarily comply with the requirements of this subchapter.]

§232.5. Renewal Date for Certificates.

(a)   The renewal date of a standard certificate shall be five years after the last day of the certificate holder's next birth month.

(b)   If an educator holds multiple certificates, all certificates will be renewed concurrently and are subject to renewal after the last day of the certificate holder's birth month in the year in which the earliest certificate was issued.

[(c)   If an educator holds an educational aide certificate and qualifies for a standard classroom teaching certificate, the expiration date of the new standard teaching certificate shall be five years after the last day of the certificate holder's next birth month.]

(c) [(d)] Pursuant to the Texas Education Code, §21.0031(f), a certificate or permit is not considered to have expired if the educator has completed the renewal requirements of this subchapter and has applied for renewal prior to the expiration date of the certificate or permit. Pursuant to the Texas Government Code, §2001.054, if an educator makes timely and sufficient application for the renewal or extension of a certificate or permit that is not granted because of the pendency of a matter subject to notice and hearing pursuant to Chapter 249 of this title (relating to Disciplinary Proceedings, Sanctions, and Contested Cases), the existing certificate or permit does not expire until the application for renewal or extension has been finally determined by the State Board for Educator Certification (SBEC) and the last day for seeking review of the SBEC order has passed.

(d) [(e)] The renewal of a certificate that is delayed as a result of failure to meet the renewal requirements of this subchapter will not become effective until all renewal requirements have been satisfied.

(e) [(f)] If all renewal requirements have been satisfied and submitted to the Texas Education Agency (TEA), the effective renewal date of a certificate or permit will not be affected by any TEA processing delay.

§232.7. Requirements for Certificate Renewal.

(a)   The Texas Education Agency (TEA) staff shall develop procedures to:

(1)   notify educators at least six months prior to the expiration of the renewal period to the email address as specified in §230.91 of this title (relating to Procedures in General);

(2)   confirm compliance with all renewal requirements pursuant to this subchapter;

(3)   notify educators who are not renewed due to noncompliance with this section; and

(4)   verify that educators applying for reactivation of certificate(s) under §232.9 of this title (relating to Inactive Status and Late Renewal) are in compliance with subsection (c) [(2)-(6)] of this section.

(b)   The TEA staff shall administratively approve each hardship exemption request that meets the criteria specified in paragraphs (1)-(3) of this subsection.

(1)   A hardship exemption must be due to one of the following circumstances that prevented the educator's completion of renewal requirements:

(A)   catastrophic illness or injury of the educator;

(B)   catastrophic illness or injury of an immediate family member; or

(C)   military service of the educator.

(2)   The request for a hardship exemption must include documentation from a licensed physician or verified military records.

(3)   The request for the amount of time allowed for renewal is equal to:

(A)   the amount of time that a licensed physician determined that the educator was not able to complete renewal requirements due to the educator's catastrophic illness or injury; or

(B)   the amount of time that a licensed physician determined that the educator was not able to complete renewal requirements due to the catastrophic illness or injury of an immediate family member; or

(C)   two years of additional time for a military service member, in accordance with the Texas Occupations Code, §55.003.

(4)   If a hardship exemption request is approved, the educator must pay the appropriate renewal fee, pursuant to §230.101 of this title (relating to Schedule of Fees for Certification Services) [§232.25 of this title (relating to Fees Payable Upon Certificate Renewal or Reactivation)] .

(c)   To be eligible for renewal, an educator must:

(1)   subject to §232.16(c) of this title (relating to Verification of Renewal Requirements), satisfy continuing professional education requirements, pursuant to §232.11 of this title (relating to Number and Content of Required Continuing Professional Education Hours);

(2)   hold a valid standard certificate that is not currently suspended and has not been surrendered in lieu of revocation or revoked by lawful authority;

(3)   not be a respondent in a disciplinary proceeding under Chapter 249 of this title (relating to Disciplinary Proceedings, Sanctions, and Contested Cases);

(4)   successfully resolve any reported criminal history, as defined by §249.3 of this title (relating to Definitions);

[(5)   not be in default on a guaranteed student loan reported by the Texas Guaranteed Student Loan Corporation or a judgment debt for a student loan owed to the Texas Higher Education Coordinating Board, unless repayment arrangements have been made;]

(5) [(6)] not be in arrears of child support, pursuant to the Texas Family Code, Chapter 232;

(6) [(7)] pay the renewal fee, provided in §230.101 of this title [pursuant to §232.25 of this title] , which shall be a single fee regardless of the number of certificates being renewed; and

(7) [(8)] submit fingerprints in accordance with §232.35(c) of this title (relating to Submission of Required Information) and the TEC, §22.0831.

(d)   The TEA staff shall renew the certificate(s) of an educator who meets all requirements of this subchapter.

§232.9. Inactive Status and Late Renewal.

(a)   The certificate(s) of an educator holding a valid standard certificate who does not satisfy the requirements of this subchapter shall be placed on inactive status, subject to the requirements of the Texas Education Code, §21.0031(f). Texas Education Agency (TEA) staff shall notify a person by email of the reason(s) for denying the renewal and the actions or conditions required for removal from inactive status. At any time, the educator may apply to have his or her certificate(s) reactivated and submit the reactivation fee. The TEA staff shall administratively approve reactivation of the educator's certificate(s) subject to verification that the educator is in compliance with §232.7 of this title (relating to Requirements for Certificate Renewal). The renewal date of a reactivated certificate(s) shall be five years after the last day of the certificate holder's next birth month.

(b)   A person who satisfies all requirements for renewal prior to the certificate expiration date and submits an application [no more than six months] after the expiration date of a certificate shall pay a late renewal fee in addition to the standard renewal fee. The certificate status will be set to valid, and the effective date of the certificate will be the day after the prior expiration date. A person whose certificate has become inactive longer than six months after the expiration date because of failure to renew shall pay a late renewal fee in addition to the standard renewal fee [and also pay a reactivation fee] . The certificate status will be set to valid, and the effective date of the certificate will be the date the educator completed continuing professional education (CPE) hours, provided it is not more than 60 days prior to the date of the application. If the application is submitted more than 60 days after CPE hours were completed, the effective date will be 60 days prior to the date of the application. The amount of these fees shall be as provided in §230.101 of this title (relating to Schedule of Fees for Certification Services).

(c)   If a person does not satisfy the required CPE hours at the expiration of the renewal period, the person may have the certificate(s) removed from inactive status and reactivated by verifying through an affidavit whether he or she is in compliance with renewal requirements, including CPE hours, and paying any applicable fee(s).

[(d)   The TEA staff shall be responsible for auditing compliance with renewal requirements. The TEA audit procedures shall be based on available resources and may include random audits. The TEA staff shall contact an educator selected for an audit of his or her renewal requirements and provide the educator with information needed to submit the documentation that supports certificate renewal. The TEA staff at any

§232.11. Number and Content of Required Continuing Professional Education Hours.

(a)   The appropriate number of clock-hours of continuing professional education (CPE) must be completed during each five-year renewal period.

(b)   One semester credit hour earned at an accredited institution of higher education is equivalent to 15 CPE clock-hours.

(c)   Required Content. Other than hours earned to comply with subsections (d), (e), (f), (g), and (k) of this section, professional development activities shall be related to the certificate(s) being renewed and focus on the standards required for issuance of the certificate(s), including:

    (1)   content area knowledge and skills; and

    (2)   professional ethics and standards of conduct.

(d)   Classroom Teacher.

    (1)   Classroom teacher certificate holders shall complete 150 clock-hours.

    (2)   A classroom teacher must attain at least 37.5 hours of CPE that includes training directly related to each of the following topics and may include two or more listed topics combined:

        (A)   collecting and analyzing information that will improve effectiveness in the classroom;

        (B)   recognizing early warning indicators that a student may be at risk of dropping out of school;

        (C)   digital learning, digital teaching, and integrating technology into classroom instruction;

        (D)   educating diverse student populations, including:

            (i)   students who are eligible to participate in special education programs under Texas Education Code (TEC), Chapter 29, Subchapter A;

            (ii)   students who are eligible to receive educational services required under the Rehabilitation Act of 1973, Section 504 (29 United States Code (USC), Section 794);

            (iii)   students with mental health conditions or who engage in substance abuse;

            (iv)   students with intellectual or developmental disabilities;

            (v)   students who are educationally disadvantaged;

            (vi)   students of limited English proficiency; and

            (vii)   students at risk of dropping out of school;

        (E)   understanding appropriate relationships, boundaries, and communications between educators and students; and

        (F)   how mental health conditions, including grief and trauma, affect student learning and behavior and how evidence-based, grief-informed, and trauma-informed strategies support the academic success of students affected by grief and trauma. The instruction must:

            (i)   comply with the training required by TEC, §38.036(c)(1); and

            (ii)   be approved by the commissioner of education.

(e)   Principal and Principal as Instructional Leader.

    (1)   Principal and Principal as Instructional Leader certificate holders shall complete 200 clock-hours.

(2)   A principal and principal as instructional leader must attain at least 50 hours of CPE that include training directly related to each of the following topics:

    (A)   effective and efficient management, including:

        (i)   collecting and analyzing information;

        (ii)   making decisions and managing time; and

        (iii)   supervising student discipline and managing behavior;

    (B)   recognizing early warning indicators that a student may be at risk of dropping out of school;

    (C)   digital learning, digital teaching, and integrating technology into campus curriculum and instruction;

    (D)   effective implementation of the Texas Model for Comprehensive School Counseling Programs under TEC, §33.005;

    (E)   mental health programs addressing a mental health condition;

    (F)   educating diverse student populations, including:

        (i)   students who are eligible to participate in special education programs under TEC, Chapter 29, Subchapter A;

        (ii)   students with intellectual or developmental disabilities;

        (iii)   students who are eligible to receive educational services required under the Rehabilitation Act of 1973, Section 504 (29 USC, Section 794);

        (iv)   students with mental health conditions or who engage in substance abuse;

        (v)   students who are educationally disadvantaged;

        (vi)   students of limited English proficiency; and

        (vii)   students at risk of dropping out of school;

    (G)   preventing, recognizing, and reporting any sexual conduct between an educator and student that is prohibited under Texas Penal Code, §21.12, or for which reporting is required under TEC, §21.006; and

    (H)   how mental health conditions, including grief and trauma, affect student learning and behavior and how evidence-based, grief-informed, and trauma-informed strategies support the academic success of students affected by grief and trauma. The instruction must be:

        (i)   based on relevant best practice-based programs and research-based practices; and

        (ii)   approved by the commissioner, in consultation with the Texas Health and Human Services Commission.

(f)   School Counselor.

    (1)   School Counselor certificate holders shall complete 200 clock-hours.

    (2)   A school counselor must attain at least 50 hours of CPE that include training directly related to each of the following topics:

        (A)   assisting students in developing high school graduation plans;

        (B)   implementing dropout prevention strategies;

        (C)   informing students concerning:

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(i)   college admissions, including college financial aid resources and application procedures; and

(ii)   career opportunities;
</blockquote>

(D)   counseling students concerning mental health conditions and substance abuse, including through the use of grief-informed and trauma-informed interventions and crisis management and suicide prevention strategies; and

(E)   effective implementation of the Texas Model for Comprehensive School Counseling Programs under TEC, §33.005.
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(g)   Superintendent.

> (1)   Superintendent certificate holders shall complete 200 clock-hours.
>
> (2)   An individual who holds a superintendent certificate that is renewed on or after January 1, 2021, must complete at least 2.5 hours of training every five years on identifying and reporting potential victims of sexual abuse, human trafficking, and other maltreatment of children, in accordance with TEC, §21.054(h). For purposes of this subsection, "other maltreatment" has the meaning assigned by Human Resources Code, §42.002.

(h)   School Librarian and Learning Resources Specialist certificate holders shall complete 200 clock-hours.

(i)   Educational Diagnostician certificate holders shall complete 200 clock-hours.

(j)   Reading Specialist certificate holders shall complete 200 clock-hours.

(k)   The required CPE for educators who teach students with dyslexia must include training regarding new research and practices in educating students with dyslexia. The required training may be satisfied through an online course approved by Texas Education Agency staff.

(l)   Professional development activities may include:

> (1)   an evidence-based mental health first aid training program or an evidence-based grief-informed and trauma-informed care program that is offered through a classroom instruction format that requires in-person attendance. A person receiving this training will receive twice the number of hours of instruction provided under that program, not to exceed 16 hours;
>
> (2)   suicide prevention training that meets the guidelines for suicide prevention training approved under the TEC, §21.451;
>
> (3)   an instructional course on the use of an automated external defibrillator (AED) that meets the guidelines for AED training approved under Texas Health and Safety Code, §779.002, in accordance with the TEC, §21.0541; and
>
> (4)   education courses that:
>
>> (A)   use technology to increase the educator's digital literacy; and
>>
>> (B)   assist the educator in the use of digital technology in learning activities that improve teaching, assessment, and instructional practices.

(m)   An educator holding multiple classes of certificates shall complete the higher number of required CPE clock-hours in the classes held during each five-year renewal period unless otherwise specified in applicable State Board for Educator Certification rules codified in the Texas Administrative Code, Title 19, Part 7.

(n)   An educator eligible to renew multiple classes of certificates issued during the same renewal period may satisfy the requirements for any class of certificate issued for less than the full five-year period by completing a prorated number of the required CPE clock-hours. Educators must complete a minimum of one-fifth of the additional CPE clock-hours for each full calendar year that the additional class of certificate is valid.

[§232.11. Number and Content of Required Continuing Professional Education Hours.]

[(a)   The appropriate number of clock-hours of continuing professional education (CPE), as specified in §232.13 of this title (relating to Number of Required Continuing Professional Education Hours by Classes of Certificates), must be completed during each five-year renewal period.

(b)   One semester credit hour earned at an accredited institution of higher education is equivalent to 15 CPE clock-hours.

(c)   At least 80% of the CPE activities shall be directly related to the certificate(s) being renewed and focus on the standards required for the initial issuance of the certificate(s), including:

    (1)   content area knowledge and skills;

    (2)   professional ethics and standards of conduct;

    (3)   professional development, which should encompass topics such as the following:

        (A)   district and campus priorities and objectives;

        (B)   child development, including research on how children learn;

        (C)   classroom management;

        (D)   applicable federal and state laws;

        (E)   diversity and special needs of student populations;

        (F)   increasing and maintaining parental involvement;

        (G)   integration of technology into educational practices;

        (H)   ensuring that students read on or above grade level;

        (I)   diagnosing and removing obstacles to student achievement; and

        (J)   instructional practices.

    (4)   An individual who holds a classroom teacher certificate that is renewed on or after June 1, 2019, must complete CPE activities directly related to each of the topics in subparagraphs (A)-(H) of this paragraph. Not more than 25% of the CPE activities for an individual who holds a classroom teacher certificate shall include instruction in the following topics:

        (A)   collecting and analyzing information that will improve effectiveness in the classroom;

        (B)   recognizing early warning indicators that a student may be at risk of dropping out of school;

        (C)   digital learning, digital teaching, and integrating technology into classroom instruction;

        (D)   educating students with disabilities, including mental health disorders;

        (E)   educating students who are educationally disadvantaged;

        (F)   educating English language learners;

        (G)   educating students at risk of dropping out of school; and

        (H)   understanding appropriate relationships, boundaries, and communications between educators and students.

    (5)   An individual who holds a principal certificate that is renewed on or after June 1, 2019, must complete CPE activities directly related to each of the topics listed in subparagraphs (A)-(J) of this paragraph. Not more than 25% of the CPE activities for an individual who holds a principal certificate shall include instruction in the following topics:

        (A)   collecting and analyzing information;

        (B)   making decisions and managing time;

    (C) supervising student discipline and managing behavior;

    (D) recognizing early warning indicators that a student may be at risk of dropping out of school;

    (E) digital learning, digital teaching, and integrating technology into campus curriculum and instruction;

    (F) educating students with disabilities, including mental health disorders;

    (G) educating students who are educationally disadvantaged;

    (H) educating English language learners;

    (I) educating students at risk of dropping out of school; and

    (J) preventing, recognizing, and reporting any sexual conduct between an educator and student that is prohibited under the Texas Penal Code, §21.12, or for which reporting is required under the Texas Education Code (TEC), §21.006.

   (6) An individual who holds a school counselor certificate that is renewed on or after June 1, 2019, must complete CPE activities directly related to each of the topics listed in subparagraphs (A)-(D) of this paragraph. Not more than 25% of the CPE activities for an individual who holds a school counselor certificate shall include instruction in the following topics:

    (A) assisting students in developing high school graduation plans;

    (B) implementing dropout prevention strategies;

    (C) informing students concerning college admissions, including college financial aid resources and application procedures; and

    (D) informing students concerning career opportunities.

(d) Educators are encouraged to identify CPE activities based on results of his or her annual appraisal required under the TEC, Chapter 21, Subchapter H.

(e) The required CPE for educators who teach students with dyslexia must include training regarding new research and practices in educating students with dyslexia. The required training may be satisfied through an online course approved by Texas Education Agency staff.

(f) An educator eligible to renew multiple classes of certificates issued during the same renewal period may satisfy the requirements specified in §232.13 of this title for any class of certificate issued for less than the full five-year period by completing a prorated number of the required CPE clock-hours. Educators must complete a minimum of one-fifth of the additional CPE clock-hours for each full calendar year that the additional class of certificate is valid.

(g) An educator may fulfill up to 12 clock-hours of required CPE activities by participating in a mental health first aid training program offered by a local mental health authority under the Texas Health and Safety Code, §1001.203. The number of clock-hours of CPE an educator may fulfill under this subsection may not exceed the number of clock-hours the educator actually spends participating in a mental health first aid training program.

(h) An educator may receive credit toward CPE requirements for completion of an instructional course on the use of an automated external defibrillator (AED) that meets the guidelines for AED training approved under Texas Health and Safety Code, §779.002, in accordance with the TEC, §21.0541.

(i) An educator may receive credit toward CPE requirements for completion of suicide prevention training that meets the guidelines for suicide prevention training approved under the TEC, §21.451.

(j) Continuing education requirements for a classroom teacher and principal may include instruction regarding how grief and trauma affect student learning and behavior and how evidence-based, grief-informed, and trauma-informed strategies support the academic success of students affected by grief and trauma.

(k) An educator may receive credit toward CPE requirements for completion of education courses that:

(1)   use technology to increase the educator's digital literacy; and

(2)   assist the educator in the use of digital technology in learning activities that improve teaching, assessment, and instructional practices.]

[§232.13. Number of Required Continuing Professional Education Hours by Classes of Certificates.]

[(a)   Holders of the Standard Superintendent Certificate shall complete 200 clock-hours of continuing professional education (CPE) every five years. Specific requirements are contained in §242.30 of this title (relating to Requirements to Renew the Standard Superintendent Certificate).

(b)   Holders of the Standard Principal Certificate shall complete 200 clock-hours of CPE every five years. Specific requirements are contained in §241.30 of this title (relating to Requirements to Renew the Standard Principal Certificate).

(c)   Holders of the Standard School Counselor Certificate shall complete 200 clock-hours of CPE every five years. Specific requirements are contained in §239.25 of this title (relating to Requirements to Renew the Standard School Counselor Certificate).

(d)   Holders of the Standard School Librarian Certificate and Learning Resources Specialist Certificate shall complete 200 clock-hours of CPE every five years. Specific requirements are contained in §239.65 of this title (relating to Requirements to Renew the Standard School Librarian Certificate).

(e)   Holders of the Standard Educational Diagnostician Certificate shall complete 200 clock-hours of CPE every five years.

(f)   Holders of the Standard Reading Specialist Certificate shall complete 200 clock-hours of CPE every five years.

(g)   Holders of the Standard Master Teacher Certificate shall complete 200 clock-hours of CPE every five years.

(h)   Holders of the Standard Classroom Teacher Certificate shall complete 150 clock-hours of CPE every five years. Specific requirements are contained in §232.11 of this title (relating to Number and Content of Required Continuing Professional Education Hours).

(i)   Holders of the Standard Educational Aide Certificate are exempt from the provisions of §232.11 of this title.

(j)   Holders of professional certificates issued prior to September 1, 1999, who opt into the Standard Certificate pursuant to §232.3 of this title (relating to Voluntary Renewal of Current Texas Educators) shall complete 200 clock-hours of CPE every five years.

(k)   Holders of provisional certificates issued prior to September 1, 1999, who opt into the Standard Certificate pursuant to §232.3 of this title shall complete 150 clock-hours of CPE every five years.

(l)   An educator holding multiple classes of certificates shall complete the higher number of required CPE clock-hours in the held classes during each five-year renewal period unless otherwise specified in applicable State Board for Educator Certification rules codified in the Texas Administrative Code, Title 19, Part 7.

(m)   Holders of a Standard Certificate in other professional areas must complete 200 clock-hours of CPE every five years.]

§232.15. Types of Acceptable Continuing Professional Education Activities.

(a)   The following are acceptable types of continuing professional education (CPE) activities:

(1)   participating in institutes, workshops, seminars, conferences, interactive distance learning, video conferencing, online activities, and in-service or staff development activities given by an approved provider or sponsor, pursuant to §232.21 of this title (relating to Provider [Registration] Requirements) [, in content area knowledge and skills related to the certificate(s) being renewed] .

Staff development activities completed through accredited public and private schools in other states, United States territories, and countries other than the United States may be accepted;

    (2)   completing undergraduate courses [~~in content area knowledge and skills related to the certificate(s) being renewed~~] , graduate courses, or training programs that are taken through an accredited institution of higher education that at the time was accredited or otherwise approved by an accrediting organization recognized by the Texas Higher Education Coordinating Board or as outlined in §230.1 of this title (relating to Definitions);

    (3)   participating in an independent study in content area knowledge and skills related to the certificate(s) being renewed, not to exceed 20% of the required clock-hours, which may include:

        (A)   self-study of relevant professional materials (e.g., books, journals, periodicals, video and audio tapes, computer software, interactive distance learning, video conferencing, or online activities);

        (B)   developing curriculum; or

        (C)   authoring a published work;

    (4)   developing, teaching, or presenting a CPE activity described in this [~~subsection or subsection (b) of this~~] section, not to exceed 10% of the required clock-hours; and

    (5)   providing professional guidance as a mentor to another educator, not to exceed 30% of the required clock-hours.

(b)   Completion of each CPE activity should be evidenced by documentation (e.g., transcripts, certificates of completion, or attendance logs).

§232.16. Verification of Renewal Requirements.

(a)   Written documentation of completion of all activities applied toward continuing professional education (CPE) requirements shall be maintained by each educator.

(b)   Subject to subsection (c) of this section, by the date renewal is required, the educator shall verify through an affidavit in a manner determined by the Texas Education Agency (TEA) staff whether he or she is in compliance with renewal requirements, including CPE.

(c)   Satisfaction of continuing professional education requirements, pursuant to §232.11 of this title (relating to Number and Content of Required Continuing Professional Education Hours), is not required by the renewal date if such requirements are implemented within one year prior to the renewal date.

(d)   The TEA staff shall be responsible for auditing compliance with renewal requirements. The TEA audit procedures shall be based on available resources and may include random audits. The TEA staff shall contact an educator selected for an audit of his or her renewal requirements and provide the educator with information needed to submit the documentation that supports certificate renewal. The TEA staff at any time may review the documentation required for renewal under this subchapter, which may include the documentation described in §232.15 of this title (relating to Types of Acceptable Continuing Professional Education Activities) and §232.21 of this title (relating to Provider Requirements).

§232.17. Pre-Approved Continuing Professional Education Provider or Sponsor.

(a)   The following entities may provide and/or sponsor continuing professional education (CPE) activities and must comply with the provisions of §232.21 of this title (relating to Provider [~~Registration~~] Requirements). Pre-approved providers include:

    (1)   State Board for Educator Certification;

    (2)   Texas Education Agency;

    (3)   accredited institutions of higher education that at the time were accredited or otherwise approved by an accrediting organization recognized by the Texas Higher Education Coordinating Board;

    (4)   regional education service centers;

(5)   Texas public school districts and open-enrollment charter schools. To be creditable toward CPE requirements, school district in-service and/or staff development activities must be developed, approved, and conducted in accordance with the Texas Education Code, §21.451;

(6)   private schools, as defined in §230.1 of this title (relating to Definitions); and

(7)   professional membership associations or non-profits that have offered professional development in Texas for at least five years and have tax-exempt status under 26 United States Code, §501(c)(3)-(6), or a state association affiliated with a national association with tax-exempt status.

(b)   If private companies, entities, and individuals provide CPE activities on behalf of a pre-approved provider, the pre-approved provider is responsible for ensuring compliance with quality and documentation requirements of §232.21 of this title.

§232.19. Approval of Private Companies, Private Entities, and Individuals as Continuing Professional Education Providers .

Private companies, private entities, and individuals seeking approval [who wish] to provide continuing professional education (CPE) for Texas educators on their own behalf must apply for registration [register] with the State Board for Educator Certification and must comply with the provisions of [be approved under] §232.21 of this title (relating to Provider [Registration] Requirements).

(1)   The Texas Education Agency staff shall [develop procedures to] approve as a CPE provider [providers and/or sponsors] any [other] person, agency, or entity seeking to offer CPE activities that: [pursuant to the requirements of this subchapter.]

(A)   submits provider information with types and methods of CPE activities;

(B)   affirms compliance with all applicable statutes and rules; and

(C)   prohibits discrimination in the provision of CPE activities to any certified educator.

(2)   It is the responsibility of the educator to verify the approval status of any CPE provider prior to completion of the CPE activities.

§232.21. Provider [Registration] Requirements.

(a)   All [Procedures adopted by the Texas Education Agency (TEA) staff require all pre-approved and all other] continuing professional education (CPE) providers must [or sponsors to register with the State Board for Educator Certification (SBEC) by submitting the relevant sections of the provider registration form designated by the TEA staff in order to accomplish any or all of the following, as applicable] :

(1)   comply with applicable State Board for Educator Certification (SBEC) rules codified in Texas Administrative Code, Title 19, Part 7 [notify the TEA staff of the intent to offer CPE activities] ;

(2)   contribute to the advancement of professional knowledge and skills identified by the commissioner's rules for teacher and administrator standards in Chapter 149 of this title (relating to Commissioner's Rules Concerning Educator Standards), the Texas Essential Knowledge and Skills adopted by the State Board of Education, and standards adopted by the SBEC for each certificate [affirm compliance with all applicable statutes and rules] ;

(3)   ensure that all CPE offered: [prohibit discrimination in the provision of CPE activities to any certified educator:]

(A)   is developed and presented by persons who are appropriately knowledgeable in the subject matter of the training being offered; and

(B)   specifies the content under §232.11 of this title (relating to Number and Content of Required Continuing Professional Education Hours) and number of creditable CPE clock-hours.

[(4)   document that each CPE activity:]

[(A)   complies with applicable SBEC rules codified in the Texas Administrative Code, Title 19, Part 7;]

[(B)   contributes to the advancement of professional knowledge and skills identified by standards adopted by the SBEC for each certificate;]

[(C)   is developed and presented by persons who are appropriately knowledgeable in the subject matter of the training being offered; and]

[(D)   specifies the content under §232.11 of this title (relating to Number and Content of Required Continuing Professional Education Hours) and number of creditable CPE clock-hours; and]

[(5)   on a biennial or more frequent basis, conduct a comprehensive, in-depth self-study to assess the CPE needs and priorities of educators served by the provider as well as the quality of the CPE activities offered.]

(b)   At the conclusion of each activity offered for CPE credit, the provider or sponsor must provide to each educator in attendance written documentation listing, at a minimum, the provider's name and provider number, the educator's name, the date and content of the activity, and the number of clock-hours that count toward satisfying CPE requirements.

(c)   All providers are required to maintain a record of CPE activities that includes a list of attendees, the date and content of the activity, and the number of clock-hours that count toward satisfying CPE requirements. Providers shall retain a record of CPE activity for a period of seven years after the activity is completed.

(d)   A provider or sponsor that is not granted approval or has its approval withdrawn by the TEA staff is not entitled to a contested-case hearing before the SBEC or a person designated by the SBEC to conduct contested-case hearings.

(e)   The TEA staff shall investigate complaints against a provider or sponsor alleging noncompliance with this section. If the investigation determines that the provider or sponsor is operating in violation of any applicable provision under this chapter, the TEA staff may withdraw the approval granted under this section to the provider or sponsor until the provider or sponsor can demonstrate compliance.

(f)   The TEA staff at any time may review the documentation required for provider registration under this chapter [section] . If a review determines that the provider or sponsor is operating in violation of any applicable provision under this chapter, the TEA staff may withdraw the approval granted under this section to the provider or sponsor until the provider or sponsor can demonstrate compliance.

(g)   Before withdrawing approval under subsection (e) or (f) of this section, TEA staff will notify the provider or sponsor in writing that an alleged violation has occurred, provide a summary of the allegation, and request that the provider or sponsor respond to the allegation.

    (1)   A provider or sponsor shall:

        (A)   cooperate fully with any TEA investigation or review; and

        (B)   respond within 21 business days of receipt of requests for information regarding the allegation and other requests for information from the TEA, except where:

            (i)   TEA staff imposes a different response date; or

            (ii)   the provider or sponsor is unable to meet the initial response date and requests and receives a different response date from TEA staff.

    (2)   TEA staff may request further information from the provider or sponsor.

    (3)   If a provider or sponsor fails to comply with paragraph (1)(B) of this subsection, the TEA may deem admitted the violation of rules under this chapter.

    (4)   Upon completion of an investigation or review, TEA staff will notify the provider or sponsor in writing of the findings.

<table>
<tr><td>(A)</td><td>If TEA staff finds that a violation occurred, the notice will specify each rule that was violated and that the approval granted under this section has been withdrawn until the provider or sponsor can demonstrate compliance.</td></tr>
<tr><td>(B)</td><td>If TEA staff finds that no violation has occurred, the notice will specify that no rule was violated.</td></tr>
</table>

[§232.23. Verification of Renewal Requirements.]

[(a) Written documentation of completion of all activities applied toward continuing professional education (CPE) requirements shall be maintained by each educator.

(b) By the date renewal is required, the educator shall verify through an affidavit in a manner determined by the Texas Education Agency (TEA) staff whether he or she is in compliance with renewal requirements, including CPE.

(c) The TEA staff shall be responsible for auditing compliance with renewal requirements. The TEA audit procedures shall be based on available resources and may include random audits. The TEA staff shall contact an educator selected for an audit of his or her renewal requirements and provide the educator with information needed to submit the documentation that supports certificate renewal. The TEA staff at any time may review the documentation required for renewal under this subchapter, which may include the documentation described in §232.15 of this title (relating to Types of Acceptable Continuing Professional Education Activities) and §232.21 of this title (relating to Provider Registration Requirements).]

[§232.25. Fees Payable Upon Certificate Renewal or Reactivation.]

[The fees for the following services will be in the amounts provided in §230.101 of this title (relating to Schedule of Fees for Certification Services):

(1) renewal fee--payable at the time of renewal to support the functions of the SBEC, including renewal, investigations, and enforcement;

(2) reactivation of inactive certificate--payable upon application to reactivate;

(3) late renewal fee;

(4) reinstatement following restitution for default on student loan or nonpayment of child support; and

(5) national criminal history review.]

Subchapter B. National Criminal History Record Information Review of Active Certificate Holders

§232.31. Purpose.

(a) This subchapter provides rules for the implementation of the criminal history record information review under the Texas Education Code, Chapter 22, Subchapter C.

(b) The following words, terms, and phrases, when used in this subchapter, shall have the following meanings, unless the context clearly indicates otherwise.

(1) Certified educator--An employee or applicant for employment at a school entity who holds a Texas educator certification issued under the Texas Education Code (TEC), Chapter 21, Subchapter B, as required by the TEC, Chapter 22, Subchapter C, to whom the TEC, §22.0831, and this subchapter apply.

(2) Criminal History Clearinghouse--An electronic clearinghouse and subscription service established by the Texas Department of Public Safety, as defined by the Texas Government Code, §411.0845.

(3) National criminal history record information--Criminal history record information obtained from both the Texas Department of Public Safety and the Federal Bureau of Investigation, as defined by the Texas Education Code, §22.081.

(4)	Pre-enrollment--The process by which the Texas Education Agency transmits personal identifiers for an applicant for certification, a certified educator, or a non-certified employee to the Texas Department of Public Safety or its fingerprinting vendor, who then provides the individual with a scheduling email that allows for the scheduling of a fingerprinting appointment.

(5) [(4)] School entity--A school district, open-enrollment charter school, or shared services arrangement.

(6) [(5)] Texas Education Agency staff--Staff of the Texas Education Agency assigned by the commissioner of education to perform the State Board for Educator Certification's administrative functions and services.

(c)	A certified educator shall submit fingerprint, photograph, and identification information to the Texas Department of Public Safety (DPS) in the form the DPS requires for the purpose of entering the person's national criminal history record information into the Criminal History Clearinghouse.

(d)	A certified educator may not be employed by a school entity on or after September 1, 2011, unless the certified educator's national criminal history record information has been entered into the Criminal History Clearinghouse and made available to the Texas Education Agency and the school entity by which the certified educator is employed.

§232.35. Submission of Required Information.

(a)	Notice to school entity.

(1)	Upon notice from the Texas Education Agency (TEA) staff, a school entity shall provide, no later than 15 calendar days from the date the school entity receives the notice, the names, e-mail addresses, [mailing addresses,] and any other requested identifying information for all certified educators employed by the school entity at that time.

(2)	All certified educators shall provide the school entity by which they are employed an e-mail address at which the certified educator can receive notices and authorizations required by this subchapter. A school entity e-mail address or an Internet e-mail address is acceptable for this purpose.

(3)	The TEA staff shall use the identifying information to return a fingerprinting status [send notices] to the school entity . The TEA will also submit the identifying information to the Texas Department of Public Safety (DPS) or its vendor to pre-enroll [and its] certified educators [notifying those educators] who must submit fingerprint, photograph, and identification information for the purpose of a national criminal history record information review.

(4)	All certified educators hired by a school entity [after it submits the names of all its certified educators to the TEA staff] shall submit fingerprint, photograph, and identification information required by this subchapter before the certified educator begins employment with the school entity. This requirement will not apply if the certified educator has already submitted such information to the DPS [Texas Department of Public Safety (DPS)] in the form the DPS requires for the purposes of fingerprinting under §230.11(b)(2) of this title (relating to General Requirements) or Chapter 153, Subchapter DD, of this title (relating to Criminal History Record Information Review) .

(b)	Notice to certified educator to submit required information.

(1)	The TEA staff shall notify the certified educator by e-mail, at the address specified by the school entity, that the certified educator must submit fingerprint, photograph, and identification information to the DPS in the form the DPS requires for the purpose of entering the certified educator's national criminal history record information into the Criminal History Clearinghouse.

(2)	The notice shall specify the date, which shall be at least 80 calendar days from the date the notice is sent via e-mail, that the certified educator's national criminal history record information must be received by the TEA staff as required by this section and by the Texas Education Code (TEC), §22.083.

[(3)	The TEA staff shall e-mail the employing school entity a copy of each notice.]

[(4)   Within ten calendar days of the date on which each notice was sent, the school entity shall ensure that all affected certified educators have received the notice by obtaining written acknowledgment from each certified educator, or by delivering a copy of the notice to the certified educator. The school entity shall maintain a record of the proof of delivery of each notice.]

[(5)   Twenty-five calendar days before the date on which an educator's criminal history information must be submitted, the TEA staff shall send a reminder notice, by e-mail only, to any certified educator whose information has not yet been received and to his or her employing school entity.]

(c)   Authorization to submit required information.

(1)   Each certified educator shall pay the required national criminal history review fee, which shall be in the same amount as the national criminal history check fee for applicants for certification in §230.101of this title (relating to Schedule of Fees for Certification Services) [, and shall electronically obtain an authorization form from the TEA staff] . This provision does not prohibit another entity from paying the national criminal history review fee on behalf of the educator.

[(2)   The authorization form shall be used to submit fingerprint, photograph, and identification information to the DPS and its contractors in the form that the DPS requires to obtain national criminal history record information required by the TEC, §22.0831, which shall be entered into the Criminal History Clearinghouse, and made available to the TEA staff and the school entity.]

(2) [(3)] Only fingerprint information that has been properly authorized by the TEA staff shall satisfy the requirements of the TEC, §22.0831, and shall be accepted and entered in the Criminal History Clearinghouse.

ATTACHMENT II

SBEC-Relation Legislation: Timeline, Action Steps, and Staff or Stakeholders

SBEC-Related Legislation:

- HB 18 and SB 11: Mental Health and Substance Abuse Training.
  Requirements of continuing education training for teachers, counselors, and principals related to educating students with mental health conditions or who engage in substance abuse.

HB 18 Statutory Changes	Teachers	Principals	Counselors
Requires at least 25% of CPE hours in specific instructional areas.	✓	✓	✓
Allows two or more topics listed together	✓		
Provides specificity on educating students: • eligible to participate in special education programs under Subchapter A, Chapter 29. • eligible to receive services under 504 • with mental health conditions or engage in substance abuse • students with intellectual or developmental disabilities	✓	✓	
Adds specific instruction regarding grief and trauma-informed instruction with specific training components. Will connect to statutory provisions.	✓ SB 11: Sec. 38.036	✓ HB 18: CMM & HHSC	
Adds comprehensive counseling program under §33.005 (Texas Model for Comprehensive School Counseling Programs) to required training.		✓	✓
Adds mental health programs addressing mental health conditions.		✓	
Adds counseling students with mental health conditions and substance abuse.			✓
Provides mental health first aid or grief/trauma-informed programs to count 2X the CPE hours, up to 16 hours maximum that is offered through classroom instruction with in-person attendance	✓	✓	✓

- HB 403: Superintendent Continuing Education Training Requirements.
  Continuing professional education requirements for the superintendent of a school district regarding sexual abuse, human trafficking, and other maltreatment of children.
- HB 2424: Micro-credential Certification Program.
  Relating to the creation of a micro-credential certification program for public school educator continuing education. TEA is currently working with leadership at the Capitol on funding and will follow up when there is an update.
- SB 37: Student Loan Default.
  Relating to the prohibition on the use of student loan default as grounds to deny the issuance or renewal of an educator certificate.

Timeline and Action Steps:

- September 2019—TEA Crosswalk
- October 9, 2019—Special Populations Unit Meeting
- October 14, 2019—Special Education Contact
- October 24, 2019—Stakeholder Meeting
- December 6, 2019—SBEC Meeting Discussion Item
- December 10, 2019—Jan Friese and Shannon Noble: Texas Counseling Association

October 24, 2019 Stakeholder Meeting Participants:

Invited	Attendees
- Holly Eaton—TCTA - Carrie Griffith—TSTA - Andrea Chevalier—ATPE - Andrea Aguilera—Teach Plus - Patti Quinzi—TXAFT - Lindsay Sobel—Teach Plus - Lolly Guerra—TASPA - Amy Campbell—TASB - Casey McCreary—TASA - Harley Eckhart—TEPSA - Mark Terry—TEPSA - Archie McAfee—TASSP - Cindy Jackson—TASSP	- Holly Eaton—TCTA - Carrie Griffith—TSTA - Andrea Chevalier—ATPE - Andrea Aguilera—Teach Plus - Patti Quinzi—TXAFT - Jennifer Barton—TASB - Casey McCreary—TASA - Belinda Neal—TEPSA - Leslie Story—TASB - Cindy Jackson—TASSP

Recommendation for Appointment to the
Lackland Independent School District Board of Trustees

July 1, 2020

COMMITTEE ON SCHOOL INITIATIVES: ACTION
STATE BOARD OF EDUCATION: CONSENT

SUMMARY: This item provides an opportunity for board consideration of one reappointment to the board of trustees of the Lackland Independent School District (ISD). The reappointment is necessary due to the expiration of a term of office.

STATUTORY AUTHORITY: Texas Education Code (TEC), §11.352, and 19 Texas Administrative Code (TAC) §61.2.

TEC, §11.352 authorizes the State Board of Education (SBOE) to appoint school board members in special purpose school districts.

The full text of statutory citations can be found in the statutory authority section of this agenda.

PREVIOUS BOARD ACTION: No previous board action has occurred on this item.

BACKGROUND INFORMATION AND JUSTIFICATION: The SBOE is statutorily authorized to appoint board members for military reservation independent school districts. Trustees so appointed shall hold office for two years and until their successors are appointed and qualified. Enlisted military personnel may be appointed to the board; however, a majority must be civilians, and all may be civilians. When a vacancy occurs on one of these boards, the base commander notifies the commissioner of education of such in compliance with TEC, §11.352. Vacancies are widely advertised through base newspapers, email and other electronic means. Interested individuals then submit resumes and other documents verifying that they qualify to hold the position and would accept it if appointed.

The commanding officer appoints a nomination panel of at least three members who review the application packages and interview and evaluate the candidates. The panel's recommendations are then forwarded to the commanding officer for consideration. The commanding officer is required by 19 TAC §61.2 to provide at least one nomination to the SBOE. All nominees must be qualified under the general school laws of Texas and live or be employed on the military reservation.

Colonel, United States Air Force, Scott J. Thompson, Commander of the 502d Installation Support Group, has notified the commissioner of one vacancy on the board of trustees of the Lackland ISD due to the expiration of a term of office. Colonel Thompson has provided a nominee for the vacancy and has recommended the reappointment of Mr. Brian Miller to fill the position.

PUBLIC BENEFIT AND COST TO PERSONS: Both the public and the students will benefit by having qualified individuals appointed to the board of trustees.

MOTION TO BE CONSIDERED: The State Board of Education:

Based on Colonel Scott J. Thompson's recommendation, approve the reappointment of Mr. Brian Miller to serve a term of office, from July 2, 2020, through July 2, 2022, on the Lackland Independent School District Board of Trustees.

Staff Member Responsible:
Jeff Cottrill, Deputy Commissioner of Governance and Accountability

Separate Exhibit: Correspondence from the colonel which includes biographical information and supporting materials for Mr. Miller
(to be provided at the June-July 2020 SBOE meeting)

INFORMATION MATERIALS

STATE BOARD OF EDUCATION OPERATING RULES
(Amended September 13, 2019)

CHAPTER 1. BOARD ORGANIZATION

The statutory citation for this chapter is the Texas Education Code, §7.107.

§1.1. Officers of the Board.

(a)   Selection.

    (1)   The vice chair and secretary of the board shall be elected in accordance with Texas Education Code, §7.107, to serve for a term of two years and until their successors are elected.

    (2)   In case of death or resignation of the vice chair or the secretary of the board, the board shall elect a board member to fill the vacancy for the unexpired term of that officer at the next board meeting. Either of these officers may be removed from office by a vote of not less than two-thirds of the membership of the board.

(b)   Duties.

    (1)   Chair. The chair shall preside at meetings and perform all other duties prescribed by law, by board rule, or by board direction.

    (2)   Vice chair. The vice chair shall perform the duties of the chair in case of absence or disability of the chair and other duties as the chair may request. Should the office of the chair become vacant, the vice chair shall serve as chair until a successor has been appointed by the governor.

    (3)   Secretary. The secretary shall perform all duties as required by law and such other duties as the chair may request.

§1.2. Committees of the Board.

(a)   The standing committees of the board and their areas of oversight are:

Committee of the Full Board

1. Public testimony
2. Establishment of essential knowledge and skills (TEKS)
3. Adopt instructional materials

Committee on Instruction

1. Establishment of curriculum and graduation requirements
2. Curriculum implementation (including procedures concerning dyslexia and related disorders)
3. Instructional materials proclamations
4. Student assessment program implementation

5. General education
6. Education of individuals with disabilities
7. Gifted and talented education
8. Adult education
9. Library standards
10. Texas School for the Blind and Visually Handicapped/Texas School for the Deaf

Committee on School Finance/Permanent School Fund

1. State and federal funding issues
2. Financial budgeting, reporting, and regulation
3. Contract and grant approval
4. Instructional materials financing and operations
5. Review commissioner's annual FSP budget
6. Community education funding
7. Oversight of the Bond Guarantee Program
8. Permanent School Fund management oversight, including audit responsibility, investment objectives, and investment decisions

Committee on School Initiatives

1. Long-range plans required by statute
2. Educational technology and telecommunications
3. Review and evaluation of charter school applications, revisions, and amendments the commissioner of education proposes to grant
4. State Board for Educator Certification rules review
5. School board member training policy
6. Hearing examiners
7. Military reservation and special school districts
8. Extracurricular activities
9. Home-rule school district probation and revocation

(b)   Amendments to the areas of committee oversight reflecting new or changing board responsibilities may be made during the board's periodic operating rules review or by means of resolution addressing the change in responsibilities should such change occur between the operating rules review.

(c)   Committees may receive information, investigate, study and report to the board. The board may from time to time define by resolution the areas of oversight of each committee as may be necessary. Each committee shall review and make recommendations on the board agenda items falling under its areas of oversight; except that the chair of the board, in consultation with the respective committee chair, may designate any board agenda item for review and recommendation by the Committee of the Full Board.

(d)   The Committee of the Full Board shall be composed of all members of the board, and the chair of the board shall be the chair of the Committee of the Full Board.

(e)   The Committees on Instruction, School Finance/Permanent School Fund, and School Initiatives shall be composed of five members selected by the officers of the board. Each member will serve on one committee in addition to the Committee of the Full Board. The

officers of the board shall request in writing the committee choices of the members ranked in order of preference and shall make committee assignments in the public view for terms of two years at the organizational meeting after the qualification of new members as the next order of business following election of board officers and adoption of rules. Vacancies shall be filled in a similar fashion. In addition to preference, the officers of the board shall also consider seniority (total years of service), ethnicity balance, gender balance, and relevant qualifications specific to a committee assignment in making committee assignments. Each committee shall elect a chair from among its members and the chair may appoint a vice chair. An officer of the board is not eligible to serve as the chair of a standing committee.

(f)   Ad hoc committees. Ad hoc committees (i.e., task forces) may be constituted from time to time as directed by a vote of the board or by the chair to perform such duties as the board or chair may assign. The personnel and length of service of ad hoc committees shall be designated by the chair unless otherwise directed by a vote of the board. No action taken by any ad hoc committee shall be final or binding upon the board unless otherwise directed by a vote of the board.

(g)   From time to time committees may find it necessary to request legal opinions, comprehensive studies, or reports to be prepared by the staff to aid the committees in their deliberations. To ensure clarity and coordination, all such requests shall be directed to the Division of State Board of Education Support and shall be reflected in the minutes of the committee meeting. The Chair or the Commissioner may request the Attorney General to issue an opinion under Texas Government Code §402.042.

§1.3.   Board Member Seating Selection.

With the exception of the chair, vice chair, and secretary, the seating of board members will be by State Board of Education districts. The seating for the remaining 12 members will be rotated annually at the first board meeting of the calendar year. Any member with a special need may exchange seats with another board member who is in agreement with that exchange.

CHAPTER 2. MEETINGS

The statutory citations for this chapter are the Texas Education Code, §§7.055, 7.106, 7.107, 7.110, and 39.030, and the Texas Government Code, Title 5, Open Government; Ethics, Subtitle A, Open Government, Chapter 551, Open Meetings.

§2.1.   Regular Meetings of the Board.

In accordance with Texas Education Code, §7.106, four regular meetings of the board a year shall be held in Austin, Texas. If a quorum is not present for a meeting, the meeting shall be recessed or adjourned and all items on the agenda shall be heard at a subsequent meeting.

§2.2.   Special Meetings of the Board.

Special meetings of the board may be held at times and places as ordered by the chair during a regular meeting, or special meetings may be called by the chair of the board to be held at a time and place the chair shall designate.

§2.3.   Open Meetings.

Regular, special, and committee meetings of the board shall be open to the public; however, the board or board committees may meet in executive session in accordance with law and these rules. Open meetings of the board and standing committees shall be broadcast live over the Internet.

§2.4.   Executive Sessions.

Executive sessions of the board or of board committees are meetings with only board members and persons authorized by law. Executive sessions shall be held in accordance with Texas Government Code, Chapter 551, Open Meetings.

§2.5.   Agendas.

(a)   The commissioner of education shall prepare and submit to each member of the board, prior to each meeting, a draft agenda schedule, listing item titles with short summaries of each item. Other than as is provided in subsection (b) and (c), all agenda items are subject to the approval of the chair of the board. Materials supplementing the agenda may be included. Official agendas will be available the day of the board meeting.

(b)   The chairs of the Committee on Instruction, Committee on School Finance/Permanent School Fund, Committee on School Initiatives, and ad hoc committees shall collaborate with the board chair regarding items to be placed on their respective committee agendas. Committee agendas shall include statutorily mandated motions, items assigned to the committee by the board chair, items posted at the discretion of the committee chair and items voted on as set out in subsection (c) below. Committee chairs may post discussion items per their discretion, but action items must be approved by the board chair, subject to the process set out in (c) below.

(c)   Any member of the board may request that a committee chair, other than the Committee of the Full Board, place an item on the agenda of that chair's committee, as either a discussion item or an action item. If the committee chair agrees, the item is placed on the agenda of that chair's committee in accordance with the member's request, subject to the approval of the board chair. If the committee chair denies the member's request, the member may appeal the denial to the board chair. If the board chair denies the request, the member may appeal the denial to the board. If the board approves the request, it is placed on the agenda of the committee to which the request was made at the next meeting of that committee.

(d)   A subject on the agenda that is outside the scope of the board's authority may only be considered by the board or the Committee of the Full Board by a vote of a majority of the membership of the board. The chair, in consultation with Agency legal counsel, shall make a determination of whether an item is outside the scope of the board's authority when preparing the agenda. Any member may move to place an item determined by the chair to be outside the scope of the board's authority on the agenda for a subsequent meeting.

§2.6.   Official Transaction of Business.

(a)   The board shall transact official business only when in session with a quorum present. Unless otherwise provided by law, in order for a board action to be final, it must be approved by a majority of the board members present and voting.

(b)   The chair may authorize the board to meet via videoconference call. As required by Government Code §551.127(c), if videoconference calling technology is used, the meeting location where the presiding officer of the meeting is present must be open to the public, except during executive sessions. The chair may limit the number of remote videoconference locations in the interest of decorum and teleconference capacity.

(c)   No posters, props, or other visual displays are allowed by board members within the meeting rooms without permission from the presiding chair.

§2.7.   Rules of Order.

(a)   The board shall observe *Robert's Rules of Order, Newly Revised,* except as otherwise provided by board rules or by statute.

(b)   The presiding chair shall preserve order and decorum during meetings. In case of disturbance or disorderly conduct in the public gallery, the chair may order that any disruptive individuals be cleared from the area.

(c)   No signs, placards, flags, noisemakers, or other objects of a similar nature shall be permitted in the audience gallery area.

(d)   No applause, outburst or other demonstration by any spectator shall be permitted during the public testimony, public hearing or debate portion of any State Board of Education meeting. After warnings to the audience to refrain from such demonstrations, the presiding chair may direct that disruptive individuals in the gallery area be removed as necessary to preserve decorum during meetings.

(e)   Supporters of a testifier may not gather behind the podiums used for testimony. Testifiers are free to use a portion of their testimony time to acknowledge supporters seated in the audience.

§2.8.   **Minutes.**

The official minutes of the board shall be kept by the office of the commissioner of education or the commissioner's designee and shall be available to any citizen desiring to examine them. Official minutes are those which the board has approved and which carry the original signature of the secretary of the board.

§2.9.   **Resolutions.**

(a)   A member wishing to offer a resolution shall give notice of the resolution by submitting a copy to the chair and the Division of State Board of Education Support not less than four weeks prior to the Monday of the week during which the meeting at which the resolution is to be considered. The board shall consider the resolution and any germane amendments at the next meeting following such notice.

(b)   Titles for congratulatory, commendatory or other non-substantive resolutions shall be submitted by the timelines prescribed in this section with resolution text following at date and time consistent with the staff's pre-meeting preparation timeline.

(c)   The board may consider a resolution which expresses an opinion related to specific instructional materials or which expresses concerns as to the appropriateness of specific instructional materials for certain ages or populations. Resolutions considered under this subsection must conform to the following:

(1)   The resolution shall be submitted in compliance with subsection (a) of this section.

(2)   Board action on a resolution expressing an opinion related to specific instructional materials may only be considered after final action has been taken concerning placement of the specific instructional materials on the list of adopted instructional materials for use in the public schools of Texas. Board action relative to instructional materials resolutions must take place within 90 days of adoption of the specific instructional materials under 19 TAC Chapter 66, State Adoption and Distribution of Instructional Materials, §66.66(c).

(3)   Nothing in the resolution shall be construed to replace or modify any final action taken by the board under 19 TAC Chapter 66.

(4)   The board may adopt a resolution expressing an opinion related to instructional materials based on the following criteria:

(A)   Instructional materials should present the most current factual information accurately and objectively without editorial opinion or bias by the authors. Theories should be clearly distinguished from fact and presented in an objective educational manner.

(B)   Instructional materials should promote citizenship, patriotism, understanding of the essentials and benefits of the free enterprise system, respect for recognized authority, and respect for individual rights. The materials should not include selections or works that encourage or condone civil disorder, social strife, or disregard of the law. Violence, if it appears, should be treated in the context of its cause and consequence. It should not appear for reasons of unwholesome excitement or sensationalism.

(i)   Instructional materials should present positive aspects of the United States and its heritage.

(ii)   When significant political or social movements in history generate no clear consensus, instructional materials should present balanced and factual treatment of the positions.

(iii)   Free enterprise means an economic system characterized by private or corporate ownership of capital goods; investments that are determined by private decision rather than by state control; and prices, production, and the distribution of goods that are determined in a free market.

(C)   Instructional materials should not include blatantly offensive language or illustrations.

(D)   Instructional materials should treat divergent groups fairly without stereotyping and reflect the positive contributions of all individuals and groups to the American way of life. Illustrations and written materials should avoid bias toward any particular group or individual and present a wide range of goal choices. Particular care should be taken in the treatment of ethnic groups, issues related to the aging and aged, roles of men and women, the dignity of workers, and respect for the work ethic.

(i)   Instructional materials should not encourage life-styles deviating from generally accepted standards of society.

(ii)   Instructional materials should provide an objective view of cultural confluence and include information needed to develop mutual understanding and respect among all elements of our population. Materials should reflect an awareness that culture and language variation does exist and can be used to promote successful learning.

(iii)   Instructional materials should present examples of men and women participating in a variety of roles and activities and also shall present the economic, political, social, and cultural contributions of men and women, past and present.

(iv)   Instructional materials that treat aspects of the world of work should reflect the positive contributions of all types of careers to the American economic system and way of life. People presented should reflect varieties of work and be treated without bias toward particular kinds of work.

(v)   Instructional materials should present traditional and contemporary roles of men, women, boys, and girls.

(vi)   Instructional materials should present balanced treatment of issues related to aging and the aged.

(5)   A representative of the publisher of the specific instructional material shall be given the opportunity to address the board prior to action by the board on such a resolution.

(6)   A copy of any resolution passed by the board expressing an opinion related to specific instructional material shall be provided to the board president and superintendent of each school district in Texas.

§2.10. Oral Public Testimony in Connection with Regular Board and Committee Meetings.

(a)   General Provisions.

(1)   The board shall provide opportunity for oral public testimony at regular committee. meetings, special meetings, and at regularly scheduled meetings of the State Board of Education.

(2)   Work session and ad hoc committee meetings are exempt from this requirement.

(3)   The presiding chair shall take appropriate action to avoid unduly repetitious testimony.

(4)   The presiding chair shall assure that members of the public with differing viewpoints have reasonable access to address the board and take steps to ensure that individuals will be given priority over registered lobbyists.

(5)   The presiding chair shall determine which speakers will be heard and the order in which they will be heard if the number exceeds that number which may reasonably be expected to testify in the allotted time for presentations. The presiding chair shall also determine whether speakers who did not register or who registered late will be heard and whether persons asking to testify as a substitute for a registered speaker may do so.

(6)   The board, without debate, may allow a person to testify for clarification and informational purposes, whether or not he/she has registered or previously testified. The person is not required to honor the request.

(b)   Registration Procedures.

(1)   Individuals may register between the hours of 8 a.m. on the Friday preceding the board meeting and 5 p.m. (Central Time) on the Monday preceding the board meeting on the agency website at https://tea.texas.gov/PublicTestimonySBOE, or by facsimile at (512) 936-4319, or, during normal operating hours, by telephone at (512) 463-9007 or in person at the William B. Travis (WBT) State Office Building, 1701 N. Congress, room 1-109, Austin, Texas 78701.

(2) The speaker shall provide his or her name and organizational affiliation, if any, contact telephone number, mailing address, email address, and indicate which item or topic the speaker will address and viewpoint on the topic; and the speaker will disclose if he or she is a lobbyist registered with the Texas Ethics Commission.

(3) A person may register himself or herself, and one other person. Organizations may not register more than two persons per item.

(4) Those registering online will receive an email confirming the registration during the next business day.

(5) Registrations will be listed based upon registration date and time or alternating points of view in order of registration date and time.

(6) Late registration will be accepted until 30 minutes before the scheduled start of a meeting, however late registrants are not guaranteed an opportunity to testify due to time constraints.

(7) Speakers will be informed if it appears that time constraints will not permit all speakers to make their presentation within the allotted time.

(8) All speakers shall provide thirty-five (35) collated or stapled copies of their testimony. Registered speakers who are unable to make their presentations due to time constraints are encouraged to provide thirty-five (35) copies of their testimony for distribution to board members and agency executive staff. Written testimony will not be attached to committee minutes.

(c) Oral Public Testimony to Committees.

(1) Oral public testimony to committees is limited to the topics posted for action or discussion on committee agendas at that specific committee meeting.

(2) Three minute time limits on individual oral testimony will be imposed unless modified by the presiding chair.

(3) The presiding chair shall designate whether oral public testimony shall be taken at the beginning of the meeting or at the time the related item is taken up by the committee after staff has presented the item.

(4) The presiding chair shall take steps to ensure that individuals will be given priority over registered lobbyists. The committee, without debate, may allow a person to testify for clarification and informational purposes, whether or not he/she has registered or previously testified. The person is not required to honor the request.

(d) Oral Public Testimony to the General Meeting of the Board.

(1) Oral public testimony at general meetings of the State Board of Education is limited to topics that are *not* posted for action or discussion at the corresponding regular committee meetings or information published in the information section of the agenda.

(2) Thirty (30) minutes shall be allotted for oral public testimony, excluding the questions and answers, at the beginning of each board meeting, unless modified by a majority vote of the board. Three minute time limits on individual oral testimony will be imposed unless modified by the presiding chair. Testimony invited by board members shall not be counted against the time allotted for oral public testimony. Agency staff shall inform the presiding chair and any affected registered speakers prior to the meeting if time constraints may not allow some registered speakers to testify.

(3) The presiding chair shall take steps to ensure that individuals will be given priority over registered lobbyists. The board, without debate, may allow a person to testify for clarification and informational purposes, whether or not he/she has registered or previously testified. The person is not required to honor the request.

§2.11. Written Testimony in Connection with Regular Board and Committee Meetings.

(a) Persons may file written testimony with regard to any committee or board agenda item. Any written testimony or comments shall identify the date of the meeting; the subject of the comments; the name of the author; the name of the author's organizational affiliation, if any; and indicate whether the author is a lobbyist registered with the Texas Ethics Commission.

(b) If the written testimony is submitted at the regular board or committee meeting, thirty-five (35) collated or stapled copies shall be provided for distribution to board members and agency executive staff. Written testimony will not be attached to the board minutes.

(c) Persons who were unable to attend or to testify at a committee or board meeting due to time constraints may provide thirty-five (35) collated or stapled copies of their testimony to agency staff for distribution to board members and agency executive staff.

§2.12. Public Hearings.

(a) Types of Public Hearings.

(1) Hearings regarding proposed board rules. The board shall conduct a public hearing on a substantive rule if a hearing is requested by at least 25 persons, a governmental subdivision or agency, or an association having at least 25 members. Testimony is restricted to comments regarding the proposed action. The hearing must be set to take place before any action is adopted. The public hearing shall be conducted before the appropriate board committee as determined by the board chair in accordance with the areas of oversight defined in board operating rules.

(2) Other types of hearings. The board may also hold public hearings on proposed actions, such as those relating to instructional materials issues. The public hearing shall be conducted before the appropriate board committee as determined by the board chair in accordance with the areas of oversight defined in board operating rules. Public hearings regarding the instructional materials adoption process are governed by 19 TAC §66.60.

(b) Speakers shall preregister in accordance with the procedures set out in §2.10(b).

(c)   The presiding chair shall establish the procedures for conducting the public hearing. These procedures shall include, but are not limited to, the following:

   (1)   Providing for presentations from invited persons or an introduction from staff;

   (2)   Providing that preregistered speakers are heard in order of registration times and dates, or requiring alternating points of view in order of registration times and dates;

   (3)   Establishing time limits for speakers, generally three minutes each;

   (4)   Adjourning the hearing at the end of the allotted time period listed in the agenda item or any extension granted by a vote of the majority of the board or appropriate committee.

(d)   Persons who testify at a public hearing shall bring thirty-five (35) collated or stapled copies of their testimony for distribution to board members and agency executive staff.

(e)   Persons who were unable to testify at a public hearing due to time constraints may provide thirty-five (35) collated or stapled copies of their testimony to agency staff for distribution to board members and agency executive staff.

(f)   Prior to the meeting, agency staff shall inform the presiding chair and shall attempt to inform any affected registered speakers if time constraints may not allow some registered speakers to testify.

§2.13. Public Comments Regarding Proposed Rulemaking.

All interested persons have a reasonable opportunity to submit data, views and arguments, prior to the board adoption of any rule. Public comments regarding proposed board rules may be submitted as provided in the notice of proposed rulemaking published in the *Texas Register*. The deadline for submitting public comments is 5:00 p.m. on Friday the week prior to the start of the board meeting. The board will also take registered oral and written comments on proposed rulemaking at the appropriate committee meeting.

CHAPTER 3. TRAVEL AND EXPENSES

The statutory citations for this chapter are the Texas Education Code, §7.105, Texas Government Code, Chapter 660, and the General Appropriations Act.

§3.1.   Reimbursement of Expenses.

(a)   Members of the State Board of Education receive no salary but are reimbursed for all expenses incurred for attending regular and special meetings of the board and of board committees.

(b)   All reimbursements for expenditures shall be in accordance with Texas Education Code, §7.105(b), Texas Government Code, Chapter 660, the General Appropriations Act, and these rules.

(c)   Only expenses of board members may be reimbursed. Expenses for spouses, family, or other persons traveling with board members are not reimbursable.

(d)   Board members must submit receipts for the following expenses:

    (1)   public transportation (excluding receipts for bus, taxi, or limousine);

    (2)   car rental;

    (3)   lodging; and

    (4)   conference registration fees (which may not include banquets, books, or materials).

(e)   Lodging receipts must show the rate for single occupancy plus tax which will be the maximum reimbursable amount per day for lodging.

(f)   Receipts are not required to claim expenses for meals; however, the General Appropriations Act provides that "none of the funds appropriated under this act for travel expenses may be expended for alcoholic beverages" and no such expenses may be claimed for reimbursement.

(g)   Other official travel expenses which board members may claim include the following when the expenses are required for the conduct of state business:

    (1)   parking fees (including personal vehicles);

    (3)   notary fees for official documents; and

    (4)   wireless connection.

(h)   Board members may not claim reimbursement for expenses such as the following:

   (1)   laundry or other personal items;

   (2)   tips or gratuities of any kind; and

   (3)   alcoholic beverages.

(i)   All claims for reimbursement will be reviewed by agency accounting personnel to ensure compliance with the requirements of the appropriations act, and any appropriate adjustments to claims shall be made by staff.

(j)   A yearly budget shall be established for travel of board members. The budgeted amount would include an allotment of travel funds for board members to attend board meetings and committee meetings, and an allotment for in-district, out-of-district, and out-of-state meetings. An additional allotment shall be budgeted for travel of the chair when representing the State Board of Education at meetings. When there is a change in office during the fiscal year, the travel budget will be reassigned to the new board member.

(k)   A board member may be reimbursed for travel expenses for attending activities other than State Board of Education meetings and committee meetings provided that the board members are in compliance with the following procedures:

   (1)   In-District and Out-of-District Travel. In-district and out-of-district travel is at each member's discretion. Prior approval is not required; however, any travel for which reimbursement is requested must be directly related to the duties and responsibilities of the State Board of Education. Any requests for reimbursement, directly or indirectly related to seeking election to office, will not be allowed.

   (2)   Out-of-State Travel. Prior approval is required by the officers of the board (chair, vice chair, and secretary).

(l)   A board member may be reimbursed for travel expenses incurred while serving on any board, council, or commission or serving in any official board position as an appointee for specific administrative functions when appointed by the State Board of Education or its chair, or subject to approval of the board or its officers of the board.

(m)   None of the funds appropriated in the General Appropriations Act shall be used for influencing the outcome of any election, or the passage or defeat of any legislative measure.

§3.2. **Travel Arrangements and Hotel Reservations for State Board of Education Meetings.**

(a)   Board members shall be responsible for making their own arrangements for travel to and from board meetings. Agency travel coordinators are available for assistance.

(b)   A Division of State Board of Education Support staff member or his/her designee will make guaranteed hotel reservations for each board member upon request.

(c)   Any change in or cancellation of reservations shall be the responsibility of the individual board member in whose name the reservations were made. Board members who wish to change or cancel their reservations must contact the hotel directly or call the State Board of Education support office. All bills received by the agency for unused or uncancelled reservations will be forwarded for payment to the board member in whose name the reservations were made.

§3.3. **Acceptance of Gifts and/or Grants for Charter School Evaluation.**

(a)   Purpose. The State Board of Education (SBOE) may accept a gift and/or grant for the limited purpose of expenses associated with evaluating an applicant for an open-enrollment charter school.

(1)   An entity making a gift and/or grant under this section may not:

(A)   limit the use of the funds to any individual applicant, cycle or class of applicants;

(B)   be a charter operator in this or any other state, a management company, service provider or vendor of any kind to charter schools in this or any other state;

(C)   have common board members or corporate members with any entity operating a charter in Texas or applying to operate a charter in Texas;

(D)   be an individual required to register as a lobbyist under Chapter 305, Government Code; or

(E)   be an employee, attorney, contractor or other agent of any kind to charter schools in this or any other state.

(2)   An entity making a gift and/or grant under this section may not do so if the source of funds used for the gift and/or grant were received from an entity that could not make a gift and/or grant under this section.

(3)   For purposes of this section, a spouse or dependent child of an individual prohibited from making a gift and/or grant is also prohibited.

(4)   For purposes of this section, an entity includes any legal entity such as corporations, individuals and other business associations. An individual is limited to a natural person.

(5) An entity making a gift and/or grant shall certify that it has complied with all requirements of this section in a format approved by the board chair.

(b) Procedure. The SBOE may accept a gift and/or grant under this section only by an affirmative vote of the board.

(1) A charter may not be evaluated using funds under this section unless the commissioner has:

(A) proposed to award a charter to that applicant pursuant to Section 12.101(b); or

(B) requested the participation of individual board members in the agency's preliminary evaluation of an applicant.

(2) The commissioner shall receive, disburse and account for funds accepted by the board.

(3) Funds accepted under this section may be used solely to pay reasonable travel expenses, including meals and accommodations, for SBOE members and TEA staff as necessary to evaluate applicants for open-enrollment under this section. Unless approved by the board chair and the commissioner, travel expenses are limited to those available for travel by SBOE members or state employees.

(4) In making decisions under this section, the board chair will consult with the board member acting as a liaison under Section 12.101(b). The board chair will also consult with the chair of the Committee on School Initiatives, unless doing so would create a quorum of a committee of the board. A decision by the board chair under this section is final.

(5) Board members evaluating a charter applicant under this section shall be selected by the board chair. The board chair will, to the extent possible, give preference to board members whose districts include proposed locations at which the charter would operate. Under no circumstances will a quorum of the board or a committee of the board participate in an evaluation under this section.

(6) The board chair may request that relevant TEA employees accompany board members in evaluating charter applicants under this section. The commissioner must approve participation of agency employees.

(7) Except as provided by this subsection, board members and TEA staff may not accept anything of value from an applicant and shall limit contact with the applicant and its employees and representatives to the actual investigation of the charter. The board chair may authorize acceptance of reasonable local transportation and meals from the applicant as necessary to facilitate the evaluation.

(8) In addition to board members and TEA staff, the board chair may authorize other professionals to participate in an evaluation under this section. Such a professional may not be an individual or entity unable to donate funds under subsection (a) and is subject to all conditions and limits imposed by this section on board members.

(c)   Evaluation. Each board member will individually report to the Committee on School Initiatives regarding his/her evaluation of a proposed charter prior to consideration of the charter by the board under §7.102(c)(9). The Committee on School Initiatives will develop a standard form for use by board members in evaluating a charter under this section.

(d)   Reporting. Expenses reimbursed for each board member, TEA staff or other professionals shall be made publicly available and reported as appropriate on a board member's personal financial statement.

CHAPTER 4. CONDUCT AND PUBLIC RELATIONS

The statutory citations for this chapter are the Texas Education Code, §7.108; the Texas Government Code, §305.006, and Chapter 572, Personal Financial Disclosure, Standards of Conduct, and Conflict of Interest; and the Texas Election Code, Chapter 251, General Provisions.

§4.1.   Standards of Conduct and Conflicts of Interest.

(a)   Personal interest in board actions. Whenever a board member has a financial interest in any matter to be voted upon by the board, such a member shall state at an open meeting that he or she has such an interest in the matter and shall abstain from voting and discussion concerning the matter.

(b)   The Permanent School Fund ethics policy governs the conduct of State Board of Education members with respect to the investment and management of the Permanent School Fund.

§4.2.   Press and Public Relations.

(a)   Prior to each State Board of Education meeting, the agenda shall be made available by agency staff to the capitol press corps; governor's office; Legislative Budget Board; Legislative Reference Library; School Land Board; Texas Higher Education Coordinating Board; regional education service centers; and state offices of professional education organizations which have requested the agenda.

(b)   A press table shall be provided at meetings of the State Board of Education and press representatives shall be supplied with copies of the official agenda for the meeting and other materials relating to specific agenda items.

(c)   The State Board of Education shall seek to maintain open relations with the press by answering reporters' questions frankly and by providing official statements through press releases and answers to follow-up inquiries.

§4.3.   Disclosure of Campaign Contributions and Gifts.

(a)   Any person, corporation, or other legal entity which proposes to enter into a contract with or applies for a grant, contract, or charter which may be granted by the State Board of Education shall disclose whether, at any time in the preceding four years, the person, corporation, or other legal entity has made a campaign contribution to a candidate for or member of the State Board of Education. Disclosure shall be made in writing to the commissioner of education 14 calendar days prior to consideration by the board or any committee of a contract, grant, or charter.

(b)   A person, corporation, or other legal entity which proposes to enter into a contract with or applies for a grant, contract, or charter which may be granted by the State Board of Education shall disclose in the same manner any benefit conferred on a candidate for or member of the State Board of Education during the preceding four years. A benefit need not be disclosed if the aggregate value of benefits conferred on a candidate for or a member of the State Board of Education during the preceding four years does not exceed $250, or a different limit set by §572.023(b)(7), Texas Government Code. This requirement applies whether or not the person, corporation, or other legal entity is required to report the expenditure to the Texas Ethics Commission. For purposes of this section, a benefit is not conferred if the candidate for or a member of the State Board of Education has paid for the member's own participation, as well as any participation by other persons for the direct benefit of any business in which the member has a substantial interest as defined under Texas Government Code §572.005 (1) - (7).

(c)   In this section:

   (1)   "person, corporation, or other legal entity" includes:

      (A)   any individual who would have a "substantial interest" in the person, corporation, or other legal entity as that term is defined in Texas Government Code, §572.005 (1) - (6);

      (B)   an attorney, representative, registered lobbyist, employee, or other agent who receives payment for representing the interests of the person, firm, or corporation before the board or to board members, or whose duties are directly related to the contract, grant, or charter; or

      (C)   an individual related within the first degree by affinity or consanguinity, as determined under Chapter 573, Government Code, to the person covered by (c)(1).

   (2)   "contract, grant, or charter" means any application to enter into a contractual relationship with or otherwise receive funding from the State Board of Education, including without limitation contracts for investment advisors, consultants, or investment managers for the Permanent School Fund and applicants for charters to operate open enrollment charter schools.

   (3)   "campaign contribution" has the meaning defined in Texas Election Code, §251.001.

   (4)   "benefit" has the meaning defined in Texas Penal Code, §36.01.

   (5)   "candidate for or a member of the State Board of Education" includes a person related within the first degree of affinity or consanguinity, as determined under Chapter 573, Government Code, to a candidate for or a member of the State Board of Education.

(d)   A person, corporation, or other legal entity has a continuing duty to report contributions or expenditures made through the term of a contract, grant, or charter and shall within 21 calendar days notify the commissioner of education and the board chair upon making a contribution or expenditure covered by this section.

(e)   Failure to disclose a contribution or expenditure under this section shall be grounds for canceling or revoking the contract, grant, or charter in the discretion of the board. Only those contributions or expenditures made after the effective date of this rule are required to be disclosed.

(f)   This section does not affect the validity of contracts, grants, or charters existing on its effective date but does apply to the renewal or extension of any contract, grant, or charter.

(g)   Before distributing bids or applications for a contract with the board, staff will provide any disclosure made under subsection (a) or (b) to a board member to whom the disclosure applies. A board member shall have 10 calendar days to provide a written statement relating to the disclosure for distribution along with all disclosures.

(h)   An SBOE member shall on April 15 of each year submit a list of businesses that the SBOE member has a substantial interest in as defined in Texas Government Code §572.005 (1) - (7) and all DBAs or assumed names of any such businesses. If any change occurs in the identities of businesses that an SBOE member has a substantial interest in, the SBOE member shall submit an amendment within 30 calendar days of the date of such change. A person, corporation, or other legal entity which proposes to enter into a contract with or applies for a grant, contract, or charter that may be granted by the State Board of Education shall be provided the combined list of all board members and shall disclose any campaign contribution or benefit under subsections (a) or (b) on behalf of any business in which an SBOE member has a substantial interest.

§4.4.   Instructional Materials Submitted to the Texas Resource Review.

(a)   An SBOE member shall not nominate instructional materials for submittal to the Texas Resource Review without a majority vote of the board endorsing said nomination.

CHAPTER 5. RULES AND THE RULEMAKING PROCESS

The statutory citation for this chapter is the Texas Government Code, Chapter 2001, Subchapter B; Texas Government Code, Chapter 2002, Subchapter B; Texas Education Code, §7.102(e)-(f).

§5.1. __State Board of Education Rules.__

(a)   An action of the board to adopt a rule under the Texas Education Code is effective only if the rule's preamble published in the *Texas Register* includes a statement of the specified statutory authority contained in the Texas Education Code to adopt the rule.

(b)   Rules submitted to the Office of the Secretary of State for publication in the *Texas Register* shall conform to requirements promulgated by the Secretary of State.

§5.2. __Adoption, Amendment, and Repeal of State Board of Education Rules.__

(a)   Proposed new rules, amendments, and repeals must appear on the agenda for discussion at one board meeting and for action at two subsequent board meetings as First Reading and Second Reading, unless a departure from this rulemaking process is approved by the board.

(b)   Each member of the board shall receive copies of the preliminary and official board meeting agendas containing all proposed new rules, amendments, or repeals to be considered.

(c)   The board can take action only if the rule is posted for action in the official notice of the meeting that is published in the *Texas Register*. The commissioner is authorized to file information with the Secretary of State to comply with the requirements of Texas Government Code, Chapter 2001, Subchapter B; and Texas Government Code, Chapter 2002, Subchapter B, regarding adoption of rules.

    (1)   First Reading and Filing Authorization. The board can authorize the commissioner to file a proposed new rule, amendment, or repeal with the Secretary of State for publication in the *Texas Register* as it appears in the agenda or with changes to the material presented in the agenda.

    (2)   Second Reading and Final Adoption. If the public comment period after filing the proposal with the Secretary of State has elapsed, the board can adopt a new rule, amendment, or repeal. If a board committee determines that a substantial revision of the material presented in the agenda shall be considered, the board shall not take final action before the next board meeting.

    (3)   Withdrawal. The board can authorize the commissioner to withdraw a proposed new rule, amendment, or repeal that was previously filed with the Secretary of State.

    (4)   Refiling. The board can authorize the commissioner to withdraw and refile a proposed new rule or amendment that was previously filed with the Secretary of State if there are substantive changes from the original filing.

(d)   The board can authorize the commissioner to conduct a public hearing on behalf of the State Board of Education concerning board rules. The public hearing shall be transcribed and the transcript made available for review by board members.

(e)   Except as otherwise provided by law, a rule does not take effect until the beginning of the school year that begins at least 90 days after the date of the rule adoption.

(f)   A rule may take effect earlier than the date set forth in subsection (e) if the rule's preamble specified an earlier date with the reason for the earlier date and:

    (1)   the earlier effective date is a requirement of:

        (A)   a federal law, or

        (B)   a state law that specifically refers to Texas Education Code §7.102 and expressly requires the adoption of an earlier effective date; or

    (2)   on an affirmative vote of two-thirds of the members of the board, the board makes a finding that an earlier effective date is necessary.

§5.3.   Emergency Rules.

The board may adopt emergency rules without prior notice or hearing. Conditions under which emergency rules can be adopted and the periods for which they are effective are governed by Texas Government Code §2001.034. The board shall also comply with the requirements of Section 5.2(f) of these rules and the notice of emergency meeting requirements in Texas Government Code, §551.045. Emergency rules will be placed on a board agenda for adoption as a permanent rule.

§5.4.   Filing Non-Substantive Rule Corrections with the Secretary of State.

The commissioner may approve and file with the Secretary of State non-substantive corrections to State Board of Education rules. Non-substantive rule corrections may only include typographical, grammatical, referencing, or spelling errors and technical edits to comply with *Texas Register* style and format requirements.

§5.5.   Rulemaking Authority.

Except for rules adopted under §5.4 of these rules (relating to Filing Non-Substantive Rule Corrections with the Secretary of State), or other exceptions specifically authorized by the board, all rules of the State Board of Education shall be approved by the State Board of Education.

§5.6.   Review of the State Board of Education Rules.

In accordance with Texas Government Code, §2001.039, the State Board of Education shall review its rules every four years to assure that statutory authority for the rules continues to exist. If necessary, proposed amendments will be brought to the board following the procedure described in §5.2 of these rules.

§5.7. **Filing of Amendments**.

A member wishing to amend any Texas Essential Knowledge and Skills (TEKS) being considered by the board for second reading and final adoption shall submit the amendment in writing to the staff no later than noon on the day prior to the final vote on the adoption of the TEKS. All amendments shall be made available to the public to the extent possible. This rule may be suspended by a two-thirds vote.

CHAPTER 6. ADVISORY GROUPS

The statutory citations for this chapter are the Texas Education Code, §§7.102(b), 29.254, 32.034, and 61.077.

§6.1.   <u>General Provisions</u>.

(a)   The State Board of Education may establish a Committee of Investment Advisors (CIA) to the Permanent School Fund and approve all selected appointments. The CIA shall be composed of not more than 15 members, one appointed by each State Board of Education member, who each have considerable institutional investment expertise and are free from conflicts of interest. The CIA member will closely advise the individual State Board of Education member who appointed the member on all matters relative to the management of the Permanent School Fund as necessary. The CIA may meet in person or via conference call or telephone conference as needed. Duties and responsibilities of the CIA are within the *Texas Permanent School Fund - Investment Procedures Manual,* Section A.2.

(b)   If the board does not establish a CIA, nothing shall prevent a board member from selecting and working with an investment advisor in a manner consistent with federal and state laws and the Investment Procedures Manual.

Texas Permanent School Fund
Asset Allocation Mix - SBOE
April 30, 2020

Asset Class	Portfolio	Book Value	Mix	Fair Value	Mix
Equity	Domestic Small-Mid Cap	$ 1,461,789,008	5.39%	$ 1,712,912,289	5.20%
	Domestic Large Cap	2,049,062,624	7.55%	4,408,583,483	13.40%
	Total Domestic Equity	3,510,851,632	12.94%	6,121,495,772	18.60%
	International Equity - Blackrock	4,059,118,450	14.95%	4,508,818,450	13.70%
	Emerging Market Equity - Navarro	795,737,541	2.93%	860,382,030	2.61%
	Total Public Market Equity	8,365,707,623	30.82%	11,490,696,252	34.91%
Fixed Income	Domestic Fixed Income	3,757,960,752	13.84%	3,843,307,793	11.68%
	Investec Emerging Market Debt	1,189,967,636	4.38%	1,126,657,509	3.42%
	Ashmore Emerging Market Debt	1,203,476,668	4.43%	1,106,088,890	3.36%
	Total Emerging Market Debt	2,393,444,304	8.81%	2,232,746,399	6.78%
	Total Fixed Income	6,151,405,056	22.65%	6,076,054,192	18.46%
Absolute Return	Raven 1	766,503,394	2.82%	1,028,672,564	3.13%
	Raven 4	589,005,627	2.17%	958,912,938	2.91%
	Raven 6	345,063,452	1.27%	449,571,295	1.37%
	Raven 7	408,526,446	1.51%	543,271,745	1.65%
	Raven 8	418,586,838	1.54%	459,927,988	1.40%
	Total Absolute Return	2,527,685,757	9.31%	3,440,356,530	10.46%
Private Equity	Columbia NB Crossroads Fund L.P.	248,073,982	0.91%	306,303,244	0.93%
	Columbia NB Crossroads Fund II L.P.	350,996,328	1.29%	539,937,922	1.64%
	Columbia NB Crossroads Fund II Tranche C	775,506,157	2.86%	987,675,720	3.00%
	Columbia NB Crossroads Fund II Tranche D	295,761,329	1.09%	315,606,344	0.96%
	TPSF NB PE Program	849,463,196	3.13%	1,153,038,252	3.50%
	Private Equity Direct	960,754,764	3.54%	1,108,826,199	3.37%
	Columbia CS Fund, L.P.	230,289,396	0.85%	314,436,999	0.96%
	Total Private Equity	3,710,845,151	13.67%	4,725,824,680	14.36%
Real Estate	Direct Real Estate Investments	2,583,477,387	9.52%	3,138,586,344	9.54%
	Total Real Estate	2,583,477,387	9.52%	3,138,586,344	9.54%
Risk Parity	AQR Capital Management	802,410,711	2.96%	1,135,654,814	3.45%
	Bridgewater	723,555,225	2.67%	1,131,015,721	3.44%
	Total Risk Parity Strategies	1,525,965,936	5.63%	2,266,670,535	6.89%
Real Return	Real Return - TIPS	867,234,050	3.19%	924,582,081	2.81%
	Real Return Commodities - Terlingua 1	587,500,000	2.16%	315,684,972	0.96%
	Real Return Commodities - Terlingua 2	575,000,000	2.12%	288,567,881	0.88%
	Real Return Commodities - Terlingua 3	212,548,630	0.78%	205,915,149	0.63%
	Total Real Return	2,242,282,680	8.25%	1,734,750,083	5.28%
Total Unallocated Cash		36,165,408	0.15%	36,165,408	0.10%
Fund Total		27,143,534,998	100.00%	32,909,104,024	100.00%

Notes: The asset classes include cash that has been allocated to the investment portfolios.
Exposure includes fair value of funded investments plus unfunded commitments.

Exposure: Total Private Equity Exposure and Percentage of Fund Total Fair Value — 6,900,525,199 — 20.97%
Total Real Estate Exposure and Percentage of Fund Total Fair Value — 5,018,441,571 — 15.25%

Current State Board of Education approved Strategic Asset Allocation Mix (approved June 15, 2018)

Large Cap U.S. Equity	13.00%	Real Estate	10.00%
Small/Mid Cap U.S. Equity	5.00%	Risk Parity	7.00%
Developed and Emerging Market International Large Cap Equity	14.00%	Real Return-Commodities	3.00%
Emerging Market Equity	3.00%	Real Return-TIPS	3.00%
Domestic Investment Grade Fixed Income	12.00%	Absolute Return	10.00%
Emerging Market Debt (LC)	7.00%	Private Equity	13.00%
			100.00%

2017-2021 Rule Review Plan for State Board of Education Rules

STATE BOARD OF EDUCATION: INFORMATION

SUMMARY: This item outlines the rule review plan for State Board of Education (SBOE) rules during the period of September 2017 through August 2021. Texas Government Code, §2001.039, requires an ongoing four-year rule review of existing state agency rules, including SBOE rules. The rule review requirement is designed to ensure that the reason for initially adopting or readopting a rule continues to exist.

BACKGROUND INFORMATION AND JUSTIFICATION: Senate Bill (SB) 178, 76th Texas Legislature, 1999, amended the Texas Government Code by adding §2001.039, which requires the review of existing state agency rules. The rule review requirement in Texas Government Code, §2001.039, is designed to ensure that the reason for adopting or readopting the rule continues to exist.

The 2017-2021 SBOE rule review plan reflected in Attachment I repeats the cycle of review that was conducted during the 2013-2017 SBOE rule review with the addition of new rules that took effect subsequent to the adoption of that plan. The 2017-2021 plan is the sixth rule review cycle of SBOE rules.

In accordance with Texas Education Code, §28.002(m), the Texas Essential Knowledge and Skills (TEKS) are exempt from the rule review requirement and are not included in the 2017-2021 rule review plan. The TEKS were also exempt from previous rule review plans. Although the TEKS will not be reviewed as part of the rule review process, the SBOE conducts a review of the TEKS on a schedule determined by the SBOE designed to align the adoption of instructional materials with amendments to the TEKS.

Revisions to Rule Review Plan. The 2017-2021 SBOE rule review plan was approved at the November 2016 SBOE meeting and will appear on an ongoing basis in the information pages of each SBOE agenda until completion.

Any necessary modifications to the plan will appear in the information pages of the SBOE agenda along with the ongoing report.

Rule Review Procedures. Secretary of State rules specify the following two-step review process to implement the rule review requirement in the Texas Government Code, §2001.039:

1. a Notice of Proposed Review (Intention to review) that announces a public comment period for comments on whether the reason for adopting or readopting the rules continues to exist (see example in Attachment II); and

2. a Notice of Adopted Review (Readoption) that summarizes the public comments received, if any, in response to the notice of proposed review and provides a response to each comment (see examples in Attachment II).

The rule review process for SBOE rules is illustrated in this item using three examples. These examples

present the following points: (1) if no amendments are recommended to rules under review, the item presenting the adoption of the review will complete the rule review process and no further action will be necessary; and (2) if amendments are recommended to rules under review, the item presenting the adoption of the review will complete the rule review process and the amendments will be presented as a separate item under the standard rulemaking process.

Example 1. Rule Review with No Changes

January SBOE Meeting	SBOE Committee (discussion)	Discussion item that briefly describes the rule and specifies that no changes are being recommended.
	Texas Register	After the SBOE meeting, staff files Notice of Proposed Review (see Attachment II).
April SBOE Meeting	SBOE Committee and Full SBOE	Action item that presents a summary of comments received, if any, from Notice of Proposed Review. The SBOE authorizes filing the Notice of Adopted Review, noting that no changes are being proposed to the rule as a result of the review.
	Texas Register	After the SBOE meeting, staff files Notice of Adopted Review that states the rule will continue to exist without changes (see Attachment II).
END OF REVIEW PROCESS (no item at June SBOE Meeting)		

Example 2. Rule Review with Changes

January SBOE Meeting	SBOE Committee (discussion)	Discussion item that briefly describes the rule, outlines issues to be considered, and specifies anticipated changes to the rule.
	Texas Register	After the SBOE meeting, staff files Notice of Proposed Review (see Attachment II).
April SBOE Meeting	SBOE Committee and Full SBOE (first reading)	Separate action items are included in the agenda: one that presents comments received, if any, from Notice of Proposed Review and one that provides the SBOE the opportunity to propose amendments. The SBOE authorizes filing the Notice of Adopted Review and approves the proposed amendments for first reading and filing authorization.
	Texas Register	After the SBOE meeting, staff files proposed amendments and the Notice of Adopted Review that states the rule will continue to exist and changes are being proposed (see Attachment II).
END OF REVIEW PROCESS		
June SBOE Meeting	SBOE Committee and Full SBOE (second reading)	Action item that presents the proposed amendments for second reading and final adoption. Item includes a summary of comments, if any, on proposed amendments.
	Texas Register	After the SBOE meeting, staff files adopted amendments.
END OF AMENDMENT PROCESS		

Example 3. Repeal of Rule under Review

January SBOE Meeting	SBOE Committee (first reading)	Action item that presents the proposed repeal of rule. SBOE approves proposed repeal for first reading and filing authorization.
	Texas Register	After the SBOE meeting, staff files proposed repeal. No Notice of Proposed Review required for repeals.
April SBOE Meeting	SBOE Committee and Full SBOE (second reading)	Action item that presents the proposed repeal of rule for second reading and final adoption.
	Texas Register	After the SBOE meeting, staff files adopted repeal.
END OF REPEAL PROCESS		

Staff Members Responsible:
Cristina De La Fuente-Valadez, Director, Rulemaking
Amanda Gunter, Program Specialist, Rulemaking

Attachment I: 2017-2021 Rule Review Plan for State Board of Education Rules

Attachment II: Sample Notices of Proposed Review and Adopted Review

ATTACHMENT I

2017-2021 Rule Review Plan for State Board of Education Rules
(Approved November 2016, Revised January 2019)

Texas Government Code, §2001.039, requires a four-year rule review cycle for all state agency rules, including State Board of Education rules. The rule review is designed to ensure that the reason for adopting or readopting the rule continues to exist. It only includes rules currently in effect at the time the plan is adopted.

Texas Education Code, §28.002(m), exempts the Texas Essential Knowledge and Skills (TEKS) from the rule review requirement; accordingly, this rule review plan does not include the rule chapters for the TEKS. Although the rules will not be reviewed as part of the rule review process, the SBOE conducts a review of the TEKS on a schedule determined by the SBOE. This review is designed to align the adoption of instructional materials with the amendments to the TEKS.

Review Period: September 2017 - August 2018			
Chapter Title	**Subchapter Title**	**Topic**	**Begin Review**
Chapter 74. Curriculum Requirements	*Subchapter A. Required Curriculum*	Curriculum	September 2017
	Subchapter B. Graduation Requirements		
	Subchapter C. Other Provisions		
	Subchapter D. Graduation Requirements, Beginning with School Year 2001-2002		
	Subchapter E. Graduation Requirements, Beginning with School Year 2004-2005		
	Subchapter F. Graduation Requirements, Beginning with School Year 2007-2008		
	Subchapter G. Graduation Requirements, Beginning with School Year 2012-2013		
Chapter 105. Foundation School Program	*Subchapter A. Definitions*	Finance	November 2017
	Subchapter B. Use of State Funds		
Chapter 89. Adaptations for Special Populations	*Subchapter A. Gifted/Talented Education*	Special Populations	January 2018
	Subchapter C. Texas Certificate of High School Equivalency		
	Subchapter D. Special Education Services and Settings		
Chapter 61. School Districts	*Subchapter A. Board of Trustees Relationship*	Administration	April 2018

Review Period: September 2018 – August 2019			
Chapter Title	**Subchapter Title**	**Topic**	**Begin Review**
Chapter 157. Hearings and Appeals	*Subchapter A. General Provisions for Hearings Before the State Board of Education*	Personnel	January 2019 [September 2018]
	Subchapter D. Independent Hearing Examiners		
Chapter 129. Student Attendance	*Subchapter A. Student Attendance Allowed*	Finance	January 2019
	Subchapter B. Student Attendance Accounting		

Review Period: September 2019 – August 2020			
Chapter Title	**Subchapter Title**	**Topic**	**Begin Review**
Chapter 33. Statement of Investment Objectives, Policies, and Guidelines of the Texas Permanent School Fund	*Subchapter A. State Board of Education Rules*	Finance	September 2019
Chapter 66. State Adoption and Distribution of Instructional Materials	*Subchapter A. General Provisions*	Instructional Materials	November 2019
	Subchapter B. State Adoption of Instructional Materials		
	Subchapter C. Local Operations		
Chapter 100. Charters	*Subchapter A. Open-Enrollment Charter Schools*	Charter Schools	January 2020
	Subchapter B. Home-Rule School District Charters		

Review Period: September 2020 – August 2021			
Chapter Title	**Subchapter Title**	**Topic**	**Begin Review**
Chapter 30. Administration	*Subchapter A. State Board of Education: General Provisions*	Administration	November 2020
	Subchapter B. State Board of Education: Purchasing and Contracts		
Chapter 101. Assessment	*Subchapter A. General Provisions*	Assessment	January 2021
	Subchapter B. Implementation of Assessments		
	Subchapter C. Local Option		
Chapter 109. Budgeting, Accounting, and Auditing	*Subchapter A. Budgeting, Accounting, Financial Reporting, and Auditing for School Districts*	Finance	January 2021
	Subchapter B. Texas Education Agency Audit Functions		
	Subchapter C. Adoptions by Reference		
	Subchapter D. Uniform Bank Bid or Request for Proposal and Depository Contract		

Notice of Proposed Review
(Intention to review)

The State Board of Education (SBOE) proposes the review of 19 TAC Chapter 129, <u>Student Attendance</u>, pursuant to the Texas Government Code, §2001.039. The rules being reviewed by the SBOE in 19 TAC Chapter 129 are organized under the following subchapters: Subchapter A, <u>Student Attendance Allowed</u>, and Subchapter B, <u>Student Attendance Accounting</u>.

As required by the Texas Government Code, §2001.039, the SBOE will accept comments as to whether the reasons for adopting 19 TAC Chapter 129, Subchapters A and B, continue to exist. The comment period begins with the publication of this notice and must last a minimum of 30 days.

Comments or questions regarding this rule review may be submitted to Cristina De La Fuente-Valadez, Rulemaking, Texas Education Agency, 1701 North Congress Avenue, Austin, Texas 78701-1494. Comments may also be submitted electronically to rules@tea.texas.gov.

Notice of Adopted Review (with no changes to rule)
(Readoption)

The State Board of Education (SBOE) adopts the review of 19 TAC Chapter 129, <u>Student Attendance</u>, Subchapter A, <u>Student Attendance Allowed</u>, and Subchapter B, <u>Student Attendance Accounting</u>, pursuant to the Texas Government Code, §2001.039. The SBOE proposed the review of 19 TAC Chapter 129, Subchapters A and B, in the February 12, 2016 issue of the Texas Register (41 TexReg 1131).

The SBOE finds that the reasons for adopting 19 TAC Chapter 129, Subchapters A and B, continue to exist and readopts the rules. The SBOE received no comments related to the review.

No changes are necessary as a result of the review.

Notice of Adopted Review (with changes to rule)
(Readoption with changes)

The State Board of Education (SBOE) adopts the review of 19 TAC Chapter 129, <u>Student Attendance</u>, Subchapter A, <u>Student Attendance Allowed</u>, and Subchapter B, <u>Student Attendance Accounting</u>, pursuant to the Texas Government Code, §2001.039. The SBOE proposed the review of 19 TAC Chapter 129, Subchapters A and B, in the February 12, 2016 issue of the Texas Register (41 TexReg 1131).

The SBOE finds that the reasons for adopting 19 TAC Chapter 129, Subchapters A and B, continue to exist and readopts the rules. The SBOE received no comments related to the review. As part of the review, the SBOE is proposing an amendment to 19 TAC §129.21, which may be found in the Proposed Rules section of this *Texas Register* issue.

**Review of Annual Audit Plan of the Division of Financial Compliance
for 2020-2021 School Year**

July 2, 2020

STATE BOARD OF EDUCATION: INFORMATION

SUMMARY: This item covers the annual audit plan of the Division of Financial Compliance for the 2020-2021 school year for field and independent financial reviews as specifically described in 19 TAC Chapter 109, <u>Texas Education Agency Audit Functions</u>, §109.21, <u>Annual Audit Plan</u>.

BACKGROUND INFORMATION AND JUSTIFICATION: Title 19 Texas Administrative Code §109.21 requires the commissioner of education to annually submit, for review of the Committee on School Finance/Permanent School Fund, an audit plan for field and independent financial reviews. The commissioner may amend the plan as needed.

FISCAL IMPACT: None.

PUBLIC BENEFIT AND COST TO PERSONS: None.

PROCEDURAL AND REPORTING IMPLICATIONS: None.

PUBLIC COMMENTS: None.

Staff Member Responsible:
David Marx, Director, Financial Compliance

Attachment: Audit Plan of the Division of Financial Compliance
                    for 2020-2021 School Year

Audit Plan for the 2020-2021 School Year

The commissioner of education shall submit an annual audit plan for field and independent audits for review of the designated committee of the State Board of Education. The plan may be amended as needed by the commissioner of education. The designated committee of the State Board of Education shall be informed at least annually by the commissioner of education on the progress of and amendments to the plan.

Texas Administrative Code §109.21; Texas Education Code, §44.001

This required audit plan is submitted by the Division of Financial Compliance. It includes the division's functional work responsibilities, which primarily are reviews of student attendance data, annual financial and compliance reports, fiscal management reviews, and certified public accountant work papers.

Audit Plan Items:

1. **Reviews of Student Attendance Data**
2. **Reviews of Annual Financial and Compliance Reports**
3. **Reviews of Certified Public Accountant Work Papers**
4. **Follow-up and Fiscal Management Reviews**
5. **Special Allotment Expenditure Reviews**
6. **School Health and Related Services**
7. **Additional Reviews**

1. **Reviews of Student Attendance** – The Division of Financial Compliance will review the student attendance systems and processes of selected school districts and open-enrollment charter schools to determine compliance with the *Student Attendance Accounting Handbook* (SAAH).
   a. Reviews will be based on a risk assessment and available resources.
   b. The division will forward adjustments to Foundation School Program (FSP) funds to the State Funding Division for enforcement actions. The division will report issues of noncompliance to the appropriate division.
   c. Projected Number of Reviews: 75–100

Primary Authorizing Rules:

Section 2.1 of the SAAH (adopted by reference in 19 Texas Administrative Code [TAC] §129.1025):

> Your district must make available and provide to the Financial Compliance Division of the TEA copies of all required attendance records within 20 working days of written request by the agency.

19 TAC §129.21(a):

> All public schools in Texas must maintain records to reflect the average daily attendance (ADA) for the allocation of Foundation School Program (FSP) funds and other funds allocated by the Texas Education Agency (TEA). Superintendents, principals, and teachers are responsible to their school boards and to the state to maintain accurate, current attendance records.

19 TAC §100.1029(a):

> Agency authority. The Texas Education Agency (TEA) may conduct routine audits, monitoring, and other investigations of the charter school or charter holder to determine compliance with the terms of the open-enrollment charter, with the terms of federal or state grants, or as authorized in the Texas Education Code (TEC) or other law.

Additional Authorizing Rules:

Sections 4.11.1 and 4.11.2 of the *Financial Accountability System Resource Guide* (FASRG) (adopted by reference in 19 TAC §109.41); 19 TAC §129.21(d); Section 1.5 of the SAAH (19 TAC §129.1025)

2. **Reviews of Annual Financial and Compliance Reports (AFRs)** – The division will review the AFRs that all school districts, open-enrollment charter schools, and regional education service centers (local education agencies [LEAs]) are required to submit. The division will conduct reviews to verify that recipients (both LEAs and non-LEAs) of federal funds over a certain threshold have had an independent audit conducted, as required for compliance with Office of Management and Budget (OMB) Circular 2-Code of Federal Regulations (CFR) 200.
   a. The division will review all independently audited AFRs, including associated reports such as single audits, reports on internal control over compliance, and electronically submitted information.
   b. The division will:
      i. report issues of noncompliance to the individual school district or charter school,
      ii. report questioned costs noted by the independent auditor to the Division of Federal Fiscal Compliance and Reporting for enforcement action, and
      iii. report issues of noncompliance noted by the independent auditor to the appropriate division or state or federal agency, if applicable.
   c. Projected Number of Reviews: 1,200

Primary Authorizing Statutes and Rules:

TEC, §44.008(a) and (e) (excerpts):

   (a) The board of school trustees of each school district shall have its school district fiscal accounts audited annually at district expense by a certified or public accountant holding a permit from the Texas State Board of Public Accountancy.

   (e) The audit reports shall be reviewed by the agency, and the commissioner shall notify the board of trustees of objections, violations of sound accounting practices or law and regulation requirements, or of recommendations concerning the audit reports that the commissioner wants to make.

Title 2 CFR §200.331(d):

   (d) Monitor the activities of the subrecipient as necessary to ensure that the subaward is used for authorized purposes, in compliance with Federal statutes, regulations, and the terms and conditions of the subaward; and that subaward performance goals are achieved.

19 TAC §109.23(c) (excerpt):

   Auditors from the Texas Education Agency must review independent audit reports.

Additional Authorizing Statutes and Rules: TEC, §§ 44.001, 44.007(d), 44.009(a), and 44.010; Sections 4.2.2 and 4.2.6 of the FASRG (19 TAC §109.41); 19 TAC §109.1 and §109.25(c)

3. **Reviews of Certified Public Accountant (CPA) Work Papers** – The division will review the work papers of independent auditors engaged by school districts, open-enrollment charter schools, and regional education service centers to determine whether the independent auditors complied with applicable standards.

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a. Reviews will be based on a risk assessment and available resources.
b. The division will report issues of noncompliance to the Texas State Board of Public Accountancy.
c. Projected Number of Reviews: 10–15

Primary Authorizing Statute:

TEC, §44.008(a) (excerpt):

> The board of school trustees of each school district shall have its school district fiscal accounts audited annually at district expense by a certified or public accountant holding a permit from the Texas State Board of Public Accountancy.

19 TAC §109.23(c) (excerpt):

> Auditors from the Texas Education Agency must review independent audit reports.

19 TAC §109.23(e) (excerpt):

> If at any time the TEA division responsible for financial compliance reviews an audit firm's working papers . . . .

Additional Authorizing Statutes and Rules:

TEC, §44.007(a) and §44.008(b); Sections 4.2.2 and 4.2.5 of the FASRG (19 TAC §109.41); 19 TAC §109.1(a) and §109.23(c).

4. **Follow-up and Fiscal Management and Compliance Reviews –** The division will review the business office procedures and internal controls of school districts and open-enrollment charter schools for compliance with the FASRG, generally accepted accounting principles, and best practices. Reviews will include verifying that school districts and charter schools have corrected problems that are identified in AFR findings.
   a. Reviews will be based on a risk assessment and available resources.
   b. The division will report issues of noncompliance to the individual school district or charter school and the appropriate division or state or federal agency, if applicable.
   c. Projected Number of Reviews: 3-5

Primary Authorizing Statute:

TEC, §44.008(a) (excerpt):

> The board of school trustees of each school district shall have its school district fiscal accounts audited annually at district expense by a certified or public accountant holding a permit from the Texas State Board of Public Accountancy.

TEC, §7.021(a)(13):

> The agency shall review school district budgets, audit reports, and other fiscal reports as required under Sections 44.008 and 44.010 and prescribe forms for financial reports made by or for school districts to the commissioner or the agency as required under Section 44.009.

19 TAC §100.1029(a):

> Agency authority. The Texas Education Agency (TEA) may conduct routine audits, monitoring, and other investigations of the charter school or charter holder to determine compliance with the terms of the open-enrollment charter, with the terms of federal or state grants, or as authorized in the Texas Education Code (TEC) or other law.

5. **Special Allotment Expenditure Reviews** - The division will review the expenditure levels for FSP programs, including special education, state compensatory education, bilingual education, gifted and talented education, career and technical education, and high school education, to determine whether a school district or charter school has complied with state laws and rules.
   a. Reviews will be based on a risk assessment and available resources.
   b. The division will report issues of noncompliance to the individual school district or charter school and to the appropriate division or state or federal agency, if applicable.
   c. Projected Number of Reviews: 5

Primary Authorizing Statute:
TEC, §44.008(a) and (e) (excerpts):

> (a) The board of school trustees of each school district shall have its school district fiscal accounts audited annually at district expense by a certified or public accountant holding a permit from the Texas State Board of Public Accountancy.

> (e) The audit reports shall be reviewed by the agency, and the commissioner shall notify the board of trustees of objections, violations of sound accounting practices or law and regulation requirements, or of recommendations concerning the audit reports that the commissioner wants to make.

19 TAC §109.25(a) (excerpt):

> The commissioner of education shall ensure that districts follow guidelines contained in the "Financial Accountability System Resource Guide" in attributing supplemental direct costs to state compensatory education and accelerated instruction programs and services.

Additional Authorizing Statutes and Rules:
TEC, §§39.234, 48.102, 48.103, 48.104, 48.105, 48.106, 48.108, 48.110; 19 TAC §§109.23(b) and (c), and 109.25

6. **School Health and Related Services** – The division will review documentation that supports the submission by school districts and charter schools of certain costs for reimbursement by Medicaid that the school or charter school provided to students who have additional needs. Documentation also should show that the program is in compliance with federal and state law.
   a. The program is operated within a Memorandum of Understanding with Texas Health and Human Services Commission (HHSC).
   b. Reviews will be based on a risk assessment that determines who receives a review.
   c. The division reports its findings to both the district and HHSC.
   d. Projected Number of Reviews: 25-30

   Primary Authorizing Statute:
   Texas Government Code §531.021(a) and (b) (excerpts):
      (a) The commission is the state agency to administer the federal Medicaid funds.

      (b) The commission shall: (1) plan and direct Medicaid in each agency that operates a portion of Medicaid, including the management of the Medicaid managed care system and the development, procurement, management, and monitoring of contracts necessary to implement the Medicaid managed care system ….

   Memorandum of Understanding with HHSC Section III, Part F (excerpt):
      F. TEA has the primary responsibility for program compliance monitoring. TEA will develop self-monitoring tools and procedures for providers, with HHSC input and approval. TEA agrees to conduct compliance monitoring desk reviews each quarter and onsite compliance reviews as necessary based on risk-based assessment. TEA will share the results of these desk reviews and onsite audits with HHSC.

7. **Additional Reviews Performed by the Division of Financial Compliance** – These reviews do not fall under the "field and independent audits" specified in 19 TAC §109.21.

   - **Superintendent Severance Payments** – On receiving a school district's disclosure of a severance payment to a superintendent, the division will review the superintendent's contractual agreement and supporting documentation to determine any necessary adjustments to the district's FSP payments. (TEC, §11.201[c]; 19 TAC §105.1021)

   - **Fiscal Year Changes** – The division will review and document receipt of the forms that school districts and open-enrollment charter schools must submit when changing the start and end dates of their fiscal year.

   - **Depository Contracts** – The division will document the information each charter school is required to report each year regarding the school's main depository bank account. (19 TAC §§100.1043[b], 109.51, and 109.52)

   - **New Charter School Visits** – The division will consult with all new charter schools in their first year of operations. Guidance provided will include guidance on student attendance accounting, business office organization, governance, and working with the division and agency.

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- **Other types of reviews –** As a way of providing transparency for the public, the division is undertaking reviewing other types of projects for compliance with applicable laws and rules. Types of reviews the division is considering are procurement and construction projects, travel and reimbursement, transportation recording and reporting, and cash management and activity funds.

Throughout the year, the division will adjust this audit plan to accommodate the effects of unplanned and unscheduled work. Examples of unplanned and unscheduled work are: public information requests and production requests; record reviews; increased audit and examination activity from the United States Department of Education and other external partners and stakeholders; school consolidations and charter revocations; and resource allocation. In addition, this year will also be interrupted as we plan our reviews more virtually because of the COVID-19 pandemic.

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STATUTORY AUTHORITY REFERENCE SECTION:

TEXAS CONSTITUTION ARTICLE VII

TEXAS EDUCATION CODE (TEC)

TEXAS GOVERNMENT CODE (TGC)

TEXAS OCCUPATIONS CODE (TOC)

NATURAL RESOURCES CODE (NRC)

Sec. 2.   PERMANENT SCHOOL FUND.

All funds, lands and other property heretofore set apart and appropriated for the support of public schools; all the alternate sections of land reserved by the State out of grants heretofore made or that may hereafter be made to railroads or other corporations of any nature whatsoever; one half of the public domain of the State; and all sums of money that may come to the State from the sale of any portion of the same, shall constitute a permanent school fund.

Sec. 2A. RELEASE OF STATE CLAIM TO CERTAIN LANDS AND MINERALS WITHIN SHELBY, FRAZIER, AND MCCORMICK LEAGUE AND IN BASTROP COUNTY.

(a)   The State of Texas hereby relinquishes and releases any claim of sovereign ownership or title to an undivided one-third interest in and to the lands and minerals within the Shelby, Frazier, and McCormick League (now located in Fort Bend and Austin counties) arising out of the interest in that league originally granted under the Mexican Colonization Law of 1823 to John McCormick on or about July 24, 1824, and subsequently voided by the governing body of Austin's Original Colony on or about December 15, 1830.

(b)   The State of Texas relinquishes and releases any claim of sovereign ownership or title to an interest in and to the lands, excluding the minerals, in Tracts 2-5, 13, 15-17, 19-20, 23-26, 29-32, and 34-37, in the A. P. Nance Survey, Bastrop County, as said tracts are:

   (1)   shown on Bastrop County Rolled Sketch No. 4, recorded in the General Land Office on December 15, 1999; and

   (2)   further described by the field notes prepared by a licensed state land surveyor of Travis County in September through November 1999 and May 2000.

(c)   Title to such interest in the lands and minerals described by Subsection (a) is confirmed to the owners of the remaining interests in such lands and minerals. Title to the lands, excluding the minerals, described by Subsection (b) is confirmed to the holder of record title to each tract. Any outstanding land award or land payment obligation owed to the state for lands described by Subsection (b) is canceled, and any funds previously paid related to an outstanding land award or land payment obligation may not be refunded.

(d)   The General Land Office shall issue a patent to the holder of record title to each tract described by Subsection (b). The patent shall be issued in the same manner as other patents except that no filing fee or patent fee may be required.

(e)   A patent issued under Subsection (d) shall include a provision reserving all mineral interest in the land to the state.

(f)   This section is self-executing.

Sec. 2B. AUTHORITY TO RELEASE STATE'S INTEREST IN CERTAIN PERMANENT SCHOOL FUND LAND HELD BY PERSON UNDER COLOR OF TITLE.

(a)   The legislature by law may provide for the release of all or part of the state's interest in land, excluding mineral rights, if:

   (1)   the land is surveyed, unsold, permanent school fund land according to the records of the General Land Office;

   (2)   the land is not patentable under the law in effect before January 1, 2002; and

   (3)   the person claiming title to the land:

      (A)   holds the land under color of title;

      (B)   holds the land under a chain of title that originated on or before January 1, 1952;

      (C)   acquired the land without actual knowledge that title to the land was vested in the State of Texas;

      (D)   has a deed to the land recorded in the appropriate county; and

      (E)   has paid all taxes assessed on the land and any interest and penalties associated with any period of tax delinquency.

(b)   This section does not apply to:

      (1)   beach land, submerged or filled land, or islands; or

      (2)   land that has been determined to be state-owned by judicial decree.

(c)   This section may not be used to:

      (1)   resolve boundary disputes; or

      (2)   change the mineral reservation in an existing patent.

Sec. 2C. RELEASE OF STATE CLAIM TO CERTAIN LANDS IN UPSHUR AND SMITH COUNTIES.

(a)   Except as provided by Subsection (b) of this section, the State of Texas relinquishes and releases any claim of sovereign ownership or title to an interest in and to the tracts of land, including mineral rights, described as follows:

Tract 1:

The first tract of land is situated in Upshur County, Texas, about 14 miles South 30 degrees east from Gilmer, the county seat, and is bounded as follows: Bound on the North by the J. Manning Survey, A-314 the S.W. Beasley Survey A-66 and the David Meredith Survey A-315 and bound on the East by the M. Mann Survey, A-302 and by the M. Chandler Survey, A-84 and bound on the South by the G. W. Hooper Survey, A-657 and by the D. Ferguson Survey, A-158 and bound on the West by the J. R. Wadkins Survey, A-562 and the H. Alsup Survey, A-20, and by the W. Bratton Survey, A-57 and the G. H. Burroughs Survey, A-30 and the M. Tidwell Survey, A-498 of Upshur County, Texas.

Tract 2:

The second tract of land is situated in Smith County, Texas, north of Tyler and is bounded as follows: on the north and west by the S. Leeper A-559, the Frost Thorn Four League Grant A-3, A-9, A-7, A-19, and the H. Jacobs A-504 and on the south and east by the following surveys: John Carver A-247, A. Loverly A-609, J. Gimble A-408, R. Conner A-239, N.J. Blythe A-88, N.J. Blythe A-89, J. Choate A-195, Daniel Minor A-644, William Keys A-527, James H. Thomas A-971, Seaborn Smith A-899, and Samuel Leeper A-559.

(b)   This section does not apply to:

      (1)   any public right-of-way, including a public road right-of-way, or related interest owned by a governmental entity;

      (2)   any navigable waterway or related interest owned by a governmental entity; or

      (3)   any land owned by a governmental entity and reserved for public use, including a park, recreation area, wildlife area, scientific area, or historic site.

(c)   This section is self-executing.

Sec. 5. COMPOSITION, MANAGEMENT, USE, AND DISTRIBUTION OF PERMANENT SCHOOL FUND AND AVAILABLE SCHOOL FUND.

(a)   The permanent school fund consists of all land appropriated for public schools by this constitution or the other laws of this state, other properties belonging to the permanent school fund, and all revenue derived from the land or other properties. The available school fund consists of the distributions made to it from the total return on all investment assets of the permanent school fund, the taxes authorized by this constitution or general law to be part of the available school fund, and appropriations made to the available school fund by the legislature. The total amount distributed from the permanent school fund to the available school fund:

   (1)   in each year of a state fiscal biennium must be an amount that is not more than six percent of the average of the market value of the permanent school fund, excluding real property belonging to the fund that is managed, sold, or acquired under Section 4 of this article, but including discretionary real assets investments and cash in the state treasury derived from property belonging to the fund, on the last day of each of the 16 state fiscal quarters preceding the regular session of the legislature that begins before that state fiscal biennium, in accordance with the rate adopted by:

      (A)   a vote of two-thirds of the total membership of the State Board of Education, taken before the regular session of the legislature convenes; or

      (B)   the legislature by general law or appropriation, if the State Board of Education does not adopt a rate as provided by Paragraph (A) of this subdivision; and

   (2)   over the 10-year period consisting of the current state fiscal year and the nine preceding state fiscal years may not exceed the total return on all investment assets of the permanent school fund over the same 10-year period.

(b)   The expenses of managing permanent school fund land and investments shall be paid by appropriation from the permanent school fund.

(c)   The available school fund shall be applied annually to the support of the public free schools. Except as provided by this section, the legislature may not enact a law appropriating any part of the permanent school fund or available school fund to any other purpose. The permanent school fund and the available school fund may not be appropriated to or used for the support of any sectarian school. The available school fund shall be distributed to the several counties according to their scholastic population and applied in the manner provided by law.

Article 7 Section 5

(d)   The legislature by law may provide for using the permanent school fund to guarantee bonds issued by school districts or by the state for the purpose of making loans to or purchasing the bonds of school districts for the purpose of acquisition, construction, or improvement of instructional facilities including all furnishings thereto. If any payment is required to be made by the permanent school fund as a result of its guarantee of bonds issued by the state, an amount equal to this payment shall be immediately paid by the state from the treasury to the permanent school fund. An amount owed by the state to the permanent school fund under this section shall be a general obligation of the state until paid. The amount of bonds authorized hereunder shall not exceed $750 million or a higher amount authorized by a two-thirds record vote of both houses of the legislature. If the proceeds of bonds issued by the state are used to provide a loan to a school district and the district becomes delinquent on the loan payments, the amount of the delinquent payments shall be offset against state aid to which the district is otherwise entitled.

(e)   The legislature may appropriate part of the available school fund for administration of a bond guarantee program established under this section.

(f)   Notwithstanding any other provision of this constitution, in managing the assets of the permanent school fund, the State Board of Education may acquire, exchange, sell, supervise, manage, or retain, through procedures and subject to restrictions it establishes and in amounts it considers appropriate, any kind of investment, including investments in the Texas growth fund created by Article XVI, Section 70, of this constitution, that persons of ordinary prudence, discretion, and intelligence, exercising the judgment and care under the circumstances then prevailing, acquire or retain for their own account in the management of their affairs, not in regard to speculation but in regard to the permanent disposition of their funds, considering the probable income as well as the probable safety of their capital.

(g)   Notwithstanding any other provision of this constitution or of a statute, the General Land Office or an entity other than the State Board of Education that has responsibility for the management of permanent school fund land or other properties may in its sole discretion distribute to the available school fund each year revenue derived during that year from the land or properties, not to exceed $300 million each year.

(h)   Expired.

SECTION 5.

(a)   The legislature finds that the periodic examination of distributions made from the permanent school fund to the available school fund is necessary for the effective management of permanent school fund investments.

(b)   The Texas Education Agency, in consultation with the General Land Office, shall conduct a study regarding distributions from the permanent school fund to the available school fund. The study must:

(1)   examine historical patterns in the real value of distributions made from all assets and revenues of the permanent school fund and historical patterns in the real value of permanent school fund assets relative to the number of students enrolled in the public education system;

(2)   analyze the impact of underlying data and methodological assumptions on actual and projected distributions from the permanent school fund;

(3)   seek input from state government officials involved in public education policy or in the appropriation of state funds to support the public education system;

(4)   examine current and alternative approaches to balance the needs and interests of present and future beneficiaries of the permanent school fund and the available school fund;

(5)   develop options to maximize available revenue distributions for the education of students enrolled in the public education system while preserving the permanent school fund for future generations; and

(6)   consider any other subjects relevant to the purpose of the study.

TEC, §7.102. STATE BOARD OF EDUCATION POWERS AND DUTIES.

(a)   The board may perform only those duties relating to school districts or regional education service centers assigned to the board by the constitution of this state or by this subchapter or another provision of this code.

(b)   The board has the powers and duties provided by Subsection (c), which shall be carried out with the advice and assistance of the commissioner.

(c)   (1)   The board shall develop and update a long-range plan for public education.

(2)   The board may enter into contracts relating to or accept grants for the improvement of educational programs specifically authorized by statute.

(3)   The board may accept a gift, donation, or other contribution on behalf of the public school system or agency and, unless otherwise specified by the donor, may use the contribution in the manner the board determines.

(4)   The board shall establish curriculum and graduation requirements.

(5)   The board shall establish a standard of performance considered satisfactory on student assessment instruments.

(6)   The board may create special-purpose school districts under Chapter 11.

(7)   The board shall provide for a training course for school district trustees under Section 11.159.

(8)   The board shall adopt a procedure to be used for placing on probation or revoking a home-rule school district charter as required by Subchapter B, Chapter 12, and may place on probation or revoke a home-rule school district charter as provided by that subchapter.

(9)   The board may grant an open-enrollment charter or approve a charter revision as provided by Subchapter D, Chapter 12.

(10)   The board shall adopt rules establishing criteria for certifying hearing examiners as provided by Section 21.252.

(11)   The board shall adopt rules to carry out the curriculum required or authorized under Section 28.002.

(12)   The board shall establish guidelines for credit by examination under Section 28.023.

(13)   The board shall adopt transcript forms and standards for differentiating high school programs for purposes of reporting academic achievement under Section 28.025.

(14)   The board shall adopt guidelines for determining financial need for purposes of the Texas Advanced Placement Incentive Program under Subchapter C, Chapter 28, and may approve payments as provided by that subchapter.

(15)   The board shall adopt criteria for identifying gifted and talented students and shall develop and update a state plan for the education of gifted and talented students as required under Subchapter D, Chapter 29.

(16)   Repealed by Acts 2013, 83rd Leg., R.S., Ch. 73, Sec. 2.06(a)(1), eff. September 1, 2013.

(17)   The board shall adopt rules relating to community education development projects as required under Section 29.257.

(18)   The board may approve the plan to be developed and implemented by the commissioner for the coordination of services to children with disabilities as required under Section 30.001.

(19)   The board shall establish a date by which each school district and state institution shall provide to the commissioner the necessary information to determine the district's share of the cost of the education of a student enrolled in the Texas School for the Blind and Visually Impaired or the Texas School for the Deaf as required under Section 30.003 and may adopt other rules concerning funding of the education of students enrolled in the Texas School for the Blind and Visually Impaired or the Texas School for the Deaf as authorized under Section 30.003.

(20)   The board shall adopt rules prescribing the form and content of information school districts are required to provide concerning programs offered by state institutions as required under Section 30.004.

(21)   The board shall adopt rules concerning admission of students to the Texas School for the Deaf as required under Section 30.057.

(22)   The board shall carry out powers and duties related to regional day school programs for the deaf as provided under Subchapter D, Chapter 30.

(23)   The board shall adopt and purchase or license instructional materials as provided by Chapter 31 and adopt rules required by that chapter.

(24)   The board shall develop and update a long-range plan concerning technology in the public school system as required under Section 32.001 and shall adopt rules and policies concerning technology in public schools as provided by Chapter 32.

(25)   The board shall conduct feasibility studies related to the telecommunications capabilities of school districts and regional education service centers as provided by Section 32.033.

(26)   The board shall appoint a board of directors of the center for educational technology under Section 32.034.

(27)   Repealed by Acts 2001, 77th Leg., ch. 1420, Sec. 4.001(b), eff. Sept. 1, 2001.

(28)   The board shall approve a program for testing students for dyslexia and related disorders as provided by Section 38.003.

(29)   The board shall perform duties in connection with the public school accountability system as prescribed by Chapters 39 and 39A.

(30)   The board shall perform duties in connection with the Foundation School Program as prescribed by Chapter 48 [42].

(31)   The board may invest the permanent school fund within the limits of the authority granted by Section 5, Article VII, Texas Constitution, and Chapter 43.

(32)   The board shall adopt rules concerning school district budgets and audits of school district fiscal accounts as required under Subchapter A, Chapter 44.

(33)   The board shall adopt an annual report on the status of the guaranteed bond program and may adopt rules as necessary for the administration of the program as provided under Subchapter C, Chapter 45.

(34)   The board shall prescribe uniform bid blanks for school districts to use in selecting a depository bank as required under Section 45.206.

(d)   The board may adopt rules relating to school districts or regional education service centers only as required to carry out the specific duties assigned to the board by the constitution or under Subsection (c).

(e)   An action of the board to adopt a rule under this section is effective only if the board includes in the rule's preamble a statement of the specific authority under Subsection (c) to adopt the rule.

(f)   Except as otherwise provided by this subsection, a rule adopted by the board under this section does not take effect until the beginning of the school year that begins at least 90 days after the date on which the rule was adopted. The rule takes effect earlier if the rule's preamble specifies an earlier effective date and the reason for that earlier date and:

(1)   the earlier effective date is a requirement of:

(A)   a federal law; or

(B)   a state law that specifically refers to this section and expressly requires the adoption of an earlier effective date; or

(2)   on the affirmative vote of two-thirds of the members of the board, the board makes a finding that an earlier effective date is necessary.

TEC 7.102

TEC, §11.351. AUTHORITY TO ESTABLISH SPECIAL-PURPOSE SCHOOL DISTRICT.

(a)   On the recommendation of the commissioner and after consulting with the school districts involved and obtaining the approval of a majority of those districts in each affected county in which a proposed school district is located, the State Board of Education may establish a special-purpose school district for the education of students in special situations whose educational needs are not adequately met by regular school districts. The board may impose duties or limitations on the school district as necessary for the special purpose of the district. The board shall exercise the powers as provided by this section relating to the districts established under this section.

(b)   The State Board of Education shall grant to the districts the right to share in the available school fund apportionment and other privileges as are granted to independent and common school districts.

TEC, §11.352. GOVERNANCE OF SPECIAL-PURPOSE DISTRICT.

(a)   The State Board of Education shall appoint for each district established under Section 11.351 a board of three, five, or seven trustees, as determined by the State Board of Education. A trustee is not required to be a resident of the district.

(b)   For each military reservation school district, the State Board of Education may appoint a board of three or five trustees. Enlisted military personnel and military officers may be appointed to the school board. A majority of the trustees appointed for the district must be civilians and all may be civilians. The trustees shall be selected from a list of persons who are qualified to serve as members of a school district board of trustees under Section 11.061 and who live or are employed on the military reservation. The list shall be furnished to the board by the commanding officer of the military reservation. The trustees appointed serve terms of two years.

(c)   The State Board of Education may adopt rules for the governance of a special-purpose district. In the absence of a rule adopted under this subsection, the laws applicable to independent school districts apply to a special-purpose district.

TEC, §21.003. CERTIFICATION REQUIRED.

(a)   A person may not be employed as a teacher, teacher intern or teacher trainee, librarian, educational aide, administrator, educational diagnostician, or school counselor by a school district unless the person holds an appropriate certificate or permit issued as provided by Subchapter B.

(b)   Except as otherwise provided by this subsection, a person may not be employed by a school district as an audiologist, occupational therapist, physical therapist, physician, nurse, school psychologist, associate school psychologist, licensed professional counselor, marriage and family therapist, social worker, or speech language pathologist unless the person is licensed by the state agency that licenses that profession and may perform specific services within those professions for a school district only if the person holds the appropriate credential from the appropriate state agency. As long as a person employed by a district before September 1, 2011, to perform marriage and family therapy, as defined by Section 502.002, Occupations Code, is employed by the same district, the person is not required to hold a license as a marriage and family therapist to perform marriage and family therapy with that district.

(c)   The commissioner may waive the requirement for certification of a superintendent if requested by a school district as provided by Section 7.056. A person who is not certified as a superintendent may not be employed by a school district as the superintendent before the person has received a waiver of certification from the commissioner. The commissioner may limit the waiver of certification in any manner the commissioner determines is appropriate. A person may be designated to act as a temporary or interim superintendent for a school district, but the district may not employ the person under a contract as superintendent unless the person has been certified or a waiver has been granted.

TEC, §21.0031. FAILURE TO OBTAIN CERTIFICATION; CONTRACT VOID.

(a)   An employee's probationary, continuing, or term contract under this chapter is void if the employee:

   (1)   does not hold a valid certificate or permit issued by the State Board for Educator Certification;

   (2)   fails to fulfill the requirements necessary to renew or extend the employee's temporary, probationary, or emergency certificate or any other certificate or permit issued under Subchapter B; or

   (3)   fails to comply with any requirement under Subchapter C, Chapter 22, if the failure results in suspension or revocation of the employee's certificate under Section 22.0831(f)(2).

(b)   If a school district has knowledge that an employee's contract is void under Subsection (a):

   (1)   the district may, except as provided by Subsection (b-1):

      (A)   terminate the employee;

      (B)   suspend the employee with or without pay; or

      (C)   retain the employee for the remainder of the school year on an at-will employment basis in a position other than a position required to be held by an employee under a contract under Section 21.002 at the employee's existing rate of pay or at a reduced rate; and

   (2)   the employee is not entitled to the minimum salary prescribed by Section 21.402.

(b-1)   A school district may not terminate or suspend under Subsection (b) an employee whose contract is void under Subsection (a)(1) or (2) because the employee failed to renew or extend the employee's certificate or permit if the employee:

   (1)   requests an extension from the State Board for Educator Certification to renew, extend, or otherwise validate the employee's certificate or permit; and

   (2)   not later than the 10th day after the date the contract is void, takes necessary measures to renew, extend, or otherwise validate the employee's certificate or permit, as determined by the State Board for Educator Certification.

(c)   A school district's decision under Subsection (b) is not subject to appeal under this chapter, and the notice and hearing requirements of this chapter do not apply to the decision.

(d)   This section does not affect the rights and remedies of a party in an at-will employment relationship.

(e)   This section does not apply to a certified teacher assigned to teach a subject for which the teacher is not certified.

(f)   For purposes of this section, a certificate or permit is not considered to have expired if:

   (1)   the employee has completed the requirements for renewal of the certificate or permit;

   (2)   the employee submitted the request for renewal prior to the expiration date; and

   (3)   the date the certificate or permit would have expired is before the date the State Board for Educator Certification takes action to approve the renewal of the certificate or permit.

TEC, §21.031. PURPOSE.

(a)   The State Board for Educator Certification is established to recognize public school educators as professionals and to grant educators the authority to govern the standards of their profession. The board shall regulate and oversee all aspects of the certification, continuing education, and standards of conduct of public school educators.

(b)   In proposing rules under this subchapter, the board shall ensure that all candidates for certification or renewal of certification demonstrate the knowledge and skills necessary to improve the performance of the diverse student population of this state.

TEC, §21.041. RULES; FEES.

(a)   The board may adopt rules as necessary for its own procedures.

(b)   The board shall propose rules that:

   (1)   provide for the regulation of educators and the general administration of this subchapter in a manner consistent with this subchapter;

   (2)   specify the classes of educator certificates to be issued, including emergency certificates;

   (3)   specify the period for which each class of educator certificate is valid;

   (4)   specify the requirements for the issuance and renewal of an educator certificate;

   (5)   provide for the issuance of an educator certificate to a person who holds a similar certificate issued by another state or foreign country, subject to Section 21.052;

   (6)   provide for special or restricted certification of educators, including certification of instructors of American Sign Language;

   (7)   provide for disciplinary proceedings, including the suspension or revocation of an educator certificate, as provided by Chapter 2001, Government Code;

   (8)   provide for the adoption, amendment, and enforcement of an educator's code of ethics;

   (9)   provide for continuing education requirements; and

   (10)   provide for certification of persons performing appraisals under Subchapter H.

(c)   The board shall propose a rule adopting a fee for the issuance and maintenance of an educator certificate that, when combined with any fees imposed under Subsection (d), is adequate to cover the cost of administration of this subchapter.

(d)   The board may propose a rule adopting a fee for the approval or renewal of approval of an educator preparation program, or for the addition of a certificate or field of certification to the scope of a program's approval. A fee imposed under this subsection may not exceed the amount necessary, as determined by the board, to provide for the administrative cost of approving, renewing the approval of, and appropriately ensuring the accountability of educator preparation programs under this subchapter.

TEC, §21.054. CONTINUING EDUCATION.

(a) The board shall propose rules establishing a process for identifying continuing education courses and programs that fulfill educators' continuing education requirements, including opportunities for educators to receive micro-credentials in fields of study related to the educator's certification class as provided by Subsection (i).

(b) Continuing education requirements for an educator who teaches students with dyslexia must include training regarding new research and practices in educating students with dyslexia.

(c) The training required under Subsection (b) may be offered in an online course.

Text of subsection effective until December 01, 2019

(d) Continuing education requirements for a classroom teacher must provide that not more than 25 percent of the training required every five years include instruction regarding:

 (1) collecting and analyzing information that will improve effectiveness in the classroom;

 (2) recognizing early warning indicators that a student may be at risk of dropping out of school;

 (3) digital learning, digital teaching, and integrating technology into classroom instruction;

 (4) educating diverse student populations, including:

  (A) students with disabilities, including mental health disorders;

  (B) students who are educationally disadvantaged;

  (C) students of limited English proficiency; and

  (D) students at risk of dropping out of school;

 (5) understanding appropriate relationships, boundaries, and communications between educators and students; and

 (6) how grief and trauma affect student learning and behavior and how evidence-based, grief-informed, and trauma-informed strategies support the academic success of students affected by grief and trauma.

Text of subsection effective on December 01, 2019

(d) Continuing education requirements for a classroom teacher must provide that at least 25 percent of the training required every five years include instruction regarding:

 (1) collecting and analyzing information that will improve effectiveness in the classroom;

 (2) recognizing early warning indicators that a student may be at risk of dropping out of school;

 (3) digital learning, digital teaching, and integrating technology into classroom instruction;

 (4) educating diverse student populations, including:

  (A) students who are eligible to participate in special education programs under Subchapter A, Chapter 29;

  (B) students who are eligible to receive educational services required under Section 504, Rehabilitation Act of 1973 (29 U.S.C. Section 794);

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(C)   students with mental health conditions or who engage in substance abuse;
(D)   students with intellectual or developmental disabilities;
(E)   students who are educationally disadvantaged;
(F)   students of limited English proficiency; and
(G)   students at risk of dropping out of school;

(5)   understanding appropriate relationships, boundaries, and communications between educators and students; and

(6)   how mental health conditions, including grief and trauma, affect student learning and behavior and how evidence-based, grief-informed, and trauma-informed strategies support the academic success of students affected by grief and trauma.

Text of subsection effective on December 01, 2019

(d-1)   The instruction required under Subsection (d) may include two or more listed topics together.

Text of subsection as amended by Acts 2019, 86th Leg., R.S., Ch. 464 (S.B. 11), Sec. 4

(d-2)   The instruction required under Subsection (d)(6) must:

(1)   comply with the training required by Section 38.036(c)(1); and

(2)   be approved by the commissioner.

Text of subsection as amended by Acts 2019, 86th Leg., R.S., Ch. 352 (H.B. 18), Sec. 1.04

Text of subsection effective on December 01, 2019

(d-2)   The instruction required under Subsection (d)(6) must be:

(1)   based on relevant best practice-based programs and research-based practices; and

(2)   approved by the commissioner, in consultation with the Health and Human Services Commission.

Text of subsection effective until December 01, 2019

(e)   Continuing education requirements for a principal must provide that not more than 25 percent of the training required every five years include instruction regarding:

(1)   effective and efficient management, including:

(A)   collecting and analyzing information;

(B)   making decisions and managing time; and

(C)   supervising student discipline and managing behavior;

(2)   recognizing early warning indicators that a student may be at risk of dropping out of school;

(3)   digital learning, digital teaching, and integrating technology into campus curriculum and instruction;

(4)   educating diverse student populations, including:

(A)   students with disabilities, including mental health disorders;

(B)   students who are educationally disadvantaged;

(C)   students of limited English proficiency; and

      (D)   students at risk of dropping out of school; and

    (5)   preventing, recognizing, and reporting any sexual conduct between an educator and student that is prohibited under Section 21.12, Penal Code, or for which reporting is required under Section 21.006 of this code.

Text of subsection effective on December 01, 2019

(e)   Continuing education requirements for a principal must provide that at least 25 percent of the training required every five years include instruction regarding:

    (1)   effective and efficient management, including:

        (A)   collecting and analyzing information;

        (B)   making decisions and managing time; and

        (C)   supervising student discipline and managing behavior;

    (2)   recognizing early warning indicators that a student may be at risk of dropping out of school;

    (3)   digital learning, digital teaching, and integrating technology into campus curriculum and instruction;

    (4)   effective implementation of a comprehensive school counseling program under Section 33.005;

    (5)   mental health programs addressing a mental health condition;

    (6)   educating diverse student populations, including:

        (A)   students who are eligible to participate in special education programs under Subchapter A, Chapter 29;

        (B)   students with intellectual or developmental disabilities;

        (C)   students who are eligible to receive educational services required under Section 504, Rehabilitation Act of 1973 (29 U.S.C. Section 794);

        (D)   students with mental health conditions or who engage in substance abuse;

        (E)   students who are educationally disadvantaged;

        (F)   students of limited English proficiency; and

        (G)   students at risk of dropping out of school;

    (7)   preventing, recognizing, and reporting any sexual conduct between an educator and student that is prohibited under Section 21.12, Penal Code, or for which reporting is required under Section 21.006 of this code; and

    (8)   how mental health conditions, including grief and trauma, affect student learning and behavior and how evidence-based, grief-informed, and trauma-informed strategies support the academic success of students affected by grief and trauma.

Text of subsection effective until December 01, 2019

(e-2)   Continuing education requirements for a principal may include instruction regarding how grief and trauma affect student learning and behavior and how evidence-based, grief-informed, and trauma-informed strategies support the academic success of students affected by grief and trauma.

Text of subsection effective on December 01, 2019

(e-2)   The instruction required under Subsection (e)(8) must be:

    (1)   based on relevant best practice-based programs and research-based practices; and

    (2)   approved by the commissioner, in consultation with the Health and Human Services Commission.

Text of subsection effective until December 01, 2019

(f)   Continuing education requirements for a counselor must provide that not more than 25 percent of training required every five years include instruction regarding:

    (1)   assisting students in developing high school graduation plans;

    (2)   implementing dropout prevention strategies; and

    (3)   informing students concerning:

        (A)   college admissions, including college financial aid resources and application procedures; and

        (B)   career opportunities.

Text of subsection effective on December 01, 2019

(f)   Continuing education requirements for a counselor must provide that at least 25 percent of training required every five years include instruction regarding:

    (1)   assisting students in developing high school graduation plans;

    (2)   implementing dropout prevention strategies;

    (3)   informing students concerning:

        (A)   college admissions, including college financial aid resources and application procedures; and

        (B)   career opportunities;

    (4)   counseling students concerning mental health conditions and substance abuse, including through the use of grief-informed and trauma-informed interventions and crisis management and suicide prevention strategies; and

    (5)   effective implementation of a comprehensive school counseling program under Section 33.005.

Text of subsection effective until December 01, 2019

(g)   The board shall adopt rules that allow an educator to fulfill up to 12 hours of continuing education by participating in a mental health first aid training program offered by a local mental health authority under Section 1001.203, Health and Safety Code. The number of hours of continuing education an educator may fulfill under this subsection may not exceed the number of hours the educator actually spends participating in a mental health first aid training program.

Text of subsection effective on December 01, 2019

(g)   The board shall adopt rules that allow an educator to fulfill continuing education requirements by participating in an evidence-based mental health first aid training program or an evidence-based grief-informed and trauma-informed care program. The rules adopted under this subsection must allow an educator to complete a program described by this subsection and receive credit toward continuing education requirements for twice the number of hours of instruction provided under that program, not to exceed 16 hours. The program must be offered through a classroom instruction format that requires in-person attendance.

(h)   Continuing education requirements for a superintendent must include at least 2-1/2 hours of training every five years on identifying and reporting potential victims of sexual abuse, human trafficking, and other maltreatment of children. For purposes of this subsection, "other maltreatment" has the meaning assigned by Section 42.002, Human Resources Code.

(i)   The board shall propose rules establishing a program to issue micro-credentials in fields of study related to an educator's certification class. The agency shall approve continuing education providers to offer micro-credential courses. A micro-credential received by an educator shall be recorded on the agency's Educator Certification Online System (ECOS) and included as part of the educator's public certification records.

Added by Acts 1995, 74th Leg., ch. 260, Sec. 1, eff. May 30, 1995.

Amended by:

Acts 2005, 79th Leg., Ch. 675 (S.B. 143), Sec. 2, eff. June 17, 2005.

Acts 2009, 81st Leg., R.S., Ch. 596 (H.B. 200), Sec. 1, eff. September 1, 2009.

Acts 2009, 81st Leg., R.S., Ch. 895 (H.B. 3), Sec. 67(a), eff. June 19, 2009.

Acts 2011, 82nd Leg., R.S., Ch. 635 (S.B. 866), Sec. 2, eff. June 17, 2011.

Acts 2013, 83rd Leg., R.S., Ch. 638 (H.B. 642), Sec. 1, eff. September 1, 2013.

Acts 2013, 83rd Leg., R.S., Ch. 1306 (H.B. 3793), Sec. 1, eff. September 1, 2013.

Acts 2015, 84th Leg., R.S., Ch. 1236 (S.B. 1296), Sec. 21.001(9), eff. September 1, 2015.

Acts 2017, 85th Leg., R.S., Ch. 178 (S.B. 7), Sec. 9, eff. September 1, 2017.

Acts 2017, 85th Leg., R.S., Ch. 522 (S.B. 179), Sec. 8, eff. September 1, 2017.

Acts 2017, 85th Leg., R.S., Ch. 757 (S.B. 1839), Sec. 8, eff. June 12, 2017.

Acts 2019, 86th Leg., R.S., Ch. 214 (H.B. 403), Sec. 2, eff. September 1, 2019.

Acts 2019, 86th Leg., R.S., Ch. 352 (H.B. 18), Sec. 1.04, eff. December 1, 2019.

Acts 2019, 86th Leg., R.S., Ch. 464 (S.B. 11), Sec. 4, eff. June 6, 2019.

Acts 2019, 86th Leg., R.S., Ch. 1123 (H.B. 2424), Sec. 1, eff. June 14, 2019.

TEC, §21.0541. CONTINUING EDUCATION CREDIT FOR INSTRUCTION RELATED TO USE OF AUTOMATED EXTERNAL DEFIBRILLATOR.

The board shall adopt rules allowing an educator to receive credit towards the educator's continuing education requirements for completion of an instructional course on the use of an automated external defibrillator that meets the guidelines for automated external defibrillator training approved under Section 779.002, Health and Safety Code.

TEC, §21.0543. CONTINUING EDUCATION CREDIT FOR INSTRUCTION RELATED TO DIGITAL TECHNOLOGY.

The board shall propose rules allowing an educator to receive credit toward the educator's continuing education requirements for completion of education courses that:

(1)   use technology to increase the educator's digital literacy; and

(2)   assist the educator in the use of digital technology in learning activities that improve teaching, assessment, and instructional practices.

TEC, §22.0831. NATIONAL CRIMINAL HISTORY RECORD INFORMATION REVIEW OF CERTIFIED EDUCATORS .

(a)   In this section, "board" means the State Board for Educator Certification.

(b)   This section applies to a person who is an applicant for or holder of a certificate under Subchapter B, Chapter 21, and who is employed by or is an applicant for employment by a school district, open-enrollment charter school, or shared services arrangement.

(c)   The board shall review the national criminal history record information of a person who has not previously submitted fingerprints to the department or been subject to a national criminal history record information review.

(d)   The board shall place an educator's certificate on inactive status for failure to comply with a deadline for submitting information required under this section.

(e)   The board may allow a person who is applying for a certificate under Subchapter B, Chapter 21, and who currently resides in another state to submit the person's fingerprints and other required information in a manner that does not impose an undue hardship on the person.

(f)   The board may propose rules to implement this section, including rules establishing:

      (1)   deadlines for a person to submit fingerprints and photographs in compliance with this section; and

      (2)   sanctions for a person's failure to comply with the requirements of this section, including suspension or revocation of a certificate or refusal to issue a certificate.

(g)   Expired.

TEC, §28.002. REQUIRED CURRICULUM.

(a)   Each school district that offers kindergarten through grade 12 shall offer, as a required curriculum:

    (1)   a foundation curriculum that includes:

        (A)   English language arts;

        (B)   mathematics;

        (C)   science; and

        (D)   social studies, consisting of Texas, United States, and world history, government, economics, with emphasis on the free enterprise system and its benefits, and geography; and

    (2)   an enrichment curriculum that includes:

        (A)   to the extent possible, languages other than English;

        (B)   health, with emphasis on: ~~the importance of proper nutrition and exercise;~~

            (i)   <u>physical health, including</u> the importance of proper nutrition and exercise;
            (ii)   <u>mental health, including instruction about mental health conditions, substance abuse, skills to manage emotions, establishing and maintaining positive relationships, and responsible decision-making; and</u>
            (iii)   <u>suicide prevention, including recognizing suicide-related risk factors and warning signs;</u>

        (C)   physical education;

        (D)   fine arts;

        (E)   career and technology education;

        (F)   technology applications;

        (G)   religious literature, including the Hebrew Scriptures (Old Testament) and New Testament, and its impact on history and literature; and

        (H)   personal financial literacy.

(b)   The State Board of Education by rule shall designate subjects constituting a well-balanced curriculum to be offered by a school district that does not offer kindergarten through grade 12.

(b-1)   In this section, "common core state standards" means the national curriculum standards developed by the Common Core State Standards Initiative.

(b-2)   The State Board of Education may not adopt common core state standards to comply with a duty imposed under this chapter.

(b-3)   A school district may not use common core state standards to comply with the requirement to provide instruction in the essential knowledge and skills at appropriate grade levels under Subsection (c).

(b-4)   Notwithstanding any other provision of this code, a school district or open-enrollment charter school may not be required to offer any aspect of a common core state standards curriculum.

(c)   The State Board of Education, with the direct participation of educators, parents, business and industry representatives, and employers shall by rule identify the essential knowledge and skills of each subject of the required curriculum that all students should be able to demonstrate and that will be used in evaluating instructional materials under Chapter 31 and addressed on the assessment instruments required under Subchapter B, Chapter 39. As a condition of accreditation, the board shall require each district to provide instruction in the essential knowledge and skills at appropriate grade levels and to make available to each high school student in the district an Algebra II course.

(c-1)   The State Board of Education shall adopt rules requiring students enrolled in grade levels six, seven, and eight to complete at least one fine arts course during those grade levels as part of a district's fine arts curriculum.

(c-2)   Each time the Texas Higher Education Coordinating Board revises the Internet database of the coordinating board's official statewide inventory of workforce education courses, the State Board of Education shall by rule revise the essential knowledge and skills of any corresponding career and technology education curriculum as provided by Subsection (c).

(c-3)   In adopting the essential knowledge and skills for the technology applications curriculum for kindergarten through grade eight, the State Board of Education shall adopt essential knowledge and skills that include coding, computer programming, computational thinking, and cybersecurity. The State Board of Education shall review and revise, as needed, the essential knowledge and skills of the technology applications curriculum every five years to ensure the curriculum:

    (1)   is relevant to student education; and
    (2)   aligns with current or emerging professions.

(d)   The physical education curriculum required under Subsection (a)(2)(C) must be sequential, developmentally appropriate, and designed, implemented, and evaluated to enable students to develop the motor, self-management, and other skills, knowledge, attitudes, and confidence necessary to participate in physical activity throughout life. Each school district shall establish specific objectives and goals the district intends to accomplish through the physical education curriculum. In identifying the essential knowledge and skills of physical education, the State Board of Education shall ensure that the curriculum:

    (1)   emphasizes the knowledge and skills capable of being used during a lifetime of regular physical activity;

    (2)   is consistent with national physical education standards for:

        (A)   the information that students should learn about physical activity; and

        (B)   the physical activities that students should be able to perform;

    (3)   requires that, on a weekly basis, at least 50 percent of the physical education class be used for actual student physical activity and that the activity be, to the extent practicable, at a moderate or vigorous level;

    (4)   offers students an opportunity to choose among many types of physical activity in which to participate;

    (5)   offers students both cooperative and competitive games;

    (6)   meets the needs of students of all physical ability levels, including students who have a chronic health problem, disability, including a student who is a person with a disability described under Section 29.003(b) or criteria developed by the agency in accordance with that section, or other special need that precludes the student from participating in regular physical education instruction but who might be able to participate in physical education that is suitably adapted and, if applicable, included in the student's individualized education program;

    (7)   takes into account the effect that gender and cultural differences might have on the degree of student interest in physical activity or on the types of physical activity in which a student is interested;

    (8)   teaches self-management and movement skills;

    (9)   teaches cooperation, fair play, and responsible participation in physical activity;

    (10)   promotes student participation in physical activity outside of school; and

    (11)   allows physical education classes to be an enjoyable experience for students.

(e)   American Sign Language is a language for purposes of Subsection (a)(2)(A). A public school may offer an elective course in the language.

(f)   A school district may offer courses for local credit in addition to those in the required curriculum. The State Board of Education shall:

   (1)   be flexible in approving a course for credit for high school graduation under this subsection; and

   (2)   approve courses in cybersecurity for credit for high school graduation under this subsection.

(g)   A local instructional plan may draw on state curriculum frameworks and program standards as appropriate. Each district is encouraged to exceed minimum requirements of law and State Board of Education rule. Each district shall ensure that all children in the district participate actively in a balanced curriculum designed to meet individual needs. Before the adoption of a major curriculum initiative, including the use of a curriculum management system, a district must use a process that:

   (1)   includes teacher input;

   (2)   provides district employees with the opportunity to express opinions regarding the initiative; and

   (3)   includes a meeting of the board of trustees of the district at which:

       (A)   information regarding the initiative is presented, including the cost of the initiative and any alternatives that were considered; and

       (B)   members of the public and district employees are given the opportunity to comment regarding the initiative.

(g-1)   A district may also offer a course or other activity, including an apprenticeship or training hours needed to obtain an industry-recognized credential or certificate, that is approved by the board of trustees for credit without obtaining State Board of Education approval if:

   (1)   the district develops a program under which the district partners with a public or private institution of higher education and local business, labor, and community leaders to develop and provide the courses; and

   (2)   the course or other activity allows students to enter:

       (A)   a career or technology training program in the district's region of the state;

       (B)   an institution of higher education without remediation;

       (C)   an apprenticeship training program; or

       (D)   an internship required as part of accreditation toward an industry-recognized credential or certificate for course credit.

(g-2)   Each school district shall annually report to the agency the names of the courses, programs, institutions of higher education, and internships in which the district's students have enrolled under Subsection (g-1) and the names of the courses and institutions of higher education in which the district's students have enrolled under Subsection (g-3). The agency shall make available information provided under this subsection to other districts.

(g-3)   A district may also offer a course in cybersecurity that is approved by the board of trustees for credit without obtaining State Board of Education approval if the district partners with a public or private institution of higher education that offers an undergraduate degree program in cybersecurity to develop and provide the course.

(h)   The State Board of Education and each school district shall foster the continuation of the tradition of teaching United States and Texas history and the free enterprise system in regular subject matter and in reading courses and in the adoption of instructional materials. A primary purpose of the public school curriculum is to prepare thoughtful, active citizens who understand the importance of patriotism and can function productively in a free enterprise society with appreciation for the basic democratic values of our state and national heritage.

(i)   The State Board of Education shall adopt rules for the implementation of this subchapter. Except as provided by Subsection (j), the board may not adopt rules that designate the methodology used by a teacher or the time spent by a teacher or a student on a particular task or subject.

(j)   The State Board of Education by rule may require laboratory instruction in secondary science courses and may require a specific amount or percentage of time in a secondary science course that must be laboratory instruction.

(k)   The State Board of Education, in consultation with the Department of State Health Services and the Texas Diabetes Council, shall develop a diabetes education program that a school district may use in the health curriculum under Subsection (a)(2)(B).

(l)   A school district shall require a student enrolled in full-day prekindergarten, in kindergarten, or in a grade level below grade six to participate in moderate or vigorous daily physical activity for at least 30 minutes throughout the school year as part of the district's physical education curriculum or through structured activity during a school campus's daily recess. To the extent practicable, a school district shall require a student enrolled in prekindergarten on less than a full-day basis to participate in the same type and amount of physical activity as a student enrolled in full-day prekindergarten. A school district shall require students enrolled in grade levels six, seven, and eight to participate in moderate or vigorous daily physical activity for at least 30 minutes for at least four semesters during those grade levels as part of the district's physical education curriculum. If a school district determines, for any particular grade level below grade six, that requiring moderate or vigorous daily physical activity is impractical due to scheduling concerns or other factors, the district may as an alternative require a student in that grade level to participate in moderate or vigorous physical activity for at least 135 minutes during each school week. Additionally, a school district may as an alternative require a student enrolled in a grade level for which the district uses block scheduling to participate in moderate or vigorous physical activity for at least 225 minutes during each period of two school weeks. A school district must provide for an exemption for:

    (1)   any student who is unable to participate in the required physical activity because of illness or disability; and

    (2)   a middle school or junior high school student who participates in an extracurricular activity with a moderate or vigorous physical activity component that is considered a structured activity under rules adopted by the commissioner.

(l-1)   In adopting rules relating to an activity described by Subsection (l)(2), the commissioner may permit an exemption for a student who participates in a school-related activity or an activity sponsored by a private league or club only if the student provides proof of participation in the activity.

(l-2)   To encourage school districts to promote physical activity for children through classroom curricula for health and physical education, the agency, in consultation with the Department of State Health Services, shall designate nationally recognized health and physical education program guidelines that a school district may use in the health curriculum under Subsection (a)(2)(B) or the physical education curriculum under Subsection (a)(2)(C).

(l-3)   (1)   This subsection may be cited as "Lauren's Law."

    (2)   The State Board of Education, the Department of State Health Services, or a school district may not adopt any rule, policy, or program under Subsections (a), (k), (l), (l-1), or (l-2) that would prohibit a parent or grandparent of a student from providing any food product of the parent's or grandparent's choice to:

    (A)   children in the classroom of the child of the parent or grandparent on the occasion of the child's birthday; or

    (B)   children at a school-designated function.

(m)   Section 2001.039, Government Code, as added by Chapter 1499, Acts of the 76th Legislature, Regular Session, 1999, does not apply to a rule adopted by the State Board of Education under Subsection (c) or (d).

(n)   The State Board of Education may by rule develop and implement a plan designed to incorporate foundation curriculum requirements into the career and technology education curriculum under Subsection (a)(2)(E).

(o)   In approving career and technology courses, the State Board of Education must determine that at least 50 percent of the approved courses are cost-effective for a school district to implement.

(p)   The State Board of Education, in conjunction with the office of the attorney general, shall develop a parenting and paternity awareness program that a school district shall use in the district's high school health curriculum. A school district may use the program developed under this subsection in the district's middle or junior high school curriculum. At the discretion of the district, a teacher may modify the suggested sequence and pace of the program at any grade level. The program must:

    (1)   address parenting skills and responsibilities, including child support and other legal rights and responsibilities that come with parenthood;

    (2)   address relationship skills, including money management, communication skills, and marriage preparation; and

    (3)   in district middle, junior high, or high schools that do not have a family violence prevention program, address skills relating to the prevention of family violence.

(p-2)   A school district may develop or adopt research-based programs and curriculum materials for use in conjunction with the program developed under Subsection (p). The programs and curriculum materials may provide instruction in:

    (1)   child development;

    (2)   parenting skills, including child abuse and neglect prevention; and

    (3)   assertiveness skills to prevent teenage pregnancy, abusive relationships, and family violence.

(p-3)   The agency shall evaluate programs and curriculum materials developed under Subsection (p-2) and distribute to other school districts information regarding those programs and materials.

(p-4)   A student under 14 years of age may not participate in a program developed under Subsection (p) without the permission of the student's parent or person standing in parental relation to the student.

(q)   Repealed by Acts 2013, 83rd Leg., R.S., Ch. 211, Sec. 78(b)(1), eff. September 1, 2014.

(r)   In adopting the essential knowledge and skills for the health curriculum under Subsection (a)(2)(B), the State Board of Education shall adopt essential knowledge and skills that address the <u>science, risk factors, causes,</u> dangers, [<s>causes,</s>] consequences, signs, symptoms, and treatment of <u>substance abuse, including the use of illegal drugs, abuse of prescription drugs, abuse of alcohol such as by</u> binge drinking <u>or other excessive drinking resulting in</u> [<s>and</s>] alcohol poisoning<u>, inhaling solvents, and other forms of substance abuse</u>. The agency shall compile a list of evidence-based <u>substance abuse</u> [<s>alcohol</s>] awareness programs from which a school district shall choose a program to use in the district's middle school, junior high school, and high school health curriculum. In this subsection, "evidence-based <u>substance abuse</u> [<s>alcohol</s>] awareness program" means a program, practice, or strategy that has been proven to effectively prevent <u>substance abuse</u> [<s>or delay alcohol use</s>] among students, as determined by evaluations that <u>are evidence-based</u> [<s>use valid and reliable measures and that are published in peer-reviewed journals</s>].

(s)   In this subsection, "bullying" has the meaning assigned by Section 37.0832 and "harassment" has the meaning assigned by Section 37.001. In addition to any other essential knowledge and skills the State Board of Education adopts for the health curriculum under Subsection (a)(2)(B), the board shall adopt for the health curriculum, in consultation with the Texas School Safety Center, essential knowledge and skills that include evidence-based practices that will effectively address awareness, prevention, identification, self-defense in response to, and resolution of and intervention in bullying and harassment.

(t)   The State Board of Education, in consultation with the commissioner of higher education and business and industry leaders, shall develop an advanced language course that a school district may use in the curriculum under Subsection (a)(2)(A) to provide students with instruction in industry-related terminology that

prepares students to communicate in a language other than English in a specific professional, business, or industry environment.

(w) Repealed section 28.002 (w)

(w) ~~In adopting the essential knowledge and skills for the health curriculum under Subsection (a)(2)(B), the State Board of Education shall adopt essential knowledge and skills that address the dangers, causes, consequences, signs, symptoms, and treatment of nonmedical use of prescription drugs. The agency shall compile a list of evidence-based prescription drug misuse awareness programs from which a school district may choose a program to use in the district's middle school, junior high school, and high school health curriculums. In this subsection, an "evidence-based prescription drug misuse awareness program" means a program, practice, or strategy that has been proven to effectively prevent nonmedical use of prescription drugs among students, as determined by evaluations that use valid and reliable measures and that are published in peer-reviewed journals.~~

(z) The State Board of Education by rule shall require each school district to incorporate instruction in digital citizenship into the district's curriculum, including information regarding the potential criminal consequences of cyberbullying. In this subsection:

 (1) "Cyberbullying" has the meaning assigned by Section 37.0832.

 (2) "Digital citizenship" means the standards of appropriate, responsible, and healthy online behavior, including the ability to access, analyze, evaluate, create, and act on all forms of digital communication.

TEC, §28.025. HIGH SCHOOL DIPLOMA AND CERTIFICATE; ACADEMIC ACHIEVEMENT RECORD.

(a)   The State Board of Education by rule shall determine curriculum requirements for the foundation high school program that are consistent with the required curriculum under Section 28.002. The State Board of Education shall designate the specific courses in the foundation curriculum under Section 28.002 (a)(1) required under the foundation high school program. Except as provided by this section, the State Board of Education may not designate a specific course or a specific number of credits in the enrichment curriculum as requirements for the program.

(b)   A school district shall ensure that each student, on entering ninth grade, indicates in writing an endorsement under Subsection (c-1) that the student intends to earn. A district shall permit a student to choose, at any time, to earn an endorsement other than the endorsement the student previously indicated. A student may graduate under the foundation high school program without earning an endorsement if, after the student's sophomore year:

   (1)   the student and the student's parent or person standing in parental relation to the student are advised by a school counselor of the specific benefits of graduating from high school with one or more endorsements; and

   (2)   the student's parent or person standing in parental relation to the student files with a school counselor written permission, on a form adopted by the agency, allowing the student to graduate under the foundation high school program without earning an endorsement.

(b-1)   The State Board of Education by rule shall require that the curriculum requirements for the foundation high school program under Subsection (a) include a requirement that students successfully complete:

   (1)   four credits in English language arts under Section 28.002(a)(1)(A), including one credit in English I, one credit in English II, one credit in English III, and one credit in an advanced English course authorized under Subsection (b-2);

   (2)   three credits in mathematics under Section 28.002(a)(1)(B), including one credit in Algebra I, one credit in geometry, and one credit in any advanced mathematics course authorized under Subsection (b-2);

   (3)   three credits in science under Section 28.002(a)(1)(C), including one credit in biology, one credit in any advanced science course authorized under Subsection (b-2), and one credit in integrated physics and chemistry or in an additional advanced science course authorized under Subsection (b-2);

   (4)   three credits in social studies under Section 28.002(a)(1)(D), including one credit in United States history, at least one-half credit in government and at least one-half credit in economics, and one credit in world geography or world history;

   (5)   except as provided under Subsections (b-12), (b-13), and (b-14), two credits in the same language in a language other than English under Section 28.002(a)(2)(A);

   (6)   five elective credits;

   (7)   one credit in fine arts under Section 28.002(a)(2)(D); and

(8)   except as provided by Subsection (b-11), one credit in physical education under Section 28.002(a)(2)(C).

(b-2)   In adopting rules under Subsection (b-1), the State Board of Education shall:

(1)   provide for a student to comply with the curriculum requirements for an advanced English course under Subsection (b-1)(1), for an advanced mathematics course under Subsection (b-1)(2), and for any advanced science course under Subsection (b-1)(3) by successfully completing a course in the appropriate content area that has been approved as an advanced course by board rule or that is offered as an advanced course for credit without board approval as provided by Section 28.002(g-1); and

(2)   allow a student to comply with the curriculum requirements for the third and fourth mathematics credits under Subsection (b-1)(2) or the third and fourth science credits under Subsection (b-1)(3) by successfully completing an advanced career and technical course designated by the State Board of Education as containing substantively similar and rigorous academic content.

(b-3)   In adopting rules for purposes of Subsection (b-2), the State Board of Education must approve a variety of advanced English, mathematics, and science courses that may be taken to comply with the foundation high school program requirements, provided that each approved course prepares students to enter the workforce successfully or postsecondary education without remediation.

(b-4)   A school district may offer the curriculum described in Subsections (b-1)(1) through (4) in an applied manner. Courses delivered in an applied manner must cover the essential knowledge and skills, and the student shall be administered the applicable end-of-course assessment instrument as provided by Sections 39.023(c) and 39.025.

(b-5)   A school district may offer a mathematics or science course to be taken by a student after completion of Algebra II and physics. A course approved under this subsection must be endorsed by an institution of higher education as a course for which the institution would award course credit or as a prerequisite for a course for which the institution would award course credit.

(b-6)   Repealed by Acts 2013, 83rd Leg., R.S., Ch. 211, Sec. 78(b)(3), eff. September 1, 2014.

(b-6)   A school district may allow a student to enroll concurrently in Algebra I and geometry.

(b-7)   The State Board of Education, in coordination with the Texas Higher Education Coordinating Board, shall adopt rules to ensure that a student may comply with the curriculum requirements under the foundation high school program or for an endorsement under Subsection (c-1) by successfully completing appropriate courses in the core curriculum of an institution of higher education under Section 61.822. Notwithstanding Subsection (b-15) or (c) of this section, Section 39.025, or any other provision of this code and notwithstanding any school district policy, a student who has completed the core curriculum of an institution of higher education under Section 61.822, as certified by the institution in accordance with commissioner rule, is considered to have earned a distinguished level of achievement under the foundation high school program and is entitled to receive a high school diploma from the appropriate high school as that high school is determined in accordance with commissioner rule. A student who is considered to have earned a distinguished level of achievement under the foundation high school program under this subsection may apply for admission to an institution of higher education for the first semester or other academic term after the semester or other academic term in which the student completes the core curriculum.

(b-8)   Repealed by Acts 2013, 83rd Leg., R.S., Ch. 211, Sec. 78(b)(3), eff. September 1, 2014.

(b-9)   A school district, with the approval of the commissioner, may allow a student to satisfy the fine arts credit required under Subsection (b-1)(7) by participating in a community-based fine arts

program not provided by the school district in which the student is enrolled. The fine arts program must provide instruction in the essential knowledge and skills identified for fine arts by the State Board of Education under Section 28.002(c). The fine arts program may be provided on or off a school campus and outside the regular school day.

(b-10)   A school district, with the approval of the commissioner, may allow a student to comply with the curriculum requirements for the physical education credit required under Subsection (b-1)(8) by participating in a private or commercially sponsored physical activity program provided on or off a school campus and outside the regular school day.

(b-11)   In adopting rules under Subsection (b-1), the State Board of Education shall allow a student who is unable to participate in physical activity due to disability or illness to substitute one credit in English language arts, mathematics, science, or social studies, one credit in a course that is offered for credit as provided by Section 28.002(g-1), or one academic elective credit for the physical education credit required under Subsection (b-1)(8). A credit allowed to be substituted under this subsection may not also be used by the student to satisfy a graduation requirement other than completion of the physical education credit. The rules must provide that the determination regarding a student's ability to participate in physical activity will be made by:

     (1)   if the student receives special education services under Subchapter A, Chapter 29, the student's admission, review, and dismissal committee;

     (2)   if the student does not receive special education services under Subchapter A, Chapter 29, but is covered by Section 504, Rehabilitation Act of 1973 (29 U.S.C. Section 794), the committee established for the student under that Act; or

     (3)   if each of the committees described by Subdivisions (1) and (2) is inapplicable, a committee established by the school district of persons with appropriate knowledge regarding the student.

(b-12)   In adopting rules under Subsection (b-1), the State Board of Education shall adopt criteria to allow a student to comply with the curriculum requirements for the two credits in a language other than English required under Subsection (b-1)(5) by substituting two credits in computer programming languages, including computer coding.

(b-13)   In adopting rules under Subsection (b-1), the State Board of Education shall allow a student to substitute credit in another appropriate course for the second credit in the same language in a language other than English otherwise required by Subsection (b-1)(5) if the student, in completing the first credit required under Subsection (b-1)(5), demonstrates that the student is unlikely to be able to complete the second credit. The board rules must establish:

     (1)   the standards and, as applicable, the appropriate school personnel for making a determination under this subsection; and

     (2)   appropriate substitute courses for purposes of this subsection.

(b-14)   In adopting rules under Subsection (b-1), the State Board of Education shall allow a student who, due to disability, is unable to complete two courses in the same language in a language other than English, as provided under Subsection (b-1)(5), to substitute for those credits two credits in English language arts, mathematics, science, or social studies or two credits in career and technology education, technology applications, or other academic electives. A credit allowed to be substituted under this subsection may not also be used by the student to satisfy a graduation credit requirement other than credit for completion of a language other than English. The rules must provide that the determination regarding a student's ability to participate in language-other-than-English courses will be made by:

(1)   if the student receives special education services under Subchapter A, Chapter 29, the student's admission, review, and dismissal committee; or

(2)   if the student does not receive special education services under Subchapter A, Chapter 29, but is covered by Section 504, Rehabilitation Act of 1973 (29 U.S.C. Section 794), the committee established for the student under that Act.

(b-15)   A student may earn a distinguished level of achievement under the foundation high school program by successfully completing:

     (1)   four credits in mathematics, which must include Algebra II and the courses described by Subsection (b-1)(2);

     (2)   four credits in science, which must include the courses described by Subsection (b-1)(3);

     (3)   the remaining curriculum requirements under Subsection (b-1); and

     (4)   the curriculum requirements for at least one endorsement under Subsection (c-1).

(b-16)   A student may satisfy an elective credit required under Subsection (b-1)(6) with a credit earned to satisfy the additional curriculum requirements for the distinguished level of achievement under the foundation high school program or an endorsement under Subsection (c-1). This subsection may apply to more than one elective credit.

(b-17)   The State Board of Education shall adopt rules to ensure that a student may comply with the curriculum requirements under Subsection (b-1)(6) by successfully completing an advanced career and technical course, including a course that may lead to an industry-recognized credential or certificate or an associate degree.

(b-18)   In adopting rules under Subsection (b-1), the State Board of Education shall allow a student to comply with the curriculum requirements under Subsection (b-1) by successfully completing a dual credit course.

(b-19)   In adopting rules under Subsection (b-1), the State Board of Education shall adopt criteria to allow a student to comply with curriculum requirements for the world geography or world history credit under Subsection (b-1)(4) by successfully completing a combined world history and world geography course developed by the State Board of Education.

(b-20)   The State Board of Education shall adopt rules to include the instruction developed under Section 28.012 in one or more courses in the required curriculum for students in grade levels 9 through 12.

(b-21)   In adopting rules under Subsection (b-1), the State Board of Education shall adopt criteria to allow a student to comply with the curriculum requirement for one credit under Subsection (b-1)(5) by successfully completing at an elementary school either a dual language immersion program under Section 28.0051 or a course in American Sign Language [at an elementary school].

(c)   A person may receive a diploma if the person is eligible for a diploma under Section 28.0251. In other cases, a student may graduate and receive a diploma only if:

     (1)   the student successfully completes the curriculum requirements identified by the State Board of Education under Subsection (a) and complies with Sections 28.0256 and [Section] 39.025; or

     (2)   the student successfully completes an individualized education program developed under Section 29.005.

(c-1)   A student may earn an endorsement on the student's transcript by successfully completing curriculum requirements for that endorsement adopted by the State Board of Education by rule. The State Board of Education by rule shall provide students with multiple options for earning each endorsement, including, to the greatest extent possible, coherent sequences of courses. The State Board of Education by rule must permit a student to enroll in courses under more than one endorsement curriculum before the student's junior year. An endorsement under this subsection may be earned in any of the following categories:

   (1)   science, technology, engineering, and mathematics (STEM), which includes courses directly related to science, including environmental science, technology, including computer science, cybersecurity, and computer coding, engineering, and advanced mathematics;

   (2)   business and industry, which includes courses directly related to database management, information technology, communications, accounting, finance, marketing, graphic design, architecture, construction, welding, logistics, automotive technology, agricultural science, and heating, ventilation, and air conditioning;

   (3)   public services, which includes courses directly related to health sciences and occupations, mental health, education and training, law enforcement, and culinary arts and hospitality;

   (4)   arts and humanities, which includes courses directly related to political science, world languages, cultural studies, English literature, history, and fine arts; and

   (5)   multidisciplinary studies, which allows a student to:

      (A)   select courses from the curriculum of each endorsement area described by Subdivisions (1) through (4); and

      (B)   earn credits in a variety of advanced courses from multiple content areas sufficient to complete the distinguished level of achievement under the foundation high school program.

(c-2)   In adopting rules under Subsection (c-1), the State Board of Education shall:

   (1)   require a student in order to earn any endorsement to successfully complete:

      (A)   four credits in mathematics, which must include:

         (i)   the courses described by Subsection (b-1)(2); and

         (ii)   an additional advanced mathematics course authorized under Subsection (b-2) or an advanced career and technology course designated by the State Board of Education;

      (B)   four credits in science, which must include:

         (i)   the courses described by Subsection (b-1)(3); and

         (ii)   an additional advanced science course authorized under Subsection (b-2) or an advanced career and technology course designated by the State Board of Education; and

      (C)   two elective credits in addition to the elective credits required under Subsection (b-1)(6); and

   (2)   develop additional curriculum requirements for each endorsement with the direct participation of educators and business, labor, and industry representatives, and shall require each school district to report to the agency the categories of endorsements under

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Subsection (c-1) for which the district offers all courses for curriculum requirements, as determined by board rule.

(c-3) In adopting rules under Subsection (c-1), the State Board of Education shall adopt criteria to allow a student participating in the arts and humanities endorsement under Subsection (c-1)(4), with the written permission of the student's parent or a person standing in parental relation to the student, to comply with the curriculum requirements for science required under Subsection (c-2)(1)(B)(ii) by substituting for an advanced course requirement a course related to that endorsement.

(c-4) Each school district must make available to high school students courses that allow a student to complete the curriculum requirements for at least one endorsement under Subsection (c-1). A school district that offers only one endorsement curriculum must offer the multidisciplinary studies endorsement curriculum.

(c-5) A student may earn a performance acknowledgment on the student's transcript by satisfying the requirements for that acknowledgment adopted by the State Board of Education by rule. An acknowledgment under this subsection may be earned:

    (1) for outstanding performance:

        (A) in a dual credit course;

        (B) in bilingualism and biliteracy;

        (C) on a college advanced placement test or international baccalaureate examination;

        (D) on an established, valid, reliable, and nationally norm-referenced preliminary college preparation assessment instrument used to measure a student's progress toward readiness for college and the workplace; or

        (E) on an established, valid, reliable, and nationally norm-referenced assessment instrument used by colleges and universities as part of their undergraduate admissions process; or

    (2) for earning a state recognized or nationally or internationally recognized business or industry certification or license.

(c-6) Notwithstanding Subsection (c), a person may receive a diploma if the person is eligible for a diploma under Section 28.0258. This subsection expires September 1, 2023 [2019].

(c-7) Subject to Subsection (c-8), a student who is enrolled in a special education program under Subchapter A, Chapter 29, may earn an endorsement on the student's transcript by:

    (1) successfully completing, with or without modification of the curriculum:

        (A) the curriculum requirements identified by the State Board of Education under Subsection (a); and

        (B) the additional endorsement curriculum requirements prescribed by the State Board of Education under Subsection (c-2); and

    (2) successfully completing all curriculum requirements for that endorsement adopted by the State Board of Education:

        (A) without modification of the curriculum; or

   (B) with modification of the curriculum, provided that the curriculum, as modified, is sufficiently rigorous as determined by the student's admission, review, and dismissal committee.

(c-8) For purposes of Subsection (c-7), the admission, review, and dismissal committee of a student in a special education program under Subchapter A, Chapter 29, shall determine whether the student is required to achieve satisfactory performance on an end-of-course assessment instrument to earn an endorsement on the student's transcript.

(c-10) In adopting rules under Subsection (c-1), the State Board of Education shall adopt or select five technology applications courses on cybersecurity to be included in a cybersecurity pathway for the science, technology, engineering, and mathematics endorsement.

(d) A school district may issue a certificate of coursework completion to a student who successfully completes the curriculum requirements identified by the State Board of Education under Subsection (a) but who fails to comply with Section 39.025. A school district may allow a student who receives a certificate to participate in a graduation ceremony with students receiving high school diplomas.

(e) Each school district shall report the academic achievement record of students who have completed the foundation high school program on transcript forms adopted by the State Board of Education. The transcript forms adopted by the board must be designed to clearly identify whether a student received a diploma or a certificate of coursework completion.

(e-1) A school district shall clearly indicate a distinguished level of achievement under the foundation high school program as described by Subsection (b-15), an endorsement described by Subsection (c-1), and a performance acknowledgment described by Subsection (c-5) on the transcript of a student who satisfies the applicable requirements. The State Board of Education shall adopt rules as necessary to administer this subsection.

(e-2) At the end of each school year, each school district shall report through the Public Education Information Management System (PEIMS) the number of district students who, during that school year, were:

  (1) enrolled in the foundation high school program;

  (2) pursuing the distinguished level of achievement under the foundation high school program as provided by Subsection (b-15); and

  (3) enrolled in a program to earn an endorsement described by Subsection (c-1).

(e-3) Information reported under Subsection (e-2) must be disaggregated by all student groups served by the district, including categories of race, ethnicity, socioeconomic status, sex, and populations served by special programs, including students in special education programs under Subchapter A, Chapter 29.

(f) A school district shall issue a certificate of attendance to a student who receives special education services under Subchapter A, Chapter 29, and who has completed four years of high school but has not completed the student's individualized education program. A school district shall allow a student who receives a certificate to participate in a graduation ceremony with students receiving high school diplomas. A student may participate in only one graduation ceremony under this subsection. This subsection does not preclude a student from receiving a diploma under Subsection (c)(2).

(g) Repealed by Acts 2013, 83rd Leg., R.S., Ch. 211, Sec. 78(b)(3), eff. September 1, 2014.

(h)   The commissioner by rule shall adopt a transition plan to implement and administer the amendments made by H.B. No. 5, 83rd Legislature, Regular Session, 2013, replacing the minimum, recommended, and advanced high school programs with the foundation high school program beginning with the 2014-2015 school year. Under the transition plan, a student who entered the ninth grade before the 2014-2015 school year must be permitted to complete the curriculum requirements required for high school graduation under:

   (1)   the foundation high school program, if the student chooses during the 2014-2015 school year to take courses under this program;

   (2)   the minimum high school program, as that program existed before the adoption of H.B. No. 5, 83rd Legislature, Regular Session, 2013, if the student was participating in that program before the 2014-2015 school year;

   (3)   the recommended high school program, as that program existed before the adoption of H.B. No. 5, 83rd Legislature, Regular Session, 2013, if the student was participating in that program before the 2014-2015 school year; or

   (4)   the advanced high school program, as that program existed before the adoption of H.B. No. 5, 83rd Legislature, Regular Session, 2013, if the student was participating in that program before the 2014-2015 school year.

(h-1)   This subsection and Subsection (h) expire September 1, 2018.

(i)   If an 11th or 12th grade student who is homeless or in the conservatorship of the Department of Family and Protective Services transfers to a different school district and the student is ineligible to graduate from the district to which the student transfers, the district from which the student transferred shall award a diploma at the student's request, if the student meets the graduation requirements of the district from which the student transferred. [~~In this subsection, "student who is homeless" has the meaning assigned to the term "homeless children and youths" under 42 U.S.C. Section 11434a~~].

TEC, §29.906. CHARACTER TRAITS INSTRUCTION.

(a)   The State Board of Education shall integrate positive character traits into the essential knowledge and skills adopted for kindergarten through grade 12, as appropriate.

(b)   The State Board of Education must include the following positive character traits:

    (1)   courage;

    (2)   trustworthiness, including honesty, reliability, punctuality, and loyalty;

    (3)   integrity;

    (4)   respect and courtesy;

    (5)   responsibility, including accountability, diligence, perseverance, and self-control;

    (6)   fairness, including justice and freedom from prejudice;

    (7)   caring, including kindness, empathy, compassion, consideration, patience, generosity, and charity;

    (8)   good citizenship, including patriotism, concern for the common good and the community, and respect for authority and the law;

    (9)   school pride; and

    (10)   gratitude.

(c)   Each school district and open-enrollment charter school must adopt a character education program that includes the positive character traits listed in Subsection (b). In developing or selecting a character education program under this section, a school district shall consult with a committee selected by the district that consists of:

    (1)   parents of district students;

    (2)   educators; and

    (3)   other members of the community, including community leaders.

(d)   This section does not require or authorize proselytizing or indoctrinating concerning any specific religious or political belief.

(e)   The agency shall:

    (1)   maintain a list of character education programs that school districts have implemented that meet the criteria under Subsection (b);

    (2)   based on data reported by districts, annually designate as a Character Plus School each school that provides a character education program that:

        (A)   meets the criteria prescribed by Subsection (b); and

(B)   is approved by the committee selected under Subsection (c); and

(3)   include in the report required under Section 39.332:

    (A)   based on data reported by districts, the impact of character education programs on student discipline and academic achievement; and

    (B)   other reported data relating to character education programs the agency considers appropriate for inclusion.

(f)   The agency may accept money from federal government and private sources to use in assisting school districts in implementing character education programs that meet the criteria prescribed by Subsection (b).

(g)   The State Board of Education may adopt rules as necessary to implement this section.

TEC, §31.003. RULES.

The State Board of Education may adopt rules, consistent with this chapter, for the adoption, requisition, distribution, care, use, and disposal of instructional materials.

TEC, §31.022. INSTRUCTIONAL MATERIALS REVIEW AND ADOPTION.

(a)   The State Board of Education shall adopt a review and adoption cycle for instructional materials for elementary grade levels, including prekindergarten, and secondary grade levels, for each subject in the required curriculum under Section 28.002. In adopting the cycle, the board:

   (1)   is not required to review and adopt instructional materials for all grade levels in a single year; and

   (2)   shall give priority to instructional materials in the following subjects:

      (A)   foundation curriculum subjects for which the essential knowledge and skills have been substantially revised and for which assessment instruments are required under Subchapter B, Chapter 39, including career and technology courses that satisfy foundation curriculum requirements as provided by Section 28.002(n);

      (B)   foundation curriculum subjects for which the essential knowledge and skills have been substantially revised, including career and technology courses that satisfy foundation curriculum requirements as provided by Section 28.002(n);

      (C)   foundation curriculum subjects not described by Paragraph (A) or (B), including career and technology courses that satisfy foundation curriculum requirements as provided by Section 28.002(n); and

      (D)   enrichment curriculum subjects.

(b)   The board shall organize the cycle for subjects in the foundation curriculum so that not more than one-fourth of the instructional materials for subjects in the foundation curriculum are reviewed each biennium. The board shall adopt rules to provide for a full and complete investigation of instructional materials for each subject in the foundation curriculum every eight years. The adoption of instructional materials for a subject in the foundation curriculum may be extended beyond the eight-year period only if the content of instructional materials for a subject is sufficiently current.

(c)   The board shall adopt rules to provide for a full and complete investigation of instructional materials for each subject in the enrichment curriculum on a cycle the board considers appropriate.

(d)   At least 12 months before the beginning of the school year for which instructional materials for a particular subject and grade level will be adopted under the review and adoption cycle, the board shall publish notice of the review and adoption cycle for those instructional materials. A request for production must allow submission of open education resource instructional materials that are available for use by the state without charge on the same basis as instructional materials offered for sale.

(d-1)   A notice published under Subsection (d) must state that a publisher of adopted instructional materials for a grade level other than prekindergarten must submit an electronic sample of the instructional materials as required by Sections 31.027(a) and (b) and may not submit a print sample copy.

(e)   The board shall designate a request for production of instructional materials in a subject area and grade level by the school year in which the instructional materials are intended to be made available in classrooms and not by the school year in which the board makes the request for production.

(f)   The board shall amend any request for production issued for the purchase of instructional materials to conform to the instructional materials funding levels provided by the General Appropriations Act for the year of implementation.

(g)   In reviewing and adopting instructional materials, the board shall consider a school district's need for technology as well as instructional materials and in any biennium may limit the adoption of instructional materials to provide sufficient resources to purchase technology resources, including digital curriculum.

(h)   The board shall include information regarding open education resource instructional materials during the adoption cycle, including any cost savings associated with the adoption of open education resource instructional materials.

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TEC, §31.151. DUTIES OF PUBLISHERS AND MANUFACTURERS

(a)　　　A publisher or manufacturer of instructional materials:

　　(1)　　shall furnish any instructional material the publisher or manufacturer offers in this state at a price that does not exceed the lowest price at which the publisher offers that instructional material for adoption or sale to any state, public school, or school district in the United States;

　　(2)　　shall automatically reduce the price of instructional material sold for use in a school district or open-enrollment charter school to the extent that the price is reduced elsewhere in the United States;

　　(3)　　shall provide any instructional material or ancillary item free of charge in this state to the same extent that the publisher or manufacturer provides the instructional material or ancillary item free of charge to any state, public school, or school district in the United States;

　　(4)　　shall guarantee that each copy of instructional material sold in this state is at least equal in quality to copies of that instructional material sold elsewhere in the United States and is free from factual error;

　　(5)　　may not become associated or connected with, directly or indirectly, any combination in restraint of trade in instructional materials or enter into any understanding or combination to control prices or restrict competition in the sale of instructional materials for use in this state;

　　(6)　　shall deliver instructional materials to a school district or open-enrollment charter school;

　　(7)　　shall, at the time an order for instructional materials is acknowledged, provide to school districts or open-enrollment charter schools an accurate shipping date for instructional materials that are back-ordered;

　　(8)　　shall guarantee delivery of instructional materials at least 10 business days before the opening day of school of the year for which the instructional materials are ordered if the instructional materials are ordered by a date specified in the sales contract; and

　　(9)　　shall submit to the State Board of Education an affidavit certifying any instructional material the publisher or manufacturer offers in this state to be free of factual errors at the time the publisher executes the contract required by Section 31.026.

(b)　　　The State Board of Education may impose a reasonable administrative penalty against a publisher or manufacturer who knowingly violates Subsection (a). The board shall provide for

a hearing to be held to determine whether a penalty is to be imposed and, if so, the amount of the penalty. The board shall base the amount of the penalty on:

(1)   the seriousness of the violation;

(2)   any history of a previous violation;

(3)   the amount necessary to deter a future violation;

(4)   any effort to correct the violation; and

(5)   any other matter justice requires.

(c)   A hearing under Subsection (b) shall be held according to rules adopted by the State Board of Education.

(d)   A penalty collected under this section shall be deposited to the credit of the state instructional materials and technology fund.

(e)   An eligible institution, as defined by Section 31.0241(a), that offers open education resource instructional materials under Section 31.0241 is not a publisher or manufacturer for purposes of this section.

TEC, §43.001. COMPOSITION OF PERMANENT SCHOOL FUND AND AVAILABLE SCHOOL FUND.

(a)   Except as provided by Subsection (b), the permanent school fund, which is a perpetual endowment for the public schools of this state, consists of:

(1)   all land appropriated for the public schools by the constitution and laws of this state;

(2)   all of the unappropriated public domain remaining in this state, including all land recovered by the state by suit or otherwise except pine forest land as defined by Section 88.111; and property described by Section 12.128;

(3)   all proceeds from the authorized sale of permanent school fund land;

(4)   all proceeds from the lawful sale of any other properties belonging to the permanent school fund;

(5)   all investments authorized by Section 43.003 of properties belonging to the permanent school fund; and

(6)   all income from the mineral development of permanent school fund land, including income from mineral development of riverbeds and other submerged land.

(b)   The available school fund, which shall be apportioned annually to each county according to its scholastic population, consists of:

(1)   the distributions to the fund from the permanent school fund as provided by Sections [Section] 5(a) and (g), Article VII, Texas Constitution;

(2)   one-fourth of all revenue derived from all state occupation taxes, exclusive of delinquencies and cost of collection;

(3)   one-fourth of revenue derived from state gasoline and special fuels excise taxes as provided by law; and

(4)   all other appropriations to the available school fund made by the legislature for public school purposes.

(c)   The term "scholastic population" in Subsection (b) or any other law governing the apportionment, distribution, and transfer of the available school fund means all students of school age enrolled in average daily attendance the preceding school year in the public elementary and high school grades of school districts within or under the jurisdiction of a county of this state.

(d)   Each biennium the State Board of Education shall set aside an amount equal to 50 percent of the distribution for that biennium from the permanent school fund to the available school fund as provided by Sections [Section] 5(a) and (g), Article VII, Texas Constitution, to be placed, subject to the General Appropriations Act, in the state technology and instructional materials fund established under Section 31.021.

TEC, §43.0031. PERMANENT SCHOOL FUND ETHICS POLICY.

(a)   In addition to any other requirements provided by law, the State Board of Education shall adopt and enforce an ethics policy that provides standards of conduct relating to the management and investment of the permanent school fund. The ethics policy must include provisions that address the following issues as they apply to the management and investment of the permanent school fund and to persons responsible for managing and investing the fund:

(1)   general ethical standards;

(2)   conflicts of interest;

(3)   prohibited transactions and interests;

(4)   the acceptance of gifts and entertainment;

(5)   compliance with applicable professional standards;

(6)   ethics training; and

(7)   compliance with and enforcement of the ethics policy.

(b)   The ethics policy must include provisions applicable to:

(1)   members of the State Board of Education;

(2)   the commissioner;

(3)   employees of the agency; and

(4)   any person who provides services to the board relating to the management or investment of the permanent school fund.

(c)   Not later than the 45th day before the date on which the board intends to adopt a proposed ethics policy or an amendment to or revision of an adopted ethics policy, the board shall submit a copy of the proposed policy, amendment, or revision to the Texas Ethics Commission and the state auditor for review and comments. The board shall consider any comments from the commission or state auditor before adopting the proposed policy.

(d)   The provisions of the ethics policy that apply to a person who provides services to the board relating to the management or investment of the permanent school fund must be based on the Code of Ethics and the Standards of Professional Conduct prescribed by the Association for Investment Management and Research or other ethics standards adopted by another appropriate professionally recognized entity.

(e)   The board shall ensure that applicable provisions of the ethics policy are included in any contract under which a person provides services to the board relating to the management and investment of the permanent school fund.

TEXAS EDUCATION CODE
TITLE 2. PUBLIC EDUCATION
SUBTITLE I. SCHOOL FINANCE AND FISCAL MANAGEMENT
CHAPTER 44. FISCAL MANAGEMENT
SUBCHAPTER A. SCHOOL DISTRICT FISCAL MANAGEMENT

TEC, §44.001. FISCAL GUIDELINES.

(a)   The commissioner shall establish advisory guidelines relating to the fiscal management of a school district.

(b)   The commissioner shall report annually to the State Board of Education the status of school district fiscal management as reflected by the advisory guidelines and by statutory requirements.

TEC, §44.007. ACCOUNTING SYSTEM; REPORT.

(a)   A standard school fiscal accounting system must be adopted and installed by the board of trustees of each school district. The accounting system must conform with generally accepted accounting principles.

(b)   The accounting system must meet at least the minimum requirements prescribed by the commissioner, subject to review and 9 comment by the state auditor.

(c)   A record must be kept of all revenues realized and of all expenditures made during the fiscal year for which a budget is adopted. A report of the revenues and expenditures for the preceding fiscal year shall be filed with the agency on or before the date set by the State Board of Education.

(d)   The State Board of Education shall require each district, as part of the report required by this section, to include management, cost accounting, and financial information in a format prescribed by the board and in a manner sufficient to enable the board to monitor the funding process and determine educational system costs by district, campus, and program.

(e)   Expired.

(f)   Expired.

TEC, §44.008. ANNUAL AUDIT; REPORT.

(a)   The board of school trustees of each school district shall have its school district fiscal accounts audited annually at district expense by a certified or public accountant holding a permit from the Texas State Board of Public Accountancy. The audit must be completed following the close of each fiscal year.

(b)   The independent audit must meet at least the minimum requirements and be in the format prescribed by the State Board of Education, subject to review and comment by the state auditor. The audit shall include an audit of the accuracy of the fiscal information provided by the district through the Public Education Information Management System (PEIMS).

(c)   Each treasurer receiving or having control of any school fund of any school district shall keep a full and separate itemized account with each of the different classes of its school funds coming into the treasurer 's hands. The treasurer 's records of the district 's itemized accounts and records shall be made available to audit.

(d)   A copy of the annual audit report, approved by the board of trustees, shall be filed by the district with the agency not 11 later than the 150th day after the end of the fiscal year for which the audit was made. If the board of trustees declines or refuses to approve its auditor 's report, it shall nevertheless file with the agency a copy of the audit report with its statement detailing reasons for failure to approve the report.

(e)   The audit reports shall be reviewed by the agency, and the commissioner shall notify the board of trustees of objections, violations of sound accounting practices or law and regulation requirements, or of recommendations concerning the audit reports that the commissioner wants to make. If the audit report reflects that penal laws have been violated, the commissioner shall notify the appropriate county or district attorney and the attorney general. The commissioner shall have access to all vouchers, receipts, district fiscal and financial records, and other school records as the commissioner considers necessary and appropriate for the review, analysis, and passing on audit reports.

TEC, §44.010. REVIEW BY AGENCY.

The budgets, fiscal reports, and audit reports filed with the agency shall be reviewed and analyzed by the staff of the agency to determine whether all legal requirements have been met and to collect fiscal data needed in preparing school fiscal reports for the governor and the legislature.

TEC, §45.053. LIMITATION; VALUE ESTIMATES.

(a)   Except as provided by Subsection (d), the commissioner may not approve bonds for guarantee under this subchapter if the approval would result in the total amount of outstanding guaranteed bonds under this subchapter exceeding an amount equal to 2-1/2 times the cost value of the permanent school fund, as estimated by the board and certified by the state auditor.

(b)   Each year, the state auditor shall analyze the status of guaranteed bonds under this subchapter as compared to the cost value of the permanent school fund. Based on that analysis, the state auditor shall certify whether the amount of bonds guaranteed under this subchapter is within the limit prescribed by this section.

(c)   The commissioner shall prepare and the board shall adopt an annual report on the status of the guaranteed bond program under this subchapter.

(d)   The board by rule may increase the limit prescribed by Subsection (a) to an amount not to exceed five times the cost value of the permanent school fund, provided that the increased limit is consistent with federal law and regulations and does not prevent the bonds to be guaranteed from receiving the highest available credit rating, as determined by the board. The board shall at least annually consider whether to change any limit in accordance with this subsection.   This subsection may not be construed in a manner that impairs, limits, or removes the guarantee of bonds that have been approved by the commissioner.

TEC, §45.0532. LIMITATION ON GUARANTEE OF CHARTER DISTRICT BONDS.

(a)   In addition to the general limitation under Section 45.053, the commissioner may not approve charter district bonds for guarantee under this subchapter in a total amount that exceeds the charter capacity of the guaranteed bond program.

(a-1)   The commissioner may not approve charter district refunding or refinanced bonds for guarantee under this subchapter in a total amount that exceeds one-half of the charter capacity.

(b)   For purposes of this section, the charter capacity of the guaranteed bond program is the percentage of the total capacity of the guaranteed bond program established by the board under Sections 45.053(d) and 45.0531 that is equal to the percentage of the number of students enrolled in open-enrollment charter schools in this state compared to the total number of students enrolled in all public schools in this state, as determined by the commissioner. Each time the board increases the limit under Section 45.053(d), the total amount of charter district bonds that may be guaranteed increases accordingly under Subsection (a).

(b-1)   The charter capacity provided by Subsection (b) applies beginning with the state fiscal year that begins September 1, 2021. Subject to Subsections (b-2) and (b-3), the board shall establish a charter capacity for the preceding state fiscal years by increasing the total limitation on the amount of charter district bonds that could be guaranteed under the law in effect on January 1, 2017, by the following amount:

   (1)   for the state fiscal year that begins September 1, 2017, 20 percent of the difference between the charter capacity provided by Subsection (b) and the charter capacity in effect on January 1, 2017;

   (2)   for the state fiscal year that begins September 1, 2018, 40 percent of the difference between the charter capacity provided by Subsection (b) and the charter capacity in effect on January 1, 2017;

   (3)   for the state fiscal year that begins September 1, 2019, 60 percent of the difference between the charter capacity provided by Subsection (b) and the charter capacity in effect on January 1, 2017; and

   (4)   for the state fiscal year that begins September 1, 2020, 80 percent of the difference between the charter capacity provided by Subsection (b) and the charter capacity in effect on January 1, 2017.

(b-2)   For any year, the board may increase the charter capacity by less than the amount provided by Subsection (b-1) or may decline to increase the charter capacity by any amount if:

   (1)   the board determines that increasing the charter capacity by the amount provided by Subsection (b-1) would likely result in a negative impact on the bond ratings

provided by one or more nationally recognized investment rating firms for school district or charter district bonds for which a guarantee is requested under this subchapter; or

(2) one or more charter districts default on payment of maturing or matured principal or interest on a guaranteed bond, resulting in a negative impact on the bond ratings provided by one or more nationally recognized investment rating firms for school district or charter district bonds for which a guarantee is requested under this subchapter.

(b-3) If the board makes a determination described by Subsection (b-2) for any year and modifies the schedule provided by Subsection (b-1) for that year, the board may also make appropriate adjustments to the schedule for subsequent years to reflect the modification, provided that the charter capacity for any year may not exceed the limit provided for that year by the schedule.

(b-4) Subsections (b-1), (b-2), and (b-3) and this subsection expire September 1, 2022.

(c) Notwithstanding Subsections (a) and (b), the commissioner may not approve charter district bonds for guarantee under this subchapter if the guarantee will result in lower bond ratings for school district bonds for which a guarantee is requested under this subchapter.

(d) The commissioner may request that the comptroller place the portion of the permanent school fund committed to the guarantee of charter district bonds in a segregated account if the commissioner determines that a separate account is needed to avoid any negative impact on the bond ratings of school district bonds for which a guarantee is requested under this subchapter.

(e) A guarantee of charter district bonds must be made in accordance with this chapter and any applicable federal law.

TEC, §48.004 [42.004]. ADMINISTRATION OF THE PROGRAM.

The commissioner, [in accordance with the rules of the State Board of Education,] shall adopt rules and take [such] action and require [such] reports consistent with this chapter as [may be] necessary to implement and administer the Foundation School Program.

TEC, §48.251. FINANCING; GENERAL RULE.

(a)   The cost of the Foundation School Program for a school district is the total sum of:

      (1)   the sum of the tier one allotments and other funding as follows:

           (A)   the basic allotment under Subchapter B;

           (B)   the student-based allotments under Subchapter C; and

           (C)   the additional funding under Subchapter D; and

      (2)   the tier two allotment under Subchapter E.

(b)   The sum of the Foundation School Program maintenance and operations costs for all accredited school districts in this state constitutes the total maintenance and operations cost of the Foundation School Program.

(c)   The program shall be financed by:

      (1)   state available school funds distributed in accordance with the law;

      (2)   ad valorem tax revenue generated by local school district effort; and

      (3)   state funds appropriated for the purposes of public school education and allocated to each district in an amount sufficient to finance the cost of each district's Foundation School Program not covered by other funds specified in this subsection.

TOC, §55.002. EXEMPTION FROM PENALTY FOR FAILURE TO RENEW LICENSE.

A state agency that issues a license shall adopt rules to exempt an individual who holds a license issued

by the agency from any increased fee or other penalty imposed by the agency for failing to renew the

license in a timely manner if the individual establishes to the satisfaction of the agency that the individual

failed to renew the license in a timely manner because the individual was serving as a military service

member.

TOC, §55.003. EXTENSION OF LICENSE RENEWAL DEADLINES FOR MILITARY SERVICE MEMBERS.

A military service member who holds a license is entitled to two years of additional time to complete:

      (1)   any continuing education requirements; and

      (2)   any other requirement related to the renewal of the military service member's license.

MINUTES

STATE BOARD OF EDUCATION

APRIL 2020

Minutes

State Board of Education

April 17, 2020

Committees of the State Board of Education

INSTRUCTION

Sue Melton-Malone, chair
Pam Little, vice chair
Aicha Davis
Georgina C. Pérez
Marty Rowley

SCHOOL FINANCE/PERMANENT SCHOOL FUND

Tom Maynard, chair
Lawrence A. Allen, Jr., vice chair
Donna Bahorich
Patricia Hardy
Ken Mercer

SCHOOL INITIATIVES

Barbara Cargill, chair
Marisa B. Perez-Diaz, vice chair
Ruben Cortez, Jr.
Keven Ellis
Matt Robinson

Minutes
State Board of Education
April 17, 2020

The State Board of Education Committee of the Full Board conducted a virtual meeting at 9:02 a.m. on Friday, April 17, 2020. Attendance was noted as follows:

Present: Keven Ellis, chair; Lawrence A. Allen, Jr.; Donna Bahorich; Barbara Cargill; Ruben Cortez, Jr.; Aicha Davis; Pat Hardy; Pam Little; Tom Maynard; Sue Melton-Malone; Ken Mercer; Georgina C. Pérez, secretary; Marisa B. Perez-Diaz; Matt Robinson; Marty Rowley, vice chair

Student performance

The student performance was provided by Lufkin High School Marching Band in the Lufkin Independent School District (ISD).

Invocation

Pledge of Allegiance

Roll Call

Approval of Minutes

> **State Board of Education, November 15, 2019**

> **State Board of Education, January 31, 2020**

Public Testimony

The State Board of Education received no presentations of public testimony.

1. **Approval of Consent Agenda**

   Any agenda item may be placed on the consent agenda by any State Board of Education committee. The State Board of Education may elect to take separate action on any item on the consent agenda.

   By unanimous consent, the State Board of Education approved the following items on the consent agenda.

   (1) **Ratification of the Purchases and Sales of the Investment Portfolio of the Permanent School Fund for the Months of December 2019, January and February 2020**
   (Board agenda page III-11)
   (Committee on School Finance/Permanent School Fund)
   The State Board of Education ratified the purchases and sales for the months of December 2019, January 2020 and February 2020, in the amount of $1,167,603,588 and $1,322,360,449 respectively.
   (ATTACHMENT 1, page 9).

(2) **Recommendation for Appointment to the Fort Sam Houston Independent School District Board of Trustees**
(Board agenda page IV-1)
(Committee on School Initiatives)

The State Board of Education approved the appointment of Mr. Richard Kling III to serve a two-year term of office, from April 17, 2020 to April 17, 2022, on the Fort Sam Houston Independent School District Board of Trustees.

(3) **Recommendation for Appointments to the Lackland Independent School District Board of Trustees**
(Board agenda page IV-22)
(Committee on School Initiatives)

The State Board of Education approved the appointments of Mr. Khalil Gatlin and Ms. Sandra H. Wellman to serve two-year terms of office, from April 17, 2020 to April 17, 2022, on the Lackland Independent School District Board of Trustees.

COMMITTEE OF THE FULL BOARD

2. **Proposed Amendments to 19 TAC Chapter 74, <u>Curriculum Requirements</u>, Subchapter B, <u>Graduation Requirements</u>, §74.11, <u>High School Graduation Requirements</u>, §74.12, <u>Foundation High School Program</u>, and §74.13, <u>Endorsements</u>**
(Second Reading and Final Adoption)
(Board agenda page I-1)

<u>**MOTION AND VOTE:**</u> *It was moved by Mr. Rowley and carried unanimously that the State Board of Education approve for second reading and final adoption the proposed amendments to 19 TAC Chapter 74, <u>Curriculum Requirements</u>, Subchapter B, <u>Graduation Requirements</u>, §74.11, <u>High School Graduation Requirements</u>; §74.12, <u>Foundation High School Program</u>; and §74.13, <u>Endorsements</u>; and*

Make an affirmative finding that immediate adoption of the proposed amendments to 19 TAC Chapter 74, <u>Curriculum Requirements</u>, Subchapter B, <u>Graduation Requirements</u>, §74.11, <u>High School Graduation Requirements</u>; §74.12, <u>Foundation High School Program</u>; and §74.13, <u>Endorsements</u>, is necessary and shall have an effective date of August 1, 2020, as recommended by the Committee of the Full Board (ATTACHMENT 2, page 11).

3. **Proposed Revisions to 19 TAC Chapter 126, <u>Texas Essential Knowledge and Skills for Technology Applications</u>, and Chapter 130, <u>Texas Essential Knowledge and Skills for Career and Technical Education</u>**
(Second Reading and Final Adoption)
(Board agenda page I-12)

<u>**MOTION AND VOTE**</u>: *It was moved by Mr. Rowley and carried unanimously that the State Board of Education approve for second reading and final adoption proposed revisions to 19 TAC Chapter 126, <u>Texas Essential Knowledge and Skills for Technology Applications</u>, Subchapter C, <u>High School</u>, and Subchapter D, <u>Other Technology Applications Courses</u>, and Chapter 130, <u>Texas Essential Knowledge and Skills for Career and Technical Education</u>, Subchapter A, <u>Agriculture, Food, and Natural Resources</u>; Subchapter C, <u>Arts, Audio/Video Technology, and Communications</u>; Subchapter K, <u>Information Technology</u>; Subchapter O, <u>Science, Technology, Engineering, and Mathematics</u>; and Subchapter Q, <u>Energy</u>; and*

Make an affirmative finding that immediate adoption of the proposed revisions to 19 TAC Chapter 126, Texas Essential Knowledge and Skills for Technology Applications, Subchapter C, High School, and Subchapter D, Other Technology Applications Courses, and Chapter 130, Texas Essential Knowledge and Skills for Career and Technical Education, Subchapter A, Agriculture, Food, and Natural Resources; Subchapter C, Arts, Audio/Video Technology, and Communications; Subchapter K, Information Technology; Subchapter O, Science, Technology, Engineering, and Mathematics; and Subchapter Q, Energy, is necessary and shall have an effective date of August 1, 2020, as recommended by the Committee of the Full Board (ATTACHMENT 3, page 19).

4. **Proposed Revisions to 19 TAC Chapter 113, <u>Texas Essential Knowledge and Skills for Social Studies</u>, Subchapter C, <u>High School</u>, and Subchapter D, <u>Other Social Studies Courses</u> (Second Reading and Final Adoption)**
(Board agenda page I-103)

MOTION AND VOTE: *It was moved by Mr. Rowley and carried unanimously that the State Board of Education ratify suspension of board operating procedures §5.7 to allow board members to provide proposed amendments to the TEKS to staff by 3:00 p.m., April 16, 2020.*

MOTION: *It was moved by Mr. Rowley that the State Board of Education approve for second reading and final adoption the proposed revisions to 19 TAC Chapter 113, Texas Essential Knowledge and Skills for Social Studies, Subchapter C, High School, and Subchapter D, Other Social Studies Courses, as amended; and*

Make an affirmative finding that immediate adoption of the proposed revisions to 19 TAC Chapter 113, Texas Essential Knowledge and Skills for Social Studies, Subchapter C, High School, and Subchapter D, Other Social Studies Courses, is necessary and shall have an effective date of August 1, 2020, as amended and recommended by the Committee of the Full Board.

MOTION AND VOTE: *It was moved by Mrs. Bahorich, seconded by Dr. Robinson, and carried unanimously that the State Board of Education amend §113.51(c)(9)(A) to read as follows:*

"~~explain~~ <u>compare and contrast</u> how the unalienable rights expressed in the Declaration of Independence and civil rights in the Bill-of-Rights, influenced the political perspectives of <u>enslaved and free</u> African Americans <u>in the late 1700s and early 1800s</u>"

MOTION AND VOTE*: It was moved by Ms. Pérez, seconded by Mrs. Bahorich, and carried, that the State Board of Education suspend board operating procedures §5.7 to allow board members to consider a proposed amendment.*

MOTION AND VOTE: *It was moved by Ms. Pérez, and carried unanimously that the State Board of Education amend § 113.5(c)(4)(G) to read as follows:*

"~~discuss~~ <u>describe</u> the impact of the U.S. Supreme Court decision Plessy v. Ferguson (1896);"

MOTION AND VOTE: *It was moved by Mr. Mercer, seconded by Mrs. Bahorich, and carried that the State Board of Education suspend board operating procedures §5.7 to allow board members to consider a proposed amendment.*

MOTION AND VOTE: *It was moved by Ms. Perez, seconded by Mr. Maynard, and carried unanimously that the State Board of Education amend § 113.51(c)(5)(B) to read as follows:*

"~~discuss~~ <u>describe</u> the impact of U.S. Supreme Court decisions Sweatt v. Painter (1950) and Brown v. Board of Education (1954);

VOTE: *A vote was taken on the original motion to recommend that the State Board of Education approve for second reading and final adoption the proposed revisions to 19 TAC Chapter 113, <u>Texas Essential Knowledge and Skills for Social Studies</u>, Subchapter C, <u>High School</u>, and Subchapter D, <u>Other Social Studies Courses</u>, as amended; and*

Make an affirmative finding that immediate adoption of the proposed revisions to 19 TAC Chapter 113, <u>Texas Essential Knowledge and Skills for Social Studies</u>, Subchapter C, <u>High School</u>, and Subchapter D, <u>Other Social Studies Courses</u>, is necessary and shall have an effective date of August 1, 2020, as amended and recommended by the Committee of the Full Board, as amended (ATTACHMENT 4, page 195).

The motion carried with 15 members voting Aye, and 0 members voting No, as follows:

<u>Aye:</u>	Mr. Allen	Mr. Maynard
	Mrs. Bahorich	Mrs. Melton-Malone
	Mrs. Cargill	Mr. Mercer
	Mr. Cortez	Ms. Pérez
	Ms. Davis	Ms. Perez-Diaz
	Dr. Ellis	Dr. Robinson
	Ms. Hardy	Mr. Rowley
	Mrs. Little	

5. ***Proclamation 2022* of the State Board of Education Advertising for Bids on Instructional Materials**
(Board agenda page I-128)

MOTION AND VOTE: *It was moved by Mr. Rowley and carried unanimously the State Board of Education approve* Proclamation 2022 *of the State Board of Education Advertising for Bids for Instructional Materials, as amended and recommended by the Committee of the Full Board.*

(Dr. Robinson was absent for the vote.)

6. **Perkins Reauthorization and Approval of State Plan**
(Board agenda page I-163)

MOTION AND VOTE: *It was moved by Mr. Rowley and carried unanimously that the State Board of Education approve the* Texas State Plan for Strengthening Career and Technical Education for the 21st Century Act (Perkins V)*, as recommended by the Committee of the Full Board.*

(Dr. Robinson was absent for the vote.)

7. **Update on Texas Essential Knowledge and Skills (TEKS) Review**
(Board agenda page I-458)

 The committee took no action; therefore, this item was removed from the agenda.

COMMITTEE ON INSTRUCTION

8.   Proposed Repeal of 19 TAC Chapter 110, <u>Texas Essential Knowledge and Skills for English Language Arts and Reading,</u> Subchapter C, <u>High School,</u> §§110.30-110.34, and Subchapter D, <u>Other High School English Language Arts and Reading Courses,</u> §110.85, and Chapter 128, <u>Texas Essential Knowledge and Skills for Spanish Language Arts and Reading and English as a Second Language,</u> Subchapter C, <u>High School,</u> §§128.30-128.32
(Second Reading and Final Adoption)
(Board agenda page II-1)

MOTION AND VOTE: *It was moved by Mrs. Melton-Malone and carried unanimously that the State Board of Education approve for second reading and final adoption the proposed repeal of 19 TAC Chapter 110, <u>Texas Essential Knowledge and Skills for English Language Arts and Reading,</u> Subchapter C, <u>High School,</u> §§110.30-110.34, and Subchapter D, <u>Other High School English Language Arts and Reading Courses,</u> §110.85, and Chapter 128, <u>Texas Essential Knowledge and Skills for Spanish Language Arts and Reading and English as a Second Language,</u> Subchapter C, <u>High School,</u> §§128.30-128.32; and*

Make an affirmative finding that immediate adoption of the proposed repeal of 19 TAC Chapter 110, <u>Texas Essential Knowledge and Skills for English Language Arts and Reading,</u> Subchapter C, <u>High School,</u> §§110.30-110.34, and Subchapter D, <u>Other High School English Language Arts and Reading Courses,</u> §110.85, and Chapter 128, <u>Texas Essential Knowledge and Skills for Spanish Language Arts and Reading and English as a Second Language,</u> Subchapter C, <u>High School,</u> §§128.30-128.32, is necessary and shall have an effective date of August 1, 2020, as recommended by the Committee on Instruction (ATTACHMENT 5, page 217).

9.   Action Regarding Origo Education
(Board agenda page II-5)

MOTION AND VOTE: *It was moved by Mrs. Melton-Malone and carried unanimously that the State Board of Education approve the changes that have been submitted by ORIGO Education, as recommended by the Committee on Instruction.*

MOTION AND VOTE: *It was moved by Mrs. Melton-Malone and carried unanimously that the State Board of Education assess liquidated damages in the amount of $113,494.*

MOTION: *It was moved by Mrs. Melton-Malone that the State Board of Education approve final adoption to establish a due date of June 1, 2020 for payment of the liquidated damages, as recommended by the Committee on Instruction.*

MOTION AND VOTE: *It was moved by Mr. Maynard, seconded by Mr. Cortez, and carried to amend the motion to read:*

"Establish a due date of <u>TEA's close of business</u> June 1, 2020, for receipt of payment of the liquidated damages."

VOTE: *A vote was taken on the motion to establish a due date of TEA's close of business on June 1, 2020, for receipt of payment of the liquidated damages, as amended. The motion carried unanimously.*

COMMITTEE ON SCHOOL FINANCE/PERMANENT SCHOOL FUND

10. **Proposed Repeal of 19 TAC Chapter 105, <u>Foundation School Program</u>, Subchapter B, <u>Use of State Funds</u>**
    (Second Reading and Final Adoption)
    (Board agenda page III-1)

    MOTION AND VOTE: *It was moved by Mr. Maynard and carried unanimously that the State Board of Education approve for second reading and final adoption the proposed repeal of 19 TAC Chapter 105, <u>Foundation School Program</u>, Subchapter B, <u>Use of State Funds</u>; and Make an affirmative finding that immediate adoption of the proposed repeal of 19 TAC Chapter 105, <u>Foundation School Program</u>, Subchapter B, <u>Use of State Funds</u>, is necessary and shall have an effective date of 20 days after filing as adopted with the Texas Register, as recommended by the Committee on School Finance/Permanent School Fund,* (ATTACHMENT 6, page 267).

10. **Proposed Amendment to 19 TAC Chapter 109, <u>Budgeting, Accounting, and Auditing</u>, Subchapter B, <u>Texas Education Agency Audit Functions</u>, §109.23, <u>School District Independent Audits and Agreed-Upon Procedures</u>**
    (First Reading and Filing Authorization)
    (Board agenda page III-5)

    MOTION AND VOTE: *It was moved by Mr. Maynard and carried unanimously that the State Board of Education approve for first reading and filing authorization the proposed amendment to 19 TAC Chapter 109, <u>Budgeting, Accounting, and Auditing</u>, Subchapter B, <u>Texas Education Agency Audit Functions</u>, §109.23, <u>School District Independent Audits and Agreed-Upon Procedures</u>, as recommended by the Committee on School Finance/Permanent School Fund* (ATTACHMENT 7, page 270).

COMMITTEE ON SCHOOL INITIATIVES

12. **Adoption of Review of 19 TAC Chapter 100, <u>Charters</u>, Subchapter A, <u>Open-Enrollment Charter Schools</u>, and Subchapter B, <u>Home-Rule School District Charters</u>**
    (Adoption of Review)
    (Board agenda page IV-34)

    MOTION AND VOTE: *It was moved by Mrs. Cargill and carried unanimously that the State Board of Education adopt the review of 19 TAC Chapter 100, <u>Charters</u>, Subchapter A, <u>Open-Enrollment Charter Schools</u>, and Subchapter B, <u>Home-Rule School District Charters</u>, as recommended by the Committee on School Initiatives.*

13. **Review of Proposed Amendments to 19 TAC Chapter 230, <u>Professional Educator Preparation and Certification</u>, Subchapter C, <u>Assessment of Educators</u>, Subchapter D, <u>Types and Classes of Certificates Issued</u>, Subchapter E, <u>Educational Aide Certificate</u>, and Subchapter G, <u>Certificate Issuance Procedures</u>**
    (Board agenda page IV-38)

    MOTION AND VOTE: *It was moved by Mrs. Cargill and carried unanimously that the State Board of Education take no action on the proposed amendments to 19 TAC Chapter 230, <u>Professional Educator Preparation and Certification</u>, Subchapter C, <u>Assessment of Educators</u>, Subchapter D, <u>Types and Classes of Certificates Issued</u>, Subchapter E, <u>Educational Aide Certificate</u>, and Subchapter G, <u>Certificate Issuance Procedures</u>, as recommended by the Committee on School Initiatives.*

REGARDING AGENDA ITEMS POSTED FOR DISCUSSION ON COMMITTEE AGENDAS

Committee on Instruction

Mrs. Melton-Malone did not report on the Committee on Instruction.

Committee on School Finance/Permanent School Fund

Mr. Maynard did not report on the Committee on Finance/Permanent School Fund.

Committee on School Initiatives

Mrs. Cargill announced that 16 charter school applications were being reviewed and interviews are still scheduled for July 27.

REPORTS OF OTHER STATE BOARD OF EDUCATION MEMBERS REGARDING AGENDA ITEMS AND EDUCATIONAL ACTIVITIES AND CONCERNS IN INDIVIDUAL DISTRICTS

Dr. Ellis gave board members an opportunity to provide information regarding agenda items or other relevant information about public education. Brief reports were made.

The meeting adjourned at 1:06 p.m.

_____
Georgina C. Pérez, Secretary

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TEXAS PERMANENT SCHOOL FUND
SUMMARY OF TRANSACTIONS FOR APPROVAL
(Including External Manager's Trades)
For December 1, 2019 through February 29, 2020

Purchases/Capital Calls:

Long Term Fixed Income	$ 360,405,911
Public Market Equities	219,125,208
Alternative Investments	588,072,469
TOTAL	$ 1,167,603,588

Sales/Distributions:

Long Term Fixed Income	$ 353,588,859
Public Market Equities	362,103,516
Alternative Investments	606,668,074
TOTAL	$ 1,322,360,449

General Land Office Contributions:

FY 2019 Cumulative February 2019	FY 2020 Cumulative February 2020
$127,500,000	$5,000,000

Based on the above information provided by staff including a report that deposits to the Permanent School Fund from the General Land Office were $127,500,000 through February 2019 for fiscal year 2019 versus $5,000,000 through February 2020 for fiscal year 2020, and the recommendation of the Executive Administrator and Chief Investment Officer and the Commissioner of Education; it is moved by unanimous consent that the Committee on School Finance/Permanent School Fund ratify for the months of December 2019, January 2020 and February 2020 Permanent School Fund portfolio purchases of $1,167,603,588 and sales of $1,322,360,449.

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ATTACHMENT
Text of Proposed Amendments to 19 TAC

Chapter 74. Curriculum Requirements

Subchapter B. Graduation Requirements

§74.11. High School Graduation Requirements.

(a)-(f)   (No change.)

(g)   Elective credits may be selected from the following:

    (1)   high school courses not required for graduation that are listed in the following chapters of this title:

        (A)   Chapter 110 of this title (relating to Texas Essential Knowledge and Skills for English Language Arts and Reading);

        (B)   Chapter 111 of this title (relating to Texas Essential Knowledge and Skills for Mathematics);

        (C)   Chapter 112 of this title (relating to Texas Essential Knowledge and Skills for Science);

        (D)   Chapter 113 of this title (relating to Texas Essential Knowledge and Skills for Social Studies);

        (E)   Chapter 114 of this title (relating to Texas Essential Knowledge and Skills for Languages Other Than English);

        (F)   Chapter 115 of this title (relating to Texas Essential Knowledge and Skills for Health Education);

        (G)   Chapter 116 of this title (relating to Texas Essential Knowledge and Skills for Physical Education);

        (H)   Chapter 117 of this title (relating to Texas Essential Knowledge and Skills for Fine Arts);

        [(I)   ~~Chapter 126 of this title (relating to Texas Essential Knowledge and Skills for Technology Applications);~~]

        (I) [(J)]   Chapter 127 of this title (relating to Texas Essential Knowledge and Skills for Career Development); and

        (J) [(K)]   Chapter 130 of this title (relating to Texas Essential Knowledge and Skills for Career and Technical Education);

    (2)   state-approved innovative courses as specified in §74.27 of this title (relating to Innovative Courses and Programs);

    (3)   Junior Reserve Officer Training Corps (JROTC)--one to four credits; and

    (4)   Driver Education--one-half credit.

(h)-(n)   (No change.)

§74.12. Foundation High School Program.

(a)   (No change.)

(b)   Core courses. A student must demonstrate proficiency in the following.

    (1)-(4)   (No change.)

    (5)   Languages other than English (LOTE)--two credits.

(A)   The credits may be selected from the following:

    (i)   any two levels in the same language, including comparable AP or IB language courses that do not count toward another credit required for graduation; or

    (ii)   two credits in computer programming languages, including computer coding, to be selected from Computer Science I, II, and III, AP Computer Science Principles, AP Computer Science A, IB Computer Science Standard Level, and IB Computer Science Higher Level.

(B)   A single two-credit IB LOTE course may only satisfy one LOTE requirement.

(C)   If a student, in completing the first credit of LOTE, demonstrates that the student is unlikely to be able to complete the second credit, the student may substitute another appropriate course as follows:

    (i)   Special Topics in Language and Culture;

    (ii)   World History Studies or World Geography Studies for a student who is not required to complete both by the local district;

    (iii)   another credit selected from Chapter 114 of this title (relating to Texas Essential Knowledge and Skills for Languages Other Than English); or

    (iv)   computer programming languages, including computer coding.

(D)   The determination regarding a student's ability to complete the second credit of LOTE must be agreed to by:

    (i)   the teacher of the first LOTE credit course or another LOTE teacher designated by the school district, the principal or designee, and the student's parent or person standing in parental relation;

    (ii)   the student's admission, review, and dismissal (ARD) committee if the student receives special education services under the TEC, Chapter 29, Subchapter A; or

    (iii)   the committee established for the student under Section 504, Rehabilitation Act of 1973 (29 United States Code, Section 794) if the student does not receive special education services under the TEC, Chapter 29, Subchapter A, but is covered by the Rehabilitation Act of 1973.

(E)   A student, who due to a disability, is unable to complete two credits in the same language in a language other than English, may substitute a combination of two credits that are not being used to satisfy another specific graduation requirement selected from English language arts, mathematics, science, or social studies or two credits in career and technical education or technology applications for the LOTE credit requirements. The determination regarding a student's ability to complete the LOTE credit requirements will be made by:

    (i)   the student's ARD committee if the student receives special education services under the TEC, Chapter 29, Subchapter A; or

    (ii)   the committee established for the student under Section 504, Rehabilitation Act of 1973 (29 United States Code, Section 794) if the student does not receive special education services under the TEC, Chapter 29, Subchapter A, but is covered by the Rehabilitation Act of 1973.

(F)   A student who successfully completes a dual language immersion/two-way or dual language immersion/one-way program in accordance with §89.1210(d)(3) and (4) of this title (relating to Program Content and Design), §89.1227 of this title (relating to Minimum Requirements for Dual Language Immersion Program Model), and §89.1228 of this title (relating to Two-Way Dual Language Immersion Program Model Implementation) at an elementary school may satisfy one credit of the two credits required in a language other than English.

(i) To successfully complete a dual language immersion program, a student must:

    (I) have participated in a dual language immersion program for at least five consecutive school years;

    (II) achieve high levels of academic competence as demonstrated by performance of meets or masters grade level on both the mathematics and reading State of Texas Assessments of Academic Readiness (STAAR®) in English or Spanish, as applicable , in at least one grade level ; and

    (III) achieve proficiency in both English and a language other than English as demonstrated by scores of proficient or higher in the reading and speaking domains on language proficiency or achievement tests in both languages.

(ii) The second credit of a language other than English must be in the same language as the successfully completed dual language immersion program.

(G) A student who successfully completes a course in American Sign Language while in elementary school may satisfy one credit of the two credits required in a language other than English.

(6)-(7) (No change.)

(c)-(d) (No change.)

§74.13. Endorsements.

(a)-(c) (No change.)

(d) A school district may define advanced courses and determine a coherent sequence of courses for an endorsement area, provided that prerequisites in Chapters 110-117, [126,] 127, and 130 of this title are followed.

(e) (No change.)

(f) A student may earn any of the following endorsements.

(1) Science, technology, engineering, and mathematics (STEM). A student may earn a STEM endorsement by completing the requirements specified in subsection (e) of this section, including Algebra II, chemistry, and physics or Principles of Technology and:

(A) a coherent sequence of courses for four or more credits in career and technical education (CTE) that consists of at least two courses in the same career cluster and at least one advanced CTE course. The courses may be selected from Chapter 130 of this title (relating to Texas Essential Knowledge and Skills for Career and Technical Education), Chapter 127 of this title (relating to Texas Essential Knowledge and Skills for Career Development), or CTE innovative courses approved by the commissioner of education. The final course in the sequence must be selected from Chapter 130, Subchapter O, of this title (relating to Science, Technology, Engineering, and Mathematics) or Career Preparation I or II and Project-Based Research in Chapter 127, Subchapter B, of this title (relating to High School), if the course addresses a STEM-related field; or

(B) courses required to complete a TEA-designated program of study related to STEM; or

[(B) a coherent sequence of four credits in computer science selected from the following:]

    [(i) Fundamentals of Computer Science; or]

    [(ii) Computer Science I; or]

    [(iii) Computer Science II; or]

    [(iv) Computer Science III; or]

[(v)   ~~Digital Forensics; or~~]

[(vi)   ~~Discrete Mathematics for Computer Science; or~~]

[(vii)   ~~Game Programming and Design; or~~]

[(viii)   ~~Mobile Application Development; or~~]

[(ix)   ~~Robotics Programming and Design; or~~]

[(x)   ~~Independent Studies in Technology Applications; or~~]

[(xi)   ~~AP Computer Science A; or~~]

[(xii)   ~~AP Computer Science Principles; or~~]

[(xiii)   ~~IB Computer Science, Standard Level; or~~]

[(xiv)   ~~IB Computer Science, Higher Level; or~~]

(C)   three credits in mathematics by successfully completing Algebra II and two additional mathematics courses for which Algebra II is a prerequisite by selecting courses from subsection (e)(2) of this section; or

(D)   four credits in science by successfully completing chemistry, physics, and two additional science courses by selecting courses from subsection (e)(6) of this section; or

[(E)   ~~a coherent sequence of four courses in cybersecurity to consist of Foundations of Cybersecurity and Cybersecurity Capstone and two additional courses to be selected from the following:~~]

[(i)   ~~AP Computer Science A; or~~]

[(ii)   ~~Computer Science I; or~~]

[(iii)   ~~AP Computer Science Principles; or~~]

[(iv)   ~~Digital Forensics; or~~]

[(v)   ~~Computer Maintenance; or~~]

[(vi)   ~~Internetworking Technologies I; or~~]

[(vii)   ~~Internetworking Technologies II; or~~]

[(viii)   ~~Networking; or~~]

(E) [~~(F)~~] in addition to Algebra II, chemistry, and physics, a coherent sequence of three additional credits from no more than two of the categories or disciplines represented by subparagraphs (A), (B), (C), and (D) of this paragraph.

(2)   Business and industry. A student may earn a business and industry endorsement by completing the requirements specified in subsection (e) of this section and:

(A)   a coherent sequence of courses for four or more credits in CTE that consists of at least two courses in the same career cluster and at least one advanced CTE course. The courses may be selected from Chapter 130 of this title, Chapter 127 of this title, or CTE innovative courses approved by the commissioner. The final course in the sequence must be selected from one of the following:

(i)   Chapter 130, Subchapter A, of this title (relating to Agriculture, Food, and Natural Resources); or

(ii)   Chapter 130, Subchapter B, of this title (relating to Architecture and Construction); or

(iii)   Chapter 130, Subchapter C, of this title (relating to Arts, Audio/Video Technology, and Communications); or

(iv)   Chapter 130, Subchapter D, of this title (relating to Business Management and Administration); or

(v)   Chapter 130, Subchapter F, of this title (relating to Finance); or

(vi)   Chapter 130, Subchapter I, of this title (relating to Hospitality and Tourism); or

(vii)   Chapter 130, Subchapter K, of this title (relating to Information Technology); or

(viii)   Chapter 130, Subchapter M, of this title (relating to Manufacturing); or

(ix)   Chapter 130, Subchapter N, of this title (relating to Marketing); or

(x)   Chapter 130, Subchapter P, of this title (relating to Transportation, Distribution, and Logistics); or

(xi)   Chapter 130, Subchapter Q, of this title (relating to Energy); or

(xii) [(xi)]   Career Preparation I or II and Project-Based Research in Chapter 127, Subchapter B, of this title if the course addresses a career from a field listed in clauses (i)-(xi) [(i)-(x)] of this subparagraph; or

(B)   courses required to complete a TEA-designated program of study related to business and industry; or

(C) [(B)]four English credits by selecting courses from Chapter 110 of this title to include three levels in one of the following areas:

(i)   public speaking; or

(ii)   debate; or

(iii)   advanced broadcast journalism; or

(iv)   advanced journalism: newspaper; or

(v)   advanced journalism: yearbook; or

(vi)   advanced journalism: literary magazine; or

[(C)   four technology applications credits by selecting from the following:]

[(i)   Digital Design and Media Production; or]

[(ii)   Digital Art and Animation; or]

[(iii)   3-D Modeling and Animation; or]

[(iv)   Digital Communications in the 21st Century; or]

[(v)   Digital Video and Audio Design; or]

[(vi)   Web Communications; or]

[(vii)   Web Design; or]

[(viii)   Web Game Development; or]

[(ix)   Independent Study in Evolving/Emerging Technologies; or]

(D)   a coherent sequence of four credits from subparagraph (A), (B), or (C) of this paragraph.

(3)   Public services. A student may earn a public services endorsement by completing the requirements specified in subsection (e) of this section and:

(A)   a coherent sequence of courses for four or more credits in CTE that consists of at least two courses in the same career cluster and at least one advanced CTE course. The courses may be selected from Chapter 130 of this title, Chapter 127 of this title, or CTE innovative courses approved by the commissioner. The final course in the sequence must be selected from one of the following:

	(i)	Chapter 130, Subchapter E, of this title (relating to Education and Training); or
	(ii)	Chapter 130, Subchapter G, of this title (relating to Government and Public Administration); or
	(iii)	Chapter 130, Subchapter H, of this title (relating to Health Science); or
	(iv)	Chapter 130, Subchapter J, of this title (relating to Human Services); or
	(v)	Chapter 130, Subchapter L, of this title (relating to Law, Public Safety, Corrections, and Security); or
	(vi)	Career Preparation I or II and Project-Based Research in Chapter 127, Subchapter B, of this title if the course addresses a field from a cluster listed in clauses (i)-(v) of this subparagraph; or

(B)   courses required to complete a TEA-designated program of study related to public services; or

(C) [(B)]four courses in Junior Reserve Officer Training Corps (JROTC).

(4)   Arts and humanities. A student may earn an arts and humanities endorsement by completing the requirements specified in subsection (e) of this section and:

(A)   five social studies credits by selecting courses from Chapter 113 of this title; or

(B)   four levels of the same language in a language other than English by selecting courses in accordance with Chapter 114 of this title, which may include Advanced Language for Career Applications; or

(C)   two levels of the same language in a language other than English and two levels of a different language in a language other than English by selecting courses in accordance with Chapter 114 of this title; or

(D)   four levels of American sign language by selecting courses in accordance with Chapter 114 of this title; or

(E)   a coherent sequence of four credits by selecting courses from one or two categories or disciplines in fine arts from Chapter 117 of this title or innovative courses approved by the commissioner; or

(F)   four English credits by selecting from the following:

(i)   English IV; or

(ii)   Independent Study in English; or

(iii)   Literary Genres; or

(iv)   Creative Writing; or

(v)   Research and Technical Writing; or

(vi)   Humanities; or

(vii)   Communication Applications; or

(viii)   AP English Literature and Composition; or

(ix)   AP English Language and Composition; or

(x)   IB Language Studies A: Language and Literature Standard Level; or

(xi)   IB Language Studies A: Language and Literature Higher Level; or

(xii)   IB Language Studies A: Literature Standard Level; or

(xiii)   IB Language Studies A: Literature Higher Level; or

(xiv)   IB Literature and Performance Standard Level.

(5)   Multidisciplinary studies. A student may earn a multidisciplinary studies endorsement by completing the requirements specified in subsection (e) of this section and:

(A)   four advanced courses that prepare a student to enter the workforce successfully or postsecondary education without remediation from within one endorsement area or among endorsement areas that are not in a coherent sequence; or

(B)   four credits in each of the four foundation subject areas to include chemistry and/or physics and English IV or a comparable AP or IB English course; or

(C)   four credits in Advanced Placement, International Baccalaureate, or dual credit selected from English, mathematics, science, social studies, economics, languages other than English, or fine arts.

(g)   (No change.)

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ATTACHMENT
Text of Proposed Revisions to 19 TAC

Chapter 130. Texas Essential Knowledge and Skills for Career and Technical Education

Subchapter A. Agriculture, Food, and Natural Resources

[**§130.13. Oil and Gas Production I (One Credit), Adopted 2015.**]

[(a)   General requirements. This course is recommended for students in Grades 9-12. Students shall be awarded one credit for successful completion of this course.

(b)   Introduction.

(1)   Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

(2)   The Agriculture, Food, and Natural Resources Career Cluster focuses on the production, processing, marketing, distribution, financing, and development of agricultural commodities and resources, including food, fiber, wood products, natural resources, horticulture, and other plant and animal products/resources.

(3)   In Oil and Gas Production I, students will identify specific career opportunities and skills, abilities, tools, certification, and safety measures associated with each career. Students will also understand components, systems, equipment, and production and safety regulations associated with oil and gas wells. To prepare for careers in oil and gas production, students must attain academic skills and knowledge, acquire technical knowledge and skills related to oil and gas production and the workplace, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer their knowledge and skills and technologies in a variety of settings.

(4)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

(5)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)   Knowledge and skills.

(1)   The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:

(A)   identify career development, education, and entrepreneurship opportunities in the oil and gas production field;

(B)   apply competencies related to resources, information, interpersonal skills, problem solving, critical thinking, and systems of operation;

(C)   demonstrate knowledge of personal and occupational safety, environmental regulations, and first-aid policy in the workplace;

(D)   analyze employers' expectations such as appropriate work habits, ethical conduct, legal responsibilities, and good citizenship skills; and

(E)   demonstrate leadership skills to accomplish organizational goals and objectives.

(2)   The student develops a supervised agriculture experience program. The student is expected to:

(A)   plan, propose, conduct, document, and evaluate a supervised agriculture experience program as an experiential learning activity;

(B)   apply proper record-keeping skills as they relate to the supervised agriculture experience;

(5)   The student discusses safety issues related to the oil and gas industry. The student is expected to:

        (A)   describe the safety, health, and environmental concerns associated with drilling, production, and maintenance; and

        (B)   research safety standards in the petroleum industry such as the Bureau of Safety and Environmental Enforcement (BSEE), United States Coast Guard (USCG), American Petroleum Institute (API), Department of Transportation (DOT), Occupational Safety and Health Administration (OSHA), Environmental Protection Agency (EPA), American Society for Testing and Materials (ASTM), American National Standards Institute (ANSI), and others.]

[§130.14. Oil and Gas Production II (One Credit), Adopted 2015.]

[(a)   General requirements. This course is recommended for students in Grades 10-12. Prerequisite: Oil and Gas Production I. Students shall be awarded one credit for successful completion of this course.

(b)   Introduction.

      (1)   Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

      (2)   The Agriculture, Food, and Natural Resources Career Cluster focuses on the production, processing, marketing, distribution, financing, and development of agricultural commodities and resources, including food, fiber, wood products, natural resources, horticulture, and other plant and animal products/resources.

      (3)   In Oil and Gas Production II, students will gain knowledge of the specific requirements for entry into post-secondary education and employment in the petroleum industry; research and discuss petroleum economics; research and discuss the modes of transportation in the petroleum industry; research and discuss environmental, health, and safety concerns; research and discuss different energy sources; and prepare for industry certification. To prepare for careers in oil and gas production, students must attain academic skills and knowledge, acquire technical knowledge and skills related to oil and gas production and the workplace, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer their knowledge and skills and technologies in a variety of settings.

      (4)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

      (5)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)   Knowledge and skills.

      (1)   The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:

        (A)   identify career development, education, and entrepreneurship opportunities in the field of agriculture, food, and natural resources;

        (B)   identify careers in agriculture, food, and natural resources with required aptitudes in science, technology, engineering, mathematics, language arts, and/or social studies;

        (C)   apply technology skills to create an electronic portfolio of skills and abilities;

        (D)   apply competencies related to resources, information, interpersonal skills, problem solving, critical thinking, and systems of operation in agriculture, food, and natural resources;

(E)   demonstrate knowledge of personal and occupational safety, health, environmental regulations, and first-aid policy in the workplace; and

(F)   analyze employers' expectations, including appropriate work habits, ethical conduct, legal responsibilities, and good citizenship skills.

(2)   The student develops a supervised agriculture experience program. The student is expected to:

(A)   plan, propose, conduct, document, and evaluate a supervised agriculture experience program as an experiential learning activity;

(B)   apply proper record-keeping skills as they relate to the supervised agriculture experience;

(C)   participate in youth leadership opportunities to create a well-rounded experience program; and

(D)   produce and participate in a local program of activities using a strategic planning process.

(3)   The student researches and discusses the modes of transportation and environmental, health, and safety concerns. The student is expected to:

(A)   describe evolution of transportation in the petroleum industry;

(B)   research and access the various ground methods of transportation;

(C)   survey health and safety policies, procedures, regulations, and practices as they relate to transportation in the petroleum industry;

(D)   research and discuss petroleum economics;

(E)   compare and contrast marketing, sales, and distribution of petroleum products;

(F)   identify supply chain businesses that create new supplies of oil and gas;

(G)   identify supply creation companies and how they operate;

(H)   discuss the factors in investment decision-making; and

(I)   calculate rates of return to evaluate prospects.

(4)   The student researches the different methods of disposing of oil and gas waste and methods of cleanup. The student is expected to:

(A)   discuss the disposal methods of exploration and production wastes;

(B)   identify cleanup methods for blowouts and spills; and

(C)   identify refining processes that minimize environmental impact.

(5)   The student researches and identifies the different energy sources and priorities for the oil and gas industry. The student is expected to:

(A)   research the petroleum industry to identify renewable energy sources;

(B)   present the challenges and priorities of the petroleum industry;

(C)   research the critical technologies needed in the future; and

(D)   research the nontechnical solutions to energy needs.]

Subchapter C. Arts, Audio/Video Technology, and Communications

§130.123. Digital Design and Media Production (One Credit).

(a) General requirements. Students shall be awarded one credit for successful completion of this course. This course is recommended for students in Grades 9-12.

(b) Introduction.

  (1) Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

  (2) The Arts, Audio/Video Technology, and Communications Career Cluster focuses on careers in designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services.

  (3) Digital Design and Media Production will allow students to demonstrate creative thinking, develop innovative strategies, and use communication tools in order to work effectively with others as well as independently. Students will gather information electronically, which will allow for problem solving and making informed decisions regarding media projects. Students will learn digital citizenship by researching current laws and regulations and by practicing integrity and respect. Students will demonstrate a thorough understanding of digital design principles that is transferable to other disciplines. The six strands include creativity and innovation; communication and collaboration; research and information fluency; critical thinking; problem solving, and decision making; digital citizenship; and technology operations and concepts.

  (4) Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

  (5) Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c) Knowledge and skills.

  (1) Creativity and innovation. The student employs a creative design process to create original projects as they relate to purposes and audiences. The student is expected to:

    (A) create designs for defined projects such as graphics, logos, and page layouts;

    (B) apply design elements and typography standards; and

    (C) use visual composition principles.

  (2) Communication and collaboration. The student understands professional digital media communications strategies. The student is expected to:

    (A) adapt the language and design of a project for audience, purpose, situation, and intent;

    (B) organize oral, written, and graphic information into formal and informal publications;

    (C) interpret and communicate information to multiple audiences; and

    (D) collaborate to create original projects, including seeking and responding to advice from others such as peers or experts in the creation and evaluation process.

  (3) Research and information fluency. The student uses a variety of strategies to plan, obtain, evaluate, and use valid information. The student is expected to:

    (A) obtain print and digital information such as graphics, audio, and video from a variety of resources while citing the sources;

    (B) evaluate information for accuracy and validity; and

    (C) present accurate information using techniques appropriate for the intended audience.

(4) Critical thinking, problem solving, and decision making. The student implements problem-solving methods using critical-thinking skills to plan, implement, manage, and evaluate projects; solve problems; and make informed decisions using appropriate digital tools and resources. The student is expected to:

(A) employ critical-thinking and interpersonal skills to solve problems and make decisions through planning and gathering, interpreting, and evaluating data;

(B) identify and organize the tasks for completion of a project using the most appropriate digital tools;

(C) distinguish design requirements as they relate to the purposes and audiences of a project and apply appropriate design elements;

(D) seek and respond to input from others, including peers, teachers, and outside collaborators;

(E) evaluate a process and project both independently and collaboratively and make suggested revisions; and

(F) transfer critical-thinking, problem-solving, and decision-making processes when using new technologies.

(5) Digital citizenship. The student complies with standard practices and behaviors and upholds legal and ethical responsibilities. The student is expected to:

(A) examine copyright and fair use guidelines with regard to print and digital media;

(B) model ethical and legal acquisition and use of digital resources such as licensing and established methods of citing sources;

(C) demonstrate proper digital etiquette, personal security guidelines, use of network resources, and application of the district's acceptable use policy for technology; and

(D) identify and demonstrate positive personal qualities such as flexibility, open-mindedness, initiative, listening attentively to speakers, willingness to learn new knowledge and skills, and pride in quality work.

(6) Technology operations and concepts. The student uses technology concepts, systems, and operations as appropriate for a project. The student is expected to:

(A) define the purpose of a product and identify the specified audience;

(B) demonstrate appropriate project management to:

(i) create a plan for a media project such as a storyboard, stage development, and identification of equipment and resources; and

(ii) evaluate design, content delivery, purpose, and audience throughout a project's timeline and make suggested revisions until completion of the project;

(C) use hardware, software, and information appropriate to a project and its audience to:

(i) acquire readily available digital information, including text, audio, video, and graphics, citing the sources;

(ii) create digital content through the use of various devices such as video camera, digital camera, scanner, microphone, interactive whiteboard, video capture, and musical instrument;

(iii) collaborate via online tools such as blogs, discussion boards, email, and online learning communities;

(iv) make decisions regarding the selection and use of software, taking into consideration operating system platform, quality, appropriateness, effectiveness, and efficiency;

       (v)   delineate and make necessary adjustments regarding compatibility issues, including digital file formats and cross-platform connectivity; and

       (vi)   demonstrate the ability to import and export elements from one program to another;

(D)   use digital typography standards such as:

       (i)   one space after punctuation, the use of em- and en-dashes, and smart quotation marks;

       (ii)   categories of type, font, size, style, and alignment appropriate for the task;

       (iii)   type techniques such as drop cap, decorative letters, or embedded text frames as graphic elements;

       (iv)   leading and kerning, automatic text flow into linked columns, widows and orphans, and text wrap; and

       (v)   type measurement for inches and picas;

(E)   apply design and layout principles and techniques to:

       (i)   incorporate the principles of design, including balance, contrast, dominant element, white space, consistency, repetition, alignment, and proximity;

       (ii)   apply the elements of design, including text, graphics, and white space;

       (iii)   apply color principles appropriate to the product in order to communicate the mood for the specific audience;

       (iv)   identify the parts of pages, including inside margin, outside margin, and gutter;

       (v)   create a master template, including page specifications and other repetitive elements; and

       (vi)   use style sheets, including a variety of type specifications such as typeface, style, size, alignment, indents, and tabs;

(F)   demonstrate appropriate use of digital photography and editing to:

       (i)   use digital photography equipment to capture still-shot images that incorporate various photo composition techniques, including lighting, perspective, candid versus posed, rule of thirds, and filling the frame;

       (ii)   transfer digital images from equipment to the computer; and

       (iii)   demonstrate image enhancement techniques such as feathering, layering, color enhancement, and image selection using appropriate digital manipulation software;

(G)   demonstrate appropriate use of videography equipment and techniques to:

       (i)   use digital photography equipment to capture video that incorporates video principles such as lighting, zooming, panning, and stabilization;

       (ii)   transfer video from equipment to the computer;

       (iii)   demonstrate videographic enhancement and editing techniques such as transitions, zooming, content editing, and synchronizing audio and video using appropriate digital manipulation software; and

       (iv)   export video in digital formats to be used in various delivery systems such as podcasting, downloadable media, embedding, and streaming; and

(H)   deploy digital media into print, web, and video products to:

<table>
<tr><td>(i)</td><td>produce digital files in various formats such as portable document format (PDF), portable network graphics (PNG), and HyperText Markup Language (HTML);</td></tr>
<tr><td>(ii)</td><td>publish integrated digital content such as video, audio, text, graphics, and motion graphics following appropriate digital etiquette standards;</td></tr>
<tr><td>(iii)</td><td>publish and share projects using online methods such as social media and collaborative sites;</td></tr>
<tr><td>(iv)</td><td>incorporate various digital media into a printed document such as a newsletter, poster, or report;</td></tr>
<tr><td>(v)</td><td>use printing options such as tiling, color separations, and collation; and</td></tr>
<tr><td>(vi)</td><td>collect and organize student-created products to build an individual portfolio.</td></tr>
</table>

§130.124. Digital Art and Animation (One Credit).

(a)   General requirements. Students shall be awarded one credit for successful completion of this course. Recommended prerequisite: Art, Level I. This course is recommended for students in Grades 9-12. This course satisfies the high school fine arts graduation requirement.

(b)   Introduction.

(1)   Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

(2)   The Arts, Audio/Video Technology, and Communications Career Cluster focuses on careers in designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services.

(3)   Digital Art and Animation consists of computer images and animations created with digital imaging software. Digital Art and Animation has applications in many careers, including graphic design, advertising, web design, animation, corporate communications, illustration, character development, script writing, storyboarding, directing, producing, inking, project management, editing, and the magazine, television, film, and game industries. Students in this course will produce various real-world projects and animations. The six strands include creativity and innovation; communication and collaboration; research and information fluency; critical thinking; problem solving, and decision making; digital citizenship; and technology operations and concepts.

(4)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

(5)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)   Knowledge and skills.

(1)   Creativity and innovation. The student demonstrates creative thinking, constructs knowledge, and develops innovative products and processes using technology. The student is expected to:

(A)   evaluate, edit, and create scripts for animations;

(B)   identify and apply color theories, including harmony rules, tints, shades, gradients, color mixing, new color creation, and the visual impacts of specific color combinations using a digital format;

(C)   compare, contrast, and integrate the basic sound editing principles, including mixing and manipulating wave forms, audio tracks, and effects;

(D)   compare and contrast the rules of composition such as the rule of thirds or the golden section/rectangle with respect to harmony and balance;

(E)   evaluate the fundamental concepts of a digital art and design such as composition, perspective, angles, lighting, repetition, proximity, white space, balance, and contrast;

(F)   analyze digital art designs to interpret the point of interest, the prominence of the subject, and visual parallels between the structures of natural and human-made environments;

(G)   distinguish among typefaces while recognizing and resolving conflicts that occur through the use of typography as a design element;

(H)   use perspective, including backgrounds, light, shades and shadows, hue and saturation, and scale, to capture a focal point and create depth;

(I)   use the basic principles of design such as proportion, balance, variety, emphasis, harmony, symmetry, and unity in type, color, size, line thickness, shape, and space;

(J)   edit files using appropriate digital editing tools and established design principles such as consistency, repetition, alignment, proximity, white space, image file size, color use, and font size, type, and style; and

(K)   identify pictorial qualities in a design such as shape and form, space and depth, or pattern and texture to create visual unity and desired effects in designs.

(2)   Communication and collaboration. The student uses digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning experience of others. The student is expected to:

(A)   use vocabulary as it relates to digital art, audio, and animation;

(B)   demonstrate the use of technology to participate in self-directed and collaborative activities within the global community;

(C)   participate in electronic communities;

(D)   create technology specifications for tasks and rubrics for the evaluation of products;

(E)   design and implement procedures to track trends, set timelines, and evaluate products;

(F)   collaborate with peers in delineating technological tasks;

(G)   publish and save information in a variety of ways, including print or digital formats;

(H)   analyze and evaluate projects for design, content delivery, purpose, and audience; and

(I)   critique original digital artwork, portfolios, and products with peers.

(3)   Research and information fluency. The student applies digital tools to gather, evaluate, and use information. The student is expected to:

(A)   distinguish between and correctly apply process color (RGB and CYMK), spot color, and black or white;

(B)   research the history of digital art and animation;

(C)   research career choices in digital art and animation;

(D)   use the Internet to retrieve information in an electronic format;

(E)   demonstrate the appropriate use of digital imaging, video integration, and sound retrieved from an electronic format;

(F)   import sounds from a variety of sources; and

(G)   create planning designs such as rough sketches, storyboards, and brainstorming materials.

(4)   Critical thinking, problem solving, and decision making. The student uses critical-thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources. The student is expected to:

(A) distinguish between and use the components of animation software programs such as cast, score, stage, and the animation manipulation interface;

(B) distinguish between and use different animation techniques such as path and cell animation, onion skinning, and tweening;

(C) create three-dimensional effects by layering images such as foreground, middle distance, and background images;

(D) apply a variety of color schemes such as monochromatic, analogous, complementary, primary/secondary triads, cool/warm colors, and split complements to digital designs;

(E) use the basic concepts of color and design theory such as working in a bitmapped and vector mode to create backgrounds, characters, and other cast members as needed for the animation;

(F) use the appropriate scripting language or program code to create an animation;

(G) use a variety of lighting techniques such as shadows and shading to create effects; and

(H) define the design attributes and requirements of products created for a variety of purposes such as posters, billboards, logos, corporate identity, advertisements, book jackets, brochures, and magazines.

(5) Digital citizenship. The student understands human, cultural, and societal issues related to technology and practices legal and ethical behavior. The student is expected to:

(A) discuss copyright laws/issues and use of digital information such as attributing ideas and citing sources using established methods;

(B) define plagiarism and model respect of intellectual property;

(C) demonstrate proper digital etiquette and knowledge of acceptable use policies when using technology; and

(D) evaluate the validity and reliability of sources.

(6) Technology operations and concepts. The student demonstrates a sound understanding of technology concepts, systems, and operations. The student is expected to:

(A) demonstrate knowledge and appropriate use of operating systems, software applications, and communication and networking components;

(B) make decisions regarding the selection and use of software and Internet resources;

(C) make necessary adjustments regarding compatibility issues with digital file formats, importing and exporting data, and cross-platform compatibility; and

(D) read, use, and develop technical documentation.

§130.125. 3-D Modeling and Animation (One Credit)

(a) General requirements. Students shall be awarded one credit for successful completion of this course. Recommended prerequisite: Art, Level I. This course is recommended for students in Grades 9-12. This course satisfies the high school fine arts graduation requirement.

(b) Introduction.

(1) Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

(2) The Arts, Audio/Video Technology, and Communications Career Cluster focuses on careers in designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services.

(3)　　3-D Modeling and Animation consists of computer images created in a virtual three-dimensional (3-D) environment. 3-D Modeling and Animation has applications in many careers, including criminal justice, crime scene, and legal applications; construction and architecture; engineering and design; and the movie and game industries. Students in this course will produce various 3-D models of real-world objects. The six strands include creativity and innovation; communication and collaboration; research and information fluency; critical thinking; problem solving, and decision making; digital citizenship; and technology operations and concepts.

(4)　　Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

(5)　　Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)　　Knowledge and skills.

(1)　　Creativity and innovation. The student demonstrates creative thinking, constructs knowledge, and develops innovative products and processes using technology. The student is expected to:

(A)　　evaluate, edit, and create scripts for animations;

(B)　　identify and apply color theories, including harmony rules, tints, shades, gradients, color mixing, new color creation, and the visual impacts of specific color combinations using a digital format;

(C)　　apply texture, transparency, skinning, and contour along a 3-D object surface;

(D)　　compare, contrast, and integrate the basic sound editing principles, including mixing and manipulating wave forms, audio tracks, and effects;

(E)　　compare and contrast the rules of composition such as the rule of thirds or the golden section/rectangle with respect to harmony and balance;

(F)　　evaluate the fundamental concepts of 3-D modeling and design such as composition, perspective, angles, lighting, repetition, proximity, white space, balance, and contrast;

(G)　　analyze 3-D model objects to interpret the point of interest, the prominence of the subject, and visual parallels between the structures of natural and human-made environments;

(H)　　distinguish among typefaces while recognizing and resolving conflicts that occur through the use of typography as a design element;

(I)　　use perspective, including spot and directional light, backgrounds, ambience, shades and shadows, and hue and saturation;

(J)　　use the basic principles of design such as proportion, balance, variety, emphasis, harmony, symmetry, and unity in type, color, size, line thickness, shape, and space;

(K)　　edit files using appropriate digital editing tools and established design principles such as consistency, repetition, alignment, proximity, white space, image file size, color use, font size, type, and style; and

(L)　　identify pictorial qualities in a design such as shape and form, space and depth, or pattern and texture to create visual unity and desired effects in designs.

(2)　　Communication and collaboration. The student uses digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning experience of others. The student is expected to:

(A)　　use vocabulary as it relates to digital art, audio, and animation;

(B)　　demonstrate the use of technology to participate in self-directed and collaborative activities within the global community;

(C)　　participate in electronic communities;

(D)　　create technology specifications for tasks and rubrics for the evaluation of products;

(E)　　design and implement procedures to track trends, set timelines, and evaluate products;

(F)　　collaborate with peers in delineating technological tasks;

(G)　　publish and save information in a variety of ways, including print or digital formats;

(H)　　analyze and evaluate projects for design, content delivery, purpose, and audience; and

(I)　　critique original 3-D digital artwork, portfolios, and products with peers.

(3)　　Research and information fluency. The student applies digital tools to gather, evaluate, and use information. The student is expected to:

(A)　　distinguish among and correctly apply process color (RGB and CYMK), spot color, and black or white;

(B)　　research the history of 3-D modeling and 3-D animation;

(C)　　research career choices in 3-D modeling and 3-D animation;

(D)　　use the Internet to retrieve information in an electronic format;

(E)　　demonstrate the appropriate use of 3-D objects, digital imaging, video integration, and sound retrieved from an electronic format;

(F)　　import sounds from a variety of sources; and

(G)　　create planning designs such as rough sketches, storyboards, and brainstorming materials.

(4)　　Critical thinking, problem solving, and decision making. The student uses critical-thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources. The student is expected to:

(A)　　distinguish between and use the components of 3-D animation software programs such as cast, score, environment, the X-Y-Z coordinate system, and the animation manipulation interface;

(B)　　distinguish between and use the different 3-D modeling techniques such as box modeling, transformation, and polygon primitives using extrusion and rotation;

(C)　　distinguish between and use the different 3-D animation techniques such as path and rendering using dynamics and physics;

(D)　　apply a variety of color schemes such as monochromatic, analogous, complementary, primary/secondary triads, cool/warm colors, and split complements to digital designs;

(E)　　use the basic concepts of color and design theory such as working with 3-D models and environments, characters, objects, and other cast members as needed for the animation;

(F)　　use the appropriate rendering techniques to create an animation;

(G)　　use a variety of lighting techniques such as shadow, shading, point, spot, directional, and ambient to create effects; and

(H)　　define the design attributes and requirements of a 3-D animation project.

(5)　　Digital citizenship. The student understands human, cultural, and societal issues related to technology and practices legal and ethical behavior. The student is expected to:

(A)　　discuss copyright laws/issues and use of digital information such as attributing ideas and citing sources using established methods;

(B)　　define plagiarism and model respect of intellectual property;

(C)　　demonstrate proper digital etiquette and knowledge of acceptable use policies when using technology; and

(D)   evaluate the validity and reliability of sources.

(6)   Technology operations and concepts. The student demonstrates a sound understanding of technology concepts, systems, and operations. The student is expected to:

(A)   demonstrate knowledge and appropriate use of operating systems, software applications, and communication and networking components;

(B)   make decisions regarding the selection and use of software and Internet resources;

(C)   make necessary adjustments regarding compatibility issues with digital file formats, importing and exporting data, and cross-platform compatibility; and

(D)   read, use, and develop technical documentation.

§130.126. Digital Communications in the 21st Century (One Credit).

(a)   General requirements. Students shall be awarded one credit for successful completion of this course. This course is recommended for students in Grades 9-12.

(b)   Introduction.

(1)   Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

(2)   The Arts, Audio/Video Technology, and Communications Career Cluster focuses on careers in designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services.

(3)   Digital Communications in the 21st Century will prepare students for the societal demands of increased civic literacy, independent working environments, global awareness, and the mastery of a base set of analysis and communication skills. Students will be expected to design and present an effective product based on well-researched issues in order to thoughtfully propose suggested solutions to authoritative stakeholders. The outcome of the process and product approach is to provide students an authentic platform to demonstrate effective application of multimedia tools within the contexts of global communication and collaborative communities and appropriately share their voices to affect change that concerns their future. The six strands include creativity and innovation; communication and collaboration; research and information fluency; critical thinking; problem solving, and decision making; digital citizenship; and technology operations and concepts.

(4)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

(5)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)   Knowledge and skills.

(1)   Creativity and innovation. The student demonstrates the ability to analyze, evaluate, and adapt during the creative problem-solving process and demonstrates creative thinking in developing solutions to real-world issues using digital tools. The student is expected to:

(A)   generate innovative, sustainable solutions for real-world issues such as global warming, immigration, or the global economy using emerging digital tools;

(B)   gather and evaluate accurate information for feasibility and practicality as a basis for making communication decisions; and

(C)   analyze the ethical and social responsibilities as a project team when communicating with peers, stakeholders, and experts.

(2)	Creativity and innovation. The student uses innovative thinking to develop new ideas and processes for solving real-world issues and conveying those ideas to a global audience through a persuasive digital product. The student is expected to:

(A)	examine real-world issues relating to current topics such as health care, government, business, or aerospace;

(B)	develop innovative solutions to address issues;

(C)	create unique methods and products conveying solutions to audiences beyond the classroom such as school officials, non-profit organizations, higher education officials, government, or other stakeholders;

(D)	demonstrate the effective use and importance of verbal and nonverbal communication skills when presenting ideas and solutions to diverse audiences; and

(E)	use appropriate techniques to manage communication apprehension, build self-confidence, and gain command of information.

(3)	Communication and collaboration. The student develops a process to effectively communicate with peers, experts, and other audiences about current issues and solutions to global problems. The student is expected to:

(A)	demonstrate innovative uses of a wide range of emerging technologies, including online learning, mobile devices, digital content, and Web 2. 0 tools such as podcasting, wikis, and blogs;

(B)	participate within appropriate electronic communities as a learner, initiator, and contributor;

(C)	extend the learning environment beyond the school walls using appropriate digital tools;

(D)	collaborate with a variety of field experts;

(E)	prepare for, organize, and participate in an informative or persuasive group discussion with an audience; and

(F)	participate appropriately in conversations by making clear requests, giving accurate directions, and asking purposeful questions.

(4)	Communication and collaboration. The student uses digital tools to facilitate collaboration and communication in the design, development, and evaluation of products offering solutions to real-world issues. The student is expected to:

(A)	design and organize resources to create an effective collaborative working environment that enables a group to investigate a local, state, national, or global issue;

(B)	analyze and evaluate effective communication;

(C)	demonstrate leadership by managing project activities such as timelines, research, product development, marketing material, and effective communication skills;

(D)	demonstrate effective management of diverse peer-group dynamics such as solving problems, managing conflicts, and building consensus; and

(E)	evaluate original products for accuracy, validity, and compliance with copyright laws.

(5)	Research and information fluency. The student uses a variety of strategies to acquire and evaluate information relating to real-world issues. The student is expected to:

(A)	locate authoritative information from primary and secondary sources such as field experts, online full-text databases, or current news databases;

(B)	make decisions regarding the selection, acquisition, and use of information gathered, taking into consideration its quality, appropriateness, effectiveness, and level of interest to society; and

    (C)   demonstrate fluency in the use of a variety of electronic sources such as cloud computing, emerging collaboration technologies, data mining strategies, and mobile or other technologies.

(6)   Research and information fluency. The student uses a variety of digital tools to synthesize information related to real-world issues in student-created materials. The student is expected to:

    (A)   construct real-world informational materials that inform, persuade, or recommend reform of selected issues;

    (B)   identify and employ a method to evaluate the design, functionality, and accuracy of the student-created materials; and

    (C)   use effective strategies to organize and outline presentations to support and clarify points.

(7)   Critical thinking, problem solving, and decision making. The student uses critical-thinking skills to conduct research, manage products, solve problems, and make informed decisions for real-world local, state, national, and global issues. The student is expected to:

    (A)   identify and define authentic problems and significant questions for investigation;

    (B)   design and implement procedures to track trends, set timelines, and review and evaluate progress for project completion;

    (C)   read and use technical documentation, including appropriate help options, to complete tasks; and

    (D)   analyze the audience, occasion, and purpose when designing presentations.

(8)   Critical thinking, problem solving, and decision making. The student creates a product presenting solutions for real-world local, state, national, and global issues. The student is expected to:

    (A)   create technology specifications for tasks and rubrics to evaluate products and product quality against established criteria;

    (B)   resolve information conflicts and validate information by comparing data;

    (C)   represent diverse perspectives in problem solutions; and

    (D)   prepare and use visual or auditory aids such as scripts, notes, or digital applications to enhance presentations.

(9)   Digital citizenship. The student examines ethical and legal behavior to demonstrate leadership as a digital citizen. The student is expected to:

    (A)   model safe and ethical use of digital information;

    (B)   model respect of intellectual property when manipulating, morphing, or editing graphics, video, text, and sound;

    (C)   use technology applications in a positive manner that supports productivity, collaboration, and continuing education; and

    (D)   use professional etiquette and protocol in situations such as making introductions, offering and receiving criticism, and communicating with digital tools.

(10)   Digital citizenship. The student demonstrates ethical and legal behavior in the creation of student products. The student is expected to:

    (A)   use collaborative tools and strategies; and

    (B)   use digital tools to correctly document sources such as in bibliographies or works cited.

(11)   Technology operations and concepts. The student makes decisions regarding the selection, acquisition, and use of digital tools in a multimedia classroom/lab, taking into consideration the quality, appropriateness, effectiveness, and efficiency of the tools. The student is expected to:

        (A)   determine the most appropriate file type based on universally recognized file formats such as portable document format (PDF), text format (TXT), rich text format (RTF), and Joint Photographic Experts Group format (JPEG);

        (B)   use compression schemes for photo, animation, video, and graphics; and

        (C)   distinguish among appropriate color, sound, and design principles such as consistency, repetition, alignment, proximity, and ratio of text to white space.

    (12)   Technology operations and concepts. The student demonstrates knowledge through various cloud and network technologies such as web-based interactive presentations, document sharing, and online scholarly databases. The student is expected to:

        (A)   use necessary vocabulary related to digital tools;

        (B)   retrieve and discriminate between authoritative and non-authoritative data sources; and

        (C)   adopt, adapt, and transfer prior knowledge to multiple situations when retrieving, manipulating, and creating original digital projects.

§130.127. Web Game Development (One Credit).

(a)   General requirements. Students shall be awarded one credit for successful completion of this course. Recommended prerequisite: Web Design. This course is recommended for students in Grades 11 and 12.

(b)   Introduction.

    (1)   Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

    (2)   The Arts, Audio/Video Technology, and Communications Career Cluster focuses on careers in designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services.

    (3)   Web Game Development will allow students to demonstrate creative thinking, develop innovative strategies, and use digital and communication tools necessary to develop fully functional online games. Web Game Development has career applications for many aspects of the game industry, including programming, art principles, graphics, web design, storyboarding and scripting, and business and marketing. The six strands include creativity and innovation; communication and collaboration; research and information fluency; critical thinking; problem solving, and decision making; digital citizenship; and technology operations and concepts.

    (4)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

    (5)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)   Knowledge and skills.

    (1)   Creativity and innovation. The student demonstrates creative thinking, constructs knowledge, and develops innovative products and processes using technology. The student is expected to:

        (A)   research, evaluate, and demonstrate appropriate design of a web-based gaming site;

        (B)   illustrate ideas for web artwork from direct observations, experiences, and imagination;

        (C)   create original designs for web applications; and

        (D)   demonstrate the effective use of art media to create original web designs.

    (2)   Communication and collaboration. The student uses digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning experience of others. The student is expected to:

(A)   understand and evaluate the use and appropriateness of webinars;

(B)   examine, discuss, and summarize interactive online learning environments;

(C)   distinguish between distance learning, virtual learning, and online learning;

(D)   define and evaluate Voice over Internet Protocol (VoIP);

(E)   identify and apply end-user, peer, self-, and professional evaluations; and

(F)   work collaboratively to create functioning programs and gaming products.

(3)   Research and information fluency. The student applies digital tools to gather, evaluate, and use information. The student is expected to:

(A)   research, evaluate, and create web forms for database processing;

(B)   identify the various programming languages and differentiate among the available web programming languages;

(C)   research, evaluate, and summarize content management systems (CMS);

(D)   differentiate between Common Gateway Interface (CGI) and computer-generated imagery (CGI);

(E)   discuss, analyze, and summarize streaming media/content and game broadcasting;

(F)   define and evaluate instant messaging (IM) within a game environment;

(G)   analyze and discuss the history of gaming;

(H)   discuss, analyze, compare, and contrast game types such as action, action-adventure, adventure, construction and management simulation, life simulation, massively multiplayer online role-playing (MMORPG), music, party, puzzle, role-playing, sports, strategy, trivia, and vehicle simulation;

(I)   discuss, analyze, compare, and contrast gaming hardware, including console, personal computer, mobile, and web;

(J)   compare and contrast web standards versus browser-specific languages;

(K)   research, evaluate, and summarize e-commerce;

(L)   investigate career opportunities in programming, gaming, art, design, business, and marketing;

(M)   research the characteristics of existing gaming websites to determine local, state, national, and global trends;

(N)   compare and contrast historical and contemporary styles of art as applied to website development;

(O)   compare and contrast the use of the art elements of color, texture, form, line, space, and value and the art principles of emphasis, pattern, rhythm, balance, proportion, and unity in personal web game artwork and the web game artwork of others, using vocabulary accurately;

(P)   describe general characteristics in artwork from a variety of cultures that influence web game design;

(Q)   research and evaluate emerging technologies; and

(R)   research and evaluate augmented reality (the supplementing of reality with computer-generated imagery) such as heads-up display and virtual digital projectors.

(4)   Critical thinking, problem solving, and decision making. The student uses critical-thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources. The student is expected to:

(A)   select an appropriate web programming language based on given criteria;

(B)   develop requirements for a database and determine the appropriate means to insert, delete, and modify records;

(C)   develop Structured Query Language (SQL) statements to retrieve, insert, modify, and delete records in a database;

(D)   design and create a flow diagram to plan a database, program, and game;

(E)   define and identify proper use of gaming graphics, including skins, textures, environment appearance, environment mapping, raster graphics, and vector graphics;

(F)   plan an animation that includes the movement of characters, camera movements, camera angles, user point of view, mechanics of motion, backgrounds, settings, ambient objects, and environments;

(G)   compare and contrast two-dimensional (2-D) and three-dimensional (3-D) animation;

(H)   develop and create a gaming storyboard and script that shows the overall development of a storyline;

(I)   identify and implement graphic and game design elements, including color, environment, time to completion, difficulty, story complexity, character development, device control, backstory, delivery, and online player(s);

(J)   design and create decision trees for a game's artificial intelligence engine;

(K)   compare and contrast available audio formats for optimal delivery;

(L)   identify the similarities and differences among platforms, including the application of coding on a personal computer, mobile device, and gaming console;

(M)   research and identify existing online game development tools;

(N)   evaluate and determine network requirements for the delivery of online games to end users; and

(O)   create visual solutions by elaborating on direct observation, experiences, and imagination as they apply to original web design.

(5)   Digital citizenship. The student understands human, cultural, and societal issues related to technology and practices legal and ethical behavior. The student is expected to:

(A)   explain game ratings and why games fit into certain ratings;

(B)   assess games and game ratings in terms of their impact on societal interactions;

(C)   model the ethical and legal acquisition of digital information following copyright laws, fair-use guidelines, and the student code of conduct;

(D)   define and practice the ethical and legal acquisition, sharing, and use of files taking into consideration their primary ownership and copyright;

(E)   examine original web game artwork to comply with appropriate behavioral, communication, and privacy guidelines, including ethics, online bullying and harassment, personal security, appropriate audience language, ethical use of files/file sharing, technical documentation, and online communities;

(F)   interpret, evaluate, and justify artistic decisions in the creation of original art for web game design; and

(G)   analyze original web game artwork and digital portfolios created by peers and others to form precise conclusions about formal qualities, historical and cultural contexts, intents, and meanings.

(6)   Technology operations and concepts. The student demonstrates a sound understanding of technology concepts, systems, and operations. The student is expected to:

    (A)   create a website that includes:

        (i)   an interactive database with elements such as SQL statements, Extensible Markup Language (XML), and Open Database Connectivity (ODBC);

        (ii)   javascript; and

        (iii)   server-side processing, including Common Gateway Interface (CGI); bitmap and vector graphics; database creation, modification, and deletion; creation and maintenance of user accounts; user authentication; and documentation;

    (B)   create a fully functional online game that includes:

        (i)   multiple game levels with increasing difficulty;

        (ii)   high-score ranking;

        (iii)   physics, including center of mass, collision detection, lighting, shading, perspective, anatomy, motion blur, lens flare, and reflections;

        (iv)   art principles, including color theory, texture, balance, lighting, shading, skinning, and drawing;

        (v)   graphics resolution, including pixel depth and compression;

        (vi)   database creation, modification, and deletion;

        (vii)   creation and maintenance of user accounts;

        (viii)   user authentication;

        (ix)   artificial intelligence;

        (x)   game-level saving;

        (xi)   mathematical functions;

        (xii)   varying camera angles;

        (xiii)   VoIP for online web games; and

        (xiv)   documentation; and

    (C)   create a digital portfolio.

Subchapter K. Information Technology

[**§130.308. Web Technologies (One Credit), Adopted 2015.**]

[(a)   General requirements. This course is recommended for students in Grades 10-12. Recommended prerequisite: Principles of Information Technology. Students shall be awarded one credit for successful completion of this course.

(b)   Introduction.

(1)   Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

(2)   The Information Technology (IT) Career Cluster focuses on building linkages in IT occupations for entry level, technical, and professional careers related to the design, development, support, and management of hardware, software, multimedia, and systems integration services.

(3)   In Web Technologies, students will learn to make informed decisions and apply the decisions to the field of IT. Students will implement personal and interpersonal skills to prepare for a rapidly evolving workplace environment. The knowledge and skills acquired and practiced will enable students to successfully perform and interact in a technology-driven society. Students will enhance reading, writing, computing, communication, and critical thinking and apply them to the IT environment.

(4)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

(5)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)   Knowledge and skills.

(1)   The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:

(A)   identify and demonstrate work behaviors and qualities that enhance employability and job advancement such as regular attendance, attention to proper attire, maintenance of a clean and safe work environment, pride in work, flexibility, and initiative;

(B)   employ effective verbal and nonverbal communication skills;

(C)   examine the role of certifications, resumes, and portfolios in the web technology profession;

(D)   solve problems and think critically;

(E)   demonstrate leadership skills and function effectively as a team member; and

(F)   demonstrate planning and time-management skills such as storyboarding and project management, including initiating, planning, executing, monitoring and controlling, and closing a project.

(2)   The student identifies employment opportunities in the IT field with a focus in the area of interactive media. The student is expected to:

(A)   identify job opportunities and accompanying job duties and tasks;

(B)   research careers of personal interest along with the education, job skills, and experience required to achieve personal career goals;

(C)   demonstrate an understanding of the functions of resumes and portfolios; and

(D)   create a portfolio.

(3)   The student demonstrates knowledge and appropriate use of hardware, software, and connectivity technologies. The student is expected to:

    (A)   identify networking components and define the impact of networking components on web development;

    (B)   evaluate the various input, processing, output, and storage devices and storage services;

    (C)   identify current and future Internet protocols such as hypertext transfer protocol, file transfer protocol, telnet, and email; and

    (D)   describe new trends in web technology and evaluate their impact on web development.

(4)   The student complies with practices and behaviors that meet legal and ethical responsibilities. The student is expected to:

    (A)   explain and demonstrate ethical use of technology and online resources;

    (B)   differentiate between copyright and trademarks;

    (C)   explain the concept of intellectual property laws, including copyright, trademarks, and patents and consequences of violating each type of law;

    (D)   examine the consequences of plagiarism;

    (E)   adhere to copyright and trademark intellectual property laws and regulations, including demonstrating correct acquisition and citation of sources;

    (F)   discuss the process of acquiring rights to use copyrighted and trademarked content in a website;

    (G)   demonstrate appropriate behavior and adherence to acceptable use policies when accessing and using online resources;

    (H)   explain the importance of information privacy such as securing credit card information, passwords, and personal information;

    (I)   describe the function of a non-disclosure agreement; and

    (J)   discuss website accessibility concerns.

(5)   The student evaluates electronic information. The student is expected to:

    (A)   identify appropriate methods to analyze the design and functionality of web pages;

    (B)   demonstrate skill in testing the accuracy and validity of information acquired; and

    (C)   synthesize information from data acquired from online resources.

(6)   The student creates and modifies web and digital media designs. The student is expected to:

    (A)   implement functional design elements such as proximity, repetition, contrast, alignment, color theory, consistency, image file size, and typography;

    (B)   identify, create, modify, and use common file formats such as text, image, video analog and digital, and audio files;

    (C)   select, create, modify, and integrate effective digital content such as vector-based and raster graphics, motion graphics, video, and audio;

    (D)   create web pages using current web standards and web development skills such as version control, documentation, web application security, validation, accessibility, and compatibility across multiple browsers and devices;

    (E)   demonstrate proper use of folder structure hierarchy; and

    (F)   use web coding standards to evaluate the design and functionality of web pages such as the World Wide Web Consortium (W3C) guidelines.

(7) The student demonstrates and employs knowledge of Internet programming strategies to develop and maintain web applications. The student is expected to:

   (A) explain the importance of Internet programming standards;

   (B) differentiate among various web coding standards such as HyperText Markup Language, and cascading style sheets;

   (C) use standard applications to develop web applications such as text-based editing programs, word processors, and web authoring software;

   (D) compare and contrast the impact of different browsers on web development;

   (E) explain client-server applications and describe the process of a client-server transaction;

   (F) identify the advantages and disadvantages of client-side processing;

   (G) identify security issues related to client-side processing;

   (H) use standard scripting languages to produce interactive web applications;

   (I) identify characteristics of various scripting languages; and

   (J) explain the process to construct secure transaction interfaces from the web server to the customer.

(8) The student employs knowledge of web administration to develop and maintain web applications. The student is expected to:

   (A) compare the advantages and disadvantages of running a personal server versus using a server provider;

   (B) explain the Transmission Control Protocol/Internet Protocol;

   (C) identify hardware and software requirements for web servers;

   (D) evaluate server providers;

   (E) describe the process of establishing a domain name;

   (F) simulate the administration of web servers, including uploading and managing files;

   (G) collect and analyze usage statistics;

   (H) maintain documentation of the server environment such as specifications, passwords, and software versions;

   (I) summarize the process of server backup and restoration of software features;

   (J) propose security measures to protect web servers from electronic threats such as unauthorized access and negative intentions; and

   (K) evaluate security measures such as using a firewall, Secure Socket Layer (SSL) connections, and Hypertext Transfer Protocol Secure (HTTPS) transactions.

(9) The student evaluates a problem and creates a project management plan for meeting client requirements. The student is expected to:

   (A) communicate with clients to analyze requirements to meet the needs of the client and target audience;

   (B) document design properties, necessary tools, and resources and identify and address risks;

   (C) develop and use a timeline task list such as critical milestones, potential challenges, and interdependencies; and

   (D) use various methods to evaluate the progress of the plan and modify as necessary.

(10)   The student creates and implements a web product using a project management plan. The student is expected to:

    (A)   create and simulate the publication of a multipage web product using client required content and web design concepts;

    (B)   develop a test plan for a multipage web product for testing usability, effectiveness, reliability, and customer acceptance;

    (C)   explain the quality assurance process; and

    (D)   develop and implement a quality assurance plan.]

[§130.309. Computer Programming I (One Credit), Adopted 2015.]

[(a)   General requirements. This course is recommended for students in Grades 10-12. Recommended prerequisites: Principles of Information Technology and Algebra I. Students shall be awarded one credit for successful completion of this course.

(b)   Introduction.

(1)   Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

(2)   The Information Technology (IT) Career Cluster focuses on building linkages in IT occupations for entry level, technical, and professional careers related to the design, development, support, and management of hardware, software, multimedia, and systems integration services.

(3)   In Computer Programming I, students will acquire knowledge of structured programming techniques and concepts appropriate to developing executable programs and creating appropriate documentation. Students will analyze the social responsibility of business and industry regarding the significant issues relating to the environment, ethics, health, safety, and diversity in society and in the workplace as related to computer programming. Students will apply technical skills to address business applications of emerging technologies.

(4)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

(5)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)   Knowledge and skills.

(1)   The student demonstrates the necessary skills for career development, maintenance of employability, and successful completion of course outcomes. The student is expected:

    (A)   employ effective reading and writing skills;

    (B)   employ effective verbal and nonverbal communication skills;

    (C)   solve problems and think critically;

    (D)   demonstrate leadership skills and function effectively as a team member;

    (E)   demonstrate an understanding of legal and ethical responsibilities in relation to the field of IT;

    (F)   demonstrate planning and time-management skills such as project management, including initiating, planning, executing, monitoring and controlling, and closing a project; and

    (G)   identify job opportunities and accompanying job duties and tasks.

(2)   The student differentiates the concepts of integrity and confidentiality as related to technology in the business environment. The student is expected to:

   (A) ~~define business ethics;~~

   (B) ~~distinguish between honest and dishonest business practices;~~

   (C) ~~examine copyright and licensing issues in the software industry; and~~

   (D) ~~analyze the effects of unethical practices on a business.~~

(3) ~~The student identifies and analyzes the client project software needs and requirements. The student is expected to:~~

   (A) ~~gather data to identify client and project requirements;~~

   (B) ~~identify input and output requirements;~~

   (C) ~~identify system processing requirements; and~~

   (D) ~~develop program requirements and specifications.~~

(4) ~~The student develops an IT-based project plan to solve a specific problem. The student is expected to:~~

   (A) ~~define scope of work to meet client-based project needs;~~

   (B) ~~identify software development processes and issues; and~~

   (C) ~~explain the software system life cycle approach.~~

(5) ~~The student designs a software application plan. The student is expected to:~~

   (A) ~~articulate the principles of system design such as procedural, object-oriented, and event-driven processes;~~

   (B) ~~perform a logical design using appropriate software tools;~~

   (C) ~~apply algorithmic and data structure concepts;~~

   (D) ~~identify constraints;~~

   (E) ~~identify modular design concepts; and~~

   (F) ~~document the design specification using a defined procedure.~~

(6) ~~The student solves problems using different types and levels of programming languages and quality assurances. The student is expected to:~~

   (A) ~~differentiate among the concepts of data such as procedural, object-oriented, and event-driven representation;~~

   (B) ~~identify current programming languages and the environment in which each is used;~~

   (C) ~~produce procedural and object-oriented programs using structured coding with appropriate style and clarity of expression;~~

   (D) ~~demonstrate skill in program testing;~~

   (E) ~~compare computed results with anticipated results to determine the reasonableness of the solutions;~~

   (F) ~~troubleshoot technological problems;~~

   (G) ~~explain the software quality assurance process; and~~

   (H) ~~follow established quality assurance procedures for testing, identifying problems, and tracking resolutions.~~

(7) ~~The student recognizes issues and complies with procedures for maintaining the security of computerized information. The student is expected to:~~

[§130.310. Computer Programming II (One Credit), Adopted 2015.]

[(a)   General requirements. This course is recommended for students in Grades 11 and 12. Recommended prerequisites: Principles of Information Technology and Computer Programming I. Students shall be awarded one credit for successful completion of this course.

(b)   Introduction.

(1)   Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

(2)   The Information Technology (IT) Career Cluster focuses on building linkages in IT occupations for entry level, technical, and professional careers related to the design, development, support, and management of hardware, software, multimedia, and systems integration services.

(3)   In Computer Programming II, students will expand their knowledge and skills in structured programming techniques and concepts by addressing more complex problems and developing comprehensive programming solutions. Students will analyze the social responsibility of business and industry regarding the significant issues relating to environment, ethics, health, safety, and diversity in society and in the workplace as related to computer programming. Students will apply technical skills to address business applications of emerging technologies.

(4)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

(5)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)   Knowledge and skills.

(1)   The student demonstrates professional standards/employability skills as required by business and industry. The student is expected:

(A)   employ effective reading and writing skills;

(B)   employ effective verbal and nonverbal communication skills;

(C)   illustrate interview skills for successful job placement;

(D)   solve problems and think critically;

(E)   demonstrate leadership skills and function effectively as a team member;

(F)   identify and implement proper safety procedures;

(G)   demonstrate an understanding of legal and ethical responsibilities in relation to the field of IT; and

(H)   demonstrate planning and time-management skills such as project management, including initiating, planning, executing, monitoring and controlling, and closing a project.

(2)   The student identifies various employment opportunities in the IT field. The student is expected to:

(A) create a personal career plan along with education, job skills, and experience necessary to achieve career goals; and

(B) develop a resume that includes letters of recommendation appropriate to a chosen career plan.

(3) The student identifies project software needs and requirements. The student is expected to:

(A) identify input and output requirements;

(B) identify system processing requirements;

(C) identify hardware, networking, and software system functional requirements;

(D) conduct a project needs analysis;

(E) define a problem to be solved by a created application;

(F) analyze requirement specifications using current approaches;

(G) identify project constraints; and

(H) use advanced modeling and analysis of functional requirements.

(4) The student produces an IT-based strategy and project plan to solve a provided class problem. The student is expected to:

(A) identify key functions and subsystem capabilities of modern software products;

(B) identify software resources and individual product risks; and

(C) identify software development methodologies.

(5) The student demonstrates knowledge of the software development environment. The student is expected to:

(A) apply prototyping techniques;

(B) use appropriate configuration management tools;

(C) apply language-specific programming techniques;

(D) develop programs using appropriate language;

(E) apply the appropriate development environment for each selected language such as the compiler, debugger, test generator, and analyzer;

(F) use appropriate modeling and analysis tools; and

(G) use appropriate requirement tracking tools.

(6) The student demonstrates knowledge of the software development process. The student is expected to:

(A) articulate the information system life cycle;

(B) identify system analysis issues related to design, testing, implementation, and maintenance;

(C) identify the use of program design tools in a software development process; and

(D) identify current information life cycle models.

(7) The student designs a software application. The student is expected to:

(A) apply principals of system design such as structured, object-oriented, and event-driven processes;

(B) develop a logical design;

(C) document design specifications according to a defined procedure;

(D) design system input, output, processing, and interfaces;

(E) identify the characteristics and uses of data processing such as batch, interactive, event driven, and object oriented;

(F) explain algorithmic and data structure concepts;

(G) identify constraints;

(H) identify modular design concepts;

(I) identify the features, functions, and architectures of client-server computing;

(J) articulate database-management concepts;

(K) define the objectives of a client-server application;

(L) design static and dynamic online processing systems; and

(M) employ interface techniques.

(8) The student codes a software application. The student is expected to:

(A) apply programming language concepts;

(B) identify the hardware-software connection;

(C) articulate the concept of data representation;

(D) apply structured, object-oriented, and event-driven programming techniques;

(E) articulate how a programming language can support multitasking and exception handling;

(F) identify how current key programming languages work in different operating system environments;

(G) translate data structures and program design into code in an appropriate language;

(H) demonstrate key constructs and commands specific to a language;

(I) identify current programming languages used in software development;

(J) explain how to resolve program implementation issues such as debugging, documentation, and auditing;

(K) articulate software development issues such as correctness, reliability, and productivity;

(L) explain code analysis issues related to design, testing, implementation, and maintenance;

(M) demonstrate how to design and implement programs in a top-down manner;

(N) demonstrate how to translate algorithmic and modular design into computer code;

(O) explain how programming control structures are used to verify correctness;

(P) compile and debug computer code; and

(Q) prepare appropriate commenting within code.

(9) The student demonstrates knowledge of software testing. The student is expected to:

(A) develop a test plan;

(B) define test procedures;

(C) develop test cases; and

(D) perform software testing.

(10) The student performs quality assurance testing. The student is expected to:

(A) explain the software quality assurance process;

§130.315. Web Communications (One-Half Credit).

(a)   General requirements. Students shall be awarded one-half credit for successful completion of this course. This course is recommended for students in Grade 9.

(b)   Introduction.

    (1)   Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

    (2)   The Information Technology (IT) Career Cluster focuses on building linkages in IT occupations for entry level, technical, and professional careers related to the design, development, support, and management of hardware, software, multimedia, and systems integration services.

    (3)   In Web Communications, students will acquire knowledge of web communications and technological operations and concepts. This is an exploratory course in web communications. The six strands include creativity and innovation; communication and collaboration; research and information fluency; critical thinking; problem solving, and decision making; digital citizenship; and technology operations and concepts.

    (4)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

    (5)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)   Knowledge and skills.

    (1)   Creativity and innovation. The student demonstrates creative thinking, constructs knowledge, and develops innovative products and processes using technology. The student is expected to:

      (A)   demonstrate proficiency in the use of local and online collaboration;

      (B)   create websites using web editors or web authoring programs;

      (C)   evaluate the accessibility and usability of original websites; and

      (D)   conceptualize possible technologies based on current technical trends.

    (2)   Communication and collaboration. The student uses digital technology to work collaboratively toward his or her own learning and the learning of others. The student is expected to:

      (A)   analyze and implement the proper and acceptable use of digital/virtual communications technologies such as instant messaging (IM), chat, email, and social networking;

      (B)   define and implement the acquisition, sharing, and use of files taking into consideration primary ownership and copyright;

      (C)   apply decisions regarding the selection, acquisition, and sharing of uniform resource locators (URLs) used in research, taking into consideration their quality, appropriateness, and effectiveness; and

      (D)   solve problems using critical-thinking strategies.

(3)   Research and information fluency. The student applies digital tools to gather, evaluate, and use information. The student is expected to:

      (A)   verify the accuracy, validity, and currency of acquired information;

      (B)   conduct effective searches using Boolean operators;

      (C)   acquire and use appropriate vocabulary terms;

      (D)   cite sources appropriately using established methods;

      (E)   model ethical and legal acquisition of digital information following guidelines in the student code of conduct, including plagiarism and copyright laws;

      (F)   identify and discuss emerging technologies and their impact;

      (G)   understand Internet history and structure and how they impact current use; and

      (H)   demonstrate appropriate use of grammar, spelling, and vocabulary when creating original work.

(4)   Critical thinking, problem solving, and decision making. The student uses critical-thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources. The student is expected to:

      (A)   demonstrate the transfer and adaptation of knowledge through the creation of original work;

      (B)   evaluate and implement security measures such as firewalls and Hypertext Transfer Protocol Secure (HTTPS) to protect original work;

      (C)   analyze and follow timelines needed to create, edit, and present original work;

      (D)   verify current licensing issues for software being used for the creation of original work;

      (E)   identify and evaluate the design and functionality of web pages using rubrics;

      (F)   optimize web information for fast download such as dial-up and high-speed Internet and mobile devices; and

      (G)   evaluate original work through self-, peer, and professional review of websites.

(5)   Digital citizenship. The student understands human, cultural, and societal issues related to technology and practices legal and ethical behavior. The student is expected to:

      (A)   engage in online activities that follow appropriate behavioral, communication, and privacy guidelines, including ethics, personal security, and verbiage determined by the intended audience;

      (B)   understand the negative impact of inappropriate technology use, including online bullying and harassment;

      (C)   implement online security guidelines, including identity protection, limited personal information sharing, and password protection of a secure website; and

      (D)   advocate and practice safe, legal, and responsible use of information and technology.

(6)   Technology operations and concepts. The student demonstrates a sound understanding of technology concepts, systems, and operations. The student is expected to:

(A)   demonstrate knowledge of hardware such as scanners, cameras, printers, video cameras, and external hard drives;

(B)   identify the parts of a computer and explain their functions;

(C)   summarize the need, functionality, and use of servers;

(D)   identify the advantages and disadvantages of running a personal web server versus using a web server provider;

(E)   differentiate and appropriately use various input, processing, output, and primary/secondary storage devices;

(F)   create and implement universally accessible documents;

(G)   analyze bandwidth issues as they relate to audience, servers, connectivity, and cost;

(H)   establish a folder/directory hierarchy for storage of a web page and its related or linked files;

(I)   follow file and folder naming conventions, including spacing, special characters, and capitalization; and

(J)   identify basic design principles when creating a website.

§130.316. Web Design (One Credit).

(a)   General requirements. Students shall be awarded one credit for successful completion of this course. This course is recommended for students in Grades 9-12.

(b)   Introduction.

     (1)   Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

     (2)   The Information Technology (IT) Career Cluster focuses on building linkages in IT occupations for entry level, technical, and professional careers related to the design, development, support, and management of hardware, software, multimedia, and systems integration services.

     (3)   In Web Design students will acquire knowledge of web design and technological operations and concepts that support creativity, innovation, collaboration, information fluency, critical thinking and decision making. The six strands include creativity and innovation; communication and collaboration; research and information fluency; critical thinking; problem solving, and decision making; digital citizenship; and technology operations and concepts.

     (4)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

     (5)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)   Knowledge and skills.

     (1)   Creativity and innovation. The student demonstrates creative thinking, constructs knowledge, and develops innovative products and processes using technology. The student is expected to:

          (A)   demonstrate proficiency in local and online collaboration;

          (B)   create a website using web editors and web authoring programs;

          (C)   evaluate the accessibility and usability of an original website as it relates to a target audience;

          (D)   conceptualize new possible technologies based on current technical trends;

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(E) analyze the use of virtualization such as virtual classrooms, distance learning, virtual storage, and a virtual operating system;
(F) demonstrate knowledge and appropriate use of operating systems, software applications, and communication and networking components; and
(G) make decisions regarding the selection, acquisition, and use of software, taking into consideration its quality, appropriateness, effectiveness, and efficiency.

(2) Communication and collaboration. The student uses digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning experience of others. The student is expected to:

- (A) analyze and implement the proper and acceptable use of digital/virtual communications technologies such as instant messaging (IM), chat, email, and social networking;
- (B) define and implement the acquisition, sharing, and use of files, taking into consideration their primary ownership and copyright;
- (C) apply decisions regarding the selection, acquisition, and sharing of uniform resource locators (URLs) used in research, taking into consideration their quality, appropriateness, and effectiveness;
- (D) solve problems using critical-thinking strategies; and
- (E) compare, evaluate, and implement the use of wired versus wireless access.

(3) Research and information fluency. The student applies digital tools to gather, evaluate, and use information. The student is expected to:

- (A) verify the accuracy, validity, and currency of acquired information;
- (B) conduct effective searches with Boolean operators;
- (C) acquire and use appropriate vocabulary terms;
- (D) cite sources appropriately using established methods;
- (E) model ethical and legal acquisition of digital information following guidelines in the student code of conduct, including plagiarism and copyright laws;
- (F) identify and discuss emerging technologies and their impact;
- (G) understand Internet history and structure and how they impact current use;
- (H) demonstrate appropriate use of grammar, spelling, and vocabulary when creating original work;
- (I) acquire, evaluate, and use various web standards such as World Wide Web Consortium (W3C), Ecma International, and Internet Corporation for Assigned Names and Numbers (ICANN) to make informed decisions and implement standards in original work;
- (J) understand, analyze, and use interactive websites;
- (K) understand, evaluate, and determine the appropriate use of dynamic and static websites;
- (L) understand, evaluate, and determine the appropriate use of open/closed source file formats and software;
- (M) explain and demonstrate how search engines work such as advanced options, preferences, advertising, and search categories;
- (N) evaluate, create, and apply principles of project management, including web storyboards, site maps, job duties, time constraints, group dynamics, communication interaction, and project completion, evaluation, and feedback;
- (O) understand the use and application of a virtual private network (VPN);

(P)   distinguish among protocols, including Hypertext Transfer Protocol (HTTP) and File Transfer Protocol (FTP);

(Q)   summarize the technical needs of a World Wide Web server, including random access memory (RAM), hard disk capacity, central processing unit (CPU) speed, busses, methods of connectivity, and appropriate software;

(R)   demonstrate proficiency in the use of a variety of electronic input devices such as keyboard, scanner, voice/sound recorder, mouse, touch screen, or digital video by incorporating such components while publishing web pages;

(S)   demonstrate proper digital etiquette and knowledge of acceptable use policies when using networks, especially resources on the Internet and intranets;

(T)   demonstrate proficiency in and appropriate use and navigation of local area networks (LANs), wide area networks (WANs), the Internet, and intranets for research and resource sharing;

(U)   construct appropriate search strategies in the acquisition of information from the Internet, including keyword searches and searches with Boolean operators; and

(V)   acquire information in electronic formats, including text, audio, video, and graphics, citing the source.

(4)   Critical thinking, problem solving, and decision making. The student uses critical-thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources. The student is expected to:

(A)   demonstrate the transfer and adaptation of knowledge through the creation of original work;

(B)   evaluate and implement security measures to protect original work such as firewalls and Hypertext Transfer Protocol Secure (HTTPS);

(C)   analyze and follow timelines needed to create, edit, and present original work;

(D)   verify current licensing issues for software being used for the creation of original work;

(E)   identify and evaluate the design and functionality of web pages using rubrics;

(F)   optimize web information for fast download such as dial-up and high-speed Internet and mobile devices;

(G)   evaluate original work through self-, peer, and professional review of websites;

(H)   evaluate the types, functions, and target audiences of websites;

(I)   read, use, and develop technical documents;

(J)   analyze, examine, assess, and decide on servers as they relate to the management of a website;

(K)   analyze, examine, assess, and decide on a web host;

(L)   analyze, examine, assess, and decide on domain name acquisition and retention;

(M)   evaluate the functionality of a website such as color scheme, grammar, technological constraints, age appropriateness, cross-platform usability, and user relevant criteria as it relates to an intended audience;

(N)   identify software file formats and their characteristics and appropriate use;

(O)   identify and apply search engine optimization (SEO) to ensure optimal website visibility;

(P)   investigate and choose electronic security methods for a web server to protect from unauthorized access and negative intentions; and

(Q)   draw conclusions from data gathered from electronic and telecommunication resources.

(5)   Digital citizenship. The student understands human, cultural, and societal issues related to technology and practices legal and ethical behavior. The student is expected to:

    (A)   engage in online activities that follow appropriate behavioral, communication, and privacy guidelines, including ethics, personal security, verbiage determined by the intended audience, and ethical use of files and file sharing;

    (B)   understand the negative impact of inappropriate technology use, including online bullying and harassment;

    (C)   implement online security guidelines, including identity protection, limited personal information sharing, and password protection of a secure website;

    (D)   engage in safe, legal, and responsible use of information and technology;

    (E)   understand and respond to local, state, national, and global issues to ensure appropriate cross-browser and cross-platform usability;

    (F)   interpret, use, and develop a safe online shared computing environment;

    (G)   identify legal, ethical, appropriate, and safe website marketing practices;

    (H)   identify legal, ethical, appropriate, and safe multimedia usage, including video, audio, graphics, animation, and emerging trends;

    (I)   analyze the impact of the World Wide Web on society through research, interviews, and personal observation; and

    (J)   participate in relevant and meaningful activities in the larger community and society to create electronic projects.

(6)   Technology operations and concepts. The student demonstrates a sound understanding of technology concepts, systems, and operations. The student is expected to:

    (A)   demonstrate knowledge of hardware, including scanners, cameras, printers, video cameras, and external hard drives;

    (B)   identify the parts of a computer and explain its functions;

    (C)   summarize the need for and functionality and use of servers;

    (D)   identify the advantages and disadvantages of running a personal web server versus using a web server provider;

    (E)   differentiate and appropriately use various input, processing, output, and primary/secondary storage devices;

    (F)   create and implement universally accessible documents;

    (G)   analyze bandwidth issues as related to audience, server, connectivity, and cost;

    (H)   establish a folder/directory hierarchy for storage of a web page and its related or linked files;

    (I)   create file and folder naming conventions to follow established guidelines, including spacing, special characters, and capitalization;

    (J)   identify basic design principles when creating a website, including white space, color theory, background color, shape, line, proximity, unity, balance (ratio of text to white space), alignment, typography, font size, type, style, image file size, repetition, contrast, consistency, and aesthetics;

    (K)   demonstrate knowledge of the six core domains (gov, net, com, mil, org, edu) and be familiar with new domain implementation;

     (L)   implement escape codes, HyperText Markup Language (HTML), cascading style sheets (CSS), and javascript through hard coding, web editors, and web authoring programs;

     (M)   identify and use FTP client software;

     (N)   implement java applet insertion;

     (O)   identify and differentiate various network topologies, including physical and logical;

     (P)   create, evaluate, and use web-based animation;

     (Q)   create, evaluate, and use video, including editing, compression, exporting, appropriateness, and delivery;

     (R)   demonstrate the ability to conduct secure communications from a web server to a client; and

     (S)   use hypertext linking appropriately when creating web pages.

§130.317. Independent Study in Technology Applications (One Credit), Beginning with School Year 2012-2013.

(a)   General requirements. Students shall be awarded one credit for successful completion of this course. Recommended prerequisite: a minimum of one credit from the courses in the Information Technology Career Cluster. This course may be taken at Grades 9-12.

(b)   Introduction.

     (1)   Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

     (2)   The Information Technology (IT) Career Cluster focuses on building linkages in IT occupations for entry level, technical, and professional careers related to the design, development, support, and management of hardware, software, multimedia, and systems integration services.

     (3)   In Independent Study in Technology Applications, through the study of technology applications foundations, including technology-related terms, concepts, and data input strategies, students will communicate information in different formats and to diverse audiences using a variety of technologies. Students will learn to make informed decisions; develop and produce original work that exemplifies the standards identified by the selected profession or discipline; and publish the product in electronic media and print. Students will practice the efficient acquisition of information by identifying task requirements, using search strategies, and using technology to access, analyze, and evaluate the acquired information. By using technology as a tool that supports the work of individuals and groups in solving problems, students will select the technology appropriate for the task, synthesize knowledge, create solutions, and evaluate the results. The six strands include creativity and innovation; communication and collaboration; research and information fluency; critical thinking; problem solving, and decision making; digital citizenship; and technology operations and concepts.

     (4)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

     (5)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)   Knowledge and skills.

     (1)   Creativity and innovation. The student demonstrates creative thinking, constructs knowledge, and develops innovative products and processes using technology. The student is expected to:

     (A)   apply existing knowledge to promote creativity in designing new technology products or services;

(B) design and implement procedures to track trends, set timelines, and review and evaluate progress for continual improvement in process and product;

(C) produce electronic documentation to illustrate the progress of a project;

(D) seek and respond to input from peers and professionals in delineating technological tasks and problem solving;

(E) make necessary revisions and/or proceed to the next stage of study;

(F) use technology terminology appropriate to the independent study course;

(G) develop and apply advanced creativity and innovation employed in technology applications skills;

(H) identify and solve problems, individually and with input from peers and professionals, using research methods and advanced creativity and innovation skills used in a selected profession or discipline;

(I) develop products that meet standards identified by the selected profession or discipline; and

(J) produce original work to solve an identified problem and publish a product in electronic media and print.

(2) Communication and collaboration. The student uses digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning experience of others. The student is expected to:

(A) format developed projects according to defined output specifications, including target audience and viewing environment;

(B) present findings to a panel for comment and professional response;

(C) determine and implement the best method of presenting or publishing findings;

(D) synthesize and publish information in a variety of print or digital formats;

(E) use evolving network and Internet resources and appropriate technology skills to create, exchange, and publish information;

(F) develop cultural understanding and global awareness by interacting with learners of other cultures through evolving digital formats and communication methods;

(G) collaborate with others to identify a problem to be solved, hypotheses, and strategies to accomplish a task;

(H) participate with electronic communities as a learner, initiator, contributor, and facilitator/mentor; and

(I) participate in relevant, meaningful activities in the larger community and society to create electronic projects.

(3) Research and information fluency. The student applies digital tools to gather, evaluate, and use information. The student is expected to:

(A) use evolving network and Internet resources for research and resource sharing of technology applications;

(B) apply appropriate search strategies in the acquisition of information from the Internet, including keyword and Boolean search strategies;

(C) pose hypotheses and questions related to a selected problem;

(D) acquire information using appropriate research strategies with source citations through electronic formats, including interactive components, text, audio, video, graphics, and simulations; and

(E)   identify, create, and use available file formats, including text, image, video, and audio files.

(4)   Critical thinking, problem solving, and decision making. The student uses critical-thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources. The student is expected to:

(A)   evaluate the design, functionality, and accuracy of the accessed information;

(B)   conduct systematic research;

(C)   demonstrate creative-thinking and problem-solving skills;

(D)   integrate appropriate productivity tools, including network, mobile access, and multimedia tools, in the creation of solutions to problems;

(E)   use enriched curricular content in the creation of products;

(F)   synthesize and generate new information from data gathered from electronic resources;

(G)   read and use technical documentation; and

(H)   write simple technical documentation relative to the audience.

(5)   Digital citizenship. The student understands human, cultural, and societal issues related to technology and practices legal and ethical behavior. The student is expected to:

(A)   discuss intellectual property, privacy, sharing of information, copyright laws, and software licensing agreements;

(B)   model ethical acquisition and use of digital information;

(C)   model respect of intellectual property when editing graphics, video, text, and sound files;

(D)   demonstrate proper etiquette, responsible use of software, and knowledge of acceptable use policies when using network resources;

(E)   demonstrate best practices in understanding and applying information security;

(F)   develop and maintain a technical documentation library in a variety of formats; and

(G)   investigate how technology has changed and the social and ethical ramifications of computer usage.

(6)   Technology operations and concepts. The student demonstrates a sound understanding of technology concepts, systems, and operations. The student is expected to:

(A)   demonstrate knowledge and appropriate use of input devices, operating systems, software applications, and communication and networking components;

(B)   select, acquire, and use appropriate digital tools;

(C)   delineate and make necessary adjustments regarding compatibility issues, including digital file formats and cross-platform connectivity; and

(D)   use appropriate technology terminology and naming conventions.

§130.318. Independent Study in Evolving/Emerging Technologies (One Credit).

(a)   General requirements. Students shall be awarded one credit for successful completion of this course. Recommended prerequisite: a minimum of one credit from the courses in the Information Technology Career Cluster. This course may be taken at Grades 9-12.

(b)   Introduction.

(1)   Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

(2)   The Information Technology (IT) Career Cluster focuses on building linkages in IT occupations for entry level, technical, and professional careers related to the design, development, support, and management of hardware, software, multimedia, and systems integration services.

(3)   In the Independent Study in Evolving/Emerging Technologies course, through the study of evolving/emerging technologies, including technology-related terms, concepts, and data input strategies, students will communicate information in different formats and to diverse audiences using a variety of technologies. Students will learn to make informed decisions, develop and produce original work that exemplifies the standards identified by the selected profession or discipline, and publish the product in electronic media and print. Students will demonstrate efficient acquisition of information by identifying task requirements, using search strategies, and using technology to access, analyze, and evaluate the acquired information. By using technology as a tool that supports the work of individuals and groups in solving problems, students will select the technology appropriate for the task, synthesize knowledge, create solutions, and evaluate the results. The six strands include creativity and innovation; communication and collaboration; research and information fluency; critical thinking; problem solving, and decision making; digital citizenship; and technology operations and concepts.

(4)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

(5)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)   Knowledge and skills.

(1)   Creativity and innovation. The student demonstrates creative thinking, constructs knowledge, and develops innovative products and processes using technology. The student is expected to:

(A)   apply existing knowledge to promote creativity in designing new technology products or services;

(B)   design and implement procedures to track trends, set timelines, and review and evaluate progress for continual improvement in process and product;

(C)   produce electronic documentation to illustrate the progress of a project;

(D)   seek and respond to input from peers and professionals in delineating technological tasks and problem solving;

(E)   make necessary revisions and/or proceed to the next stage of study;

(F)   use technology terminology appropriate to the independent study course;

(G)   develop and apply advanced creativity and innovation employed in technology applications skills;

(H)   identify and solve problems, individually and with input from peers and professionals, using research methods and advanced creativity and innovation skills used in a selected profession or discipline;

(I)   develop products that meet standards identified by a selected profession or discipline; and

(J)   produce original work to solve an identified problem and publish a product in electronic media and print.

(2)   Communication and collaboration. The student uses digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning experience of others. The student is expected to:

(A)   format developed projects according to defined output specifications, including target audience and viewing environment;

(B)   present findings to a panel for comment and professional response;

     (C)   determine and implement the best method of presenting or publishing findings;

     (D)   synthesize and publish information in a variety of print or digital formats;

     (E)   use evolving network resources and appropriate technology skills to create, exchange, and publish information;

     (F)   develop cultural understanding and global awareness by interacting with learners of other cultures through evolving digital formats and communication methods;

     (G)   collaborate with others to identify a problem to be solved, hypotheses, and strategies to accomplish a task;

     (H)   participate with electronic communities as a learner, initiator, contributor, and facilitator/mentor; and

     (I)   participate in relevant, meaningful activities in the larger community and society to create electronic projects.

(3)   Research and information fluency. The student applies digital tools to gather, evaluate, and use information. The student uses a variety of strategies to acquire information from electronic resources, with appropriate supervision. The student is expected to:

     (A)   use evolving network and Internet resources for research and resource sharing of technology applications;

     (B)   apply appropriate search strategies in the acquisition of information from the Internet, including keyword and Boolean search strategies;

     (C)   pose hypotheses and questions related to a selected problem;

     (D)   acquire information using appropriate research strategies with source citations through electronic formats, including interactive components, text, audio, video, graphics, and simulations; and

     (E)   identify, create, and use available file formats, including text, image, video, and audio files.

(4)   Critical thinking, problem solving, and decision making. The student uses critical-thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources. The student is expected to:

     (A)   evaluate the design, functionality, and accuracy of the accessed information;

     (B)   conduct systematic research;

     (C)   demonstrate creative-thinking and problem-solving skills;

     (D)   integrate appropriate productivity tools, including network, mobile access, and multimedia tools, in the creation of solutions to problems;

     (E)   use enriched curricular content in the creation of products;

     (F)   synthesize and generate new information from data gathered from electronic resources;

     (G)   read and use technical documentation; and

     (H)   write simple technical documentation relative to the audience.

(5)   Digital citizenship. The student understands human, cultural, and societal issues related to technology and practices legal and ethical behavior. The student is expected to:

     (A)   discuss intellectual property, privacy, sharing of information, copyright laws, and software licensing agreements;

     (B)   model ethical acquisition and use of digital information;

     (C)   model respect of intellectual property when editing graphics, video, text, and sound files;

(D)   demonstrate proper etiquette, responsible use of software, and knowledge of acceptable use policies when using network resources;

(E)   demonstrate best practices in understanding and applying information security;

(F)   develop and maintain a technical documentation library in a variety of formats; and

(G)   investigate how technology has changed and the social and ethical ramifications of computer usage.

(6)   Technology operations and concepts. The student demonstrates a sound understanding of technology concepts, systems, and operations. The student is expected to:

(A)   demonstrate knowledge and appropriate use of input devices, operating systems, software applications, and communication and networking components;

(B)   select, acquire, and use appropriate digital tools;

(C)   delineate and make necessary adjustments regarding compatibility issues, including digital file formats and cross-platform connectivity; and

(D)   use appropriate technology terminology and naming conventions.

Subchapter O. Science, Technology, Engineering, and Mathematics

§130.420. Fundamentals of Computer Science (One Credit).

(a)   General requirements. Students shall be awarded one credit for successful completion of this course. This course is recommended for students in Grades 9-12.

(b)   Introduction.

    (1)   Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

    (2)   The Science, Technology, Engineering, and Mathematics (STEM) Career Cluster focuses on planning, managing, and providing scientific research and professional and technical services, including laboratory and testing services, and research and development services.

    (3)   Fundamentals of Computer Science is intended as a first course for those students just beginning the study of computer science. Students will learn about the computing tools that are used every day. Students will foster their creativity and innovation through opportunities to design, implement, and present solutions to real-world problems. Students will collaborate and use computer science concepts to access, analyze, and evaluate information needed to solve problems. Students will learn the problem-solving and reasoning skills that are the foundation of computer science. By using computer science knowledge and skills that support the work of individuals and groups in solving problems, students will select the technology appropriate for the task, synthesize knowledge, create solutions, and evaluate the results. Students will learn digital citizenship by researching current laws and regulations and by practicing integrity and respect. Students will gain an understanding of the principles of computer science through the study of technology operations and concepts. The six strands include creativity and innovation; communication and collaboration; research and information fluency; critical thinking; problem solving, and decision making; digital citizenship; and technology operations and concepts.

    (4)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

    (5)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)   Knowledge and skills.

    (1)   Creativity and innovation. The student develops products and generates new understanding by extending existing knowledge. The student is expected to:

        (A)   investigate and explore various career opportunities within the computer science field and report findings through various media;

        (B)   create and publish interactive stories, games, and animations;

        (C)   create and publish interactive animations;

        (D)   create algorithms for the solution of various problems;

        (E)   create web pages using a mark-up language;

        (F)   use the Internet to create and publish solutions; and

        (G)   design creative and effective user interfaces.

    (2)   Communication and collaboration. The student communicates and collaborates with peers to contribute to his or her own learning and the learning of others. The student is expected to:

        (A)   seek and respond to advice from peers and professionals in evaluating problem solutions;

        (B)   debug and solve problems using reference materials and effective strategies; and

(C)   publish information in a variety of ways such as print, monitor display, web pages, and video.

(3)   Research and information fluency. The student locates, analyzes, processes, and organizes data. The student is expected to:

(A)   construct appropriate electronic search strategies; and

(B)   use a variety of resources, including other subject areas, together with various productivity tools to gather authentic data as a basis for individual and group programming projects.

(4)   Critical thinking, problem solving, and decision making. The student uses appropriate strategies to analyze problems and design algorithms. The student is expected to:

(A)   demonstrate the ability to insert applets into web pages;

(B)   find, download, and insert scripting code into web pages to enhance interactivity;

(C)   understand binary representation of data in computer systems, perform conversions between decimal and binary number systems, and count in binary number systems;

(D)   read and define a problem's description, purpose, and goals;

(E)   demonstrate coding proficiency in a contemporary programming language by developing solutions that create stories, games, and animations;

(F)   choose, identify, and use the appropriate data type to properly represent data in a problem solution;

(G)   demonstrate an understanding of and use variables within a programmed story, game, or animation;

(H)   demonstrate proficiency in the use of arithmetic operators to create mathematical expressions, including addition, subtraction, multiplication, real division, integer division, and modulus division;

(I)   demonstrate an understanding of and use sequence within a programmed story, game, or animation;

(J)   demonstrate an understanding of and use conditional statements within a programmed story, game, or animation;

(K)   demonstrate an understanding of and use iteration within a programmed story, game, or animation;

(L)   create an interactive story, game, or animation;

(M)   use random numbers within a programmed story, game, or animation; and

(N)   test program solutions by investigating valid and invalid data.

(5)   Digital citizenship. The student explores and understands safety, legal, cultural, and societal issues relating to the use of technology and information. The student is expected to:

(A)   discuss copyright laws/issues and model ethical acquisition of digital information by citing sources using established methods;

(B)   demonstrate proper digital etiquette and knowledge of acceptable use policies when using networks, especially resources on the Internet and on intranets;

(C)   investigate measures such as passwords or virus detection/prevention to protect computer systems and databases from unauthorized use and tampering;

(D)   understand the safety risks associated with the use of social networking sites;

(E)   discuss the impact of computing and computing related advancements on society; and

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(F)   determine the reliability of information available through electronic media.

(6)   Technology operations and concepts. The student understands technology concepts, systems, and operations as they apply to computer science. The student is expected to:

    (A)   demonstrate knowledge of the basic computer components, including a central processing unit (CPU), storage, and input/output devices;

    (B)   use operating system tools, including appropriate file management;

    (C)   demonstrate knowledge and appropriate use of different operating systems;

    (D)   demonstrate knowledge and understanding of basic network connectivity;

    (E)   describe, compare, and contrast the differences between an application and an operating system; and

    (F)   compare, contrast, and appropriately use various input, processing, output, and primary/secondary storage devices.

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§140.421. Computer Science I (One Credit).

(a)   General requirements. Students shall be awarded one credit for successful completion of this course. Prerequisite: Algebra I. This course is recommended for students in Grades 9-12.

(b)   Introduction.

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(1)   Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

(2)   The Science, Technology, Engineering, and Mathematics (STEM) Career Cluster focuses on planning, managing, and providing scientific research and professional and technical services, including laboratory and testing services, and research and development services.

(3)   Computer Science I will foster students' creativity and innovation by presenting opportunities to design, implement, and present meaningful programs through a variety of media. Students will collaborate with one another, their instructor, and various electronic communities to solve the problems presented throughout the course. Through data analysis, students will identify task requirements, plan search strategies, and use computer science concepts to access, analyze, and evaluate information needed to solve problems. By using computer science knowledge and skills that support the work of individuals and groups in solving problems, students will select the technology appropriate for the task, synthesize knowledge, create solutions, and evaluate the results. Students will learn digital citizenship by researching current laws and regulations and by practicing integrity and respect. Students will gain an understanding of the principles of computer science through the study of technology operations, systems, and concepts. The six strands include creativity and innovation; communication and collaboration; research and information fluency; critical thinking; problem solving, and decision making; digital citizenship; and technology operations and concepts.

(4)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

(5)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

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(c)   Knowledge and skills.

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(1)   Creativity and innovation. The student develops products and generates new understandings by extending existing knowledge. The student is expected to:

    (A)   participate with electronic communities as a learner, initiator, contributor, and teacher/mentor;

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(B)   extend the learning environment beyond the school walls with digital products created to increase teaching and learning in the other subject areas; and

(C)   participate in relevant, meaningful activities in the larger community and society to create electronic projects.

(2)   Communication and collaboration. The student communicates and collaborates with peers to contribute to his or her own learning and the learning of others. The student is expected to:

(A)   create and properly display meaningful output;

(B)   create interactive console display interfaces, with appropriate user prompts, to acquire data from a user;

(C)   use Graphical User Interfaces (GUIs) to create interactive interfaces to acquire data from a user and display program results;

(D)   write programs with proper programming style to enhance the readability and functionality of the code by using meaningful descriptive identifiers, internal comments, white space, spacing, indentation, and a standardized program style;

(E)   improve numeric display by optimizing data visualization;

(F)   display simple vector graphics using lines, circles, and rectangles;

(G)   display simple bitmap images; and

(H)   seek and respond to advice from peers and professionals in evaluating quality and accuracy.

(3)   Research and information fluency. The student locates, analyzes, processes, and organizes data. The student is expected to:

(A)   use a variety of resources, including foundation and enrichment curricula, to gather authentic data as a basis for individual and group programming projects; and

(B)   use various productivity tools to gather authentic data as a basis for individual and group programming projects.

(4)   Critical thinking, problem solving, and decision making. The student uses appropriate strategies to analyze problems and design algorithms. The student is expected to:

(A)   use program design problem-solving strategies to create program solutions;

(B)   define and specify the purpose and goals of solving a problem;

(C)   identify the subtasks needed to solve a problem;

(D)   identify the data types and objects needed to solve a problem;

(E)   identify reusable components from existing code;

(F)   design a solution to a problem;

(G)   code a solution from a program design;

(H)   identify and debug errors;

(I)   test program solutions with appropriate valid and invalid test data for correctness;

(J)   debug and solve problems using error messages, reference materials, language documentation, and effective strategies;

(K)   explore common algorithms, including finding greatest common divisor, finding the biggest number out of three, finding primes, making change, and finding the average;

(L)   analyze and modify existing code to improve the underlying algorithm;

(M) create program solutions that exhibit robust behavior by understanding, avoiding, and preventing runtime errors, including division by zero and type mismatch;

(N) select the most appropriate algorithm for a defined problem;

(O) demonstrate proficiency in the use of the arithmetic operators to create mathematical expressions, including addition, subtraction, multiplication, real division, integer division, and modulus division;

(P) create program solutions to problems using available mathematics libraries, including absolute value, round, power, square, and square root;

(Q) develop program solutions that use assignment;

(R) develop sequential algorithms to solve non-branching and non-iterative problems;

(S) develop algorithms to decision-making problems using branching control statements;

(T) develop iterative algorithms and code programs to solve practical problems;

(U) demonstrate proficiency in the use of the relational operators;

(V) demonstrate proficiency in the use of the logical operators; and

(W) generate and use random numbers.

(5) Digital citizenship. The student explores and understands safety, legal, cultural, and societal issues relating to the use of technology and information. The student is expected to:

(A) discuss intellectual property, privacy, sharing of information, copyright laws, and software licensing agreements;

(B) model ethical acquisition and use of digital information;

(C) demonstrate proper digital etiquette, responsible use of software, and knowledge of acceptable use policies;

(D) investigate measures, including passwords and virus detection/prevention, to protect computer systems and databases from unauthorized use and tampering; and

(E) investigate how technology has changed and the social and ethical ramifications of computer usage.

(6) Technology operations, systems, and concepts. The student understands technology concepts, systems, and operations as they apply to computer science. The student is expected to:

(A) compare and contrast types of operating systems, software applications, and programming languages;

(B) demonstrate knowledge of major hardware components, including primary and secondary memory, a central processing unit (CPU), and peripherals;

(C) differentiate among current programming languages, discuss the use of those languages in other fields of study, and demonstrate knowledge of specific programming terminology and concepts;

(D) differentiate between a high-level compiled language and an interpreted language;

(E) understand concepts of object-oriented design;

(F) use local and global scope access variable declarations;

(G) encapsulate data and associated subroutines into an abstract data type;

(H) create subroutines that do not return values with and without the use of arguments and parameters;

	(I)	create subroutines that return typed values with and without the use of arguments and parameters;

(J)   understand and identify the data-binding process between arguments and parameters;

(K)   compare objects using reference values and a comparison routine;

(L)   understand the binary representation of numeric and nonnumeric data in computer systems;

(M)   understand the finite limits of numeric data;

(N)   perform numerical conversions between the decimal and binary number systems and count in the binary number system;

(O)   choose, identify, and use the appropriate data types for integer, real, and Boolean data when writing program solutions;

(P)   demonstrate an understanding of the concept of a variable;

(Q)   demonstrate an understanding of and use reference variables for objects;

(R)   demonstrate an understanding of how to represent and manipulate text data, including concatenation and other string functions;

(S)   demonstrate an understanding of the concept of scope;

(T)   identify and use the structured data type of one-dimensional arrays to traverse, search, and modify data;

(U)   choose, identify, and use the appropriate data type and structure to properly represent the data in a program problem solution; and

(V)   compare and contrast strongly typed and un-typed programming languages.

§130.422. Computer Science II (One Credit).

(a)   General requirements. Students shall be awarded one credit for successful completion of this course. Prerequisite: Algebra I and either Computer Science I or Fundamentals of Computer Science. This course is recommended for students in Grades 11 and 12.

(b)   Introduction.

(1)   Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

(2)   The Science, Technology, Engineering, and Mathematics (STEM) Career Cluster focuses on planning, managing, and providing scientific research and professional and technical services, including laboratory and testing services, and research and development services.

(3)   Computer Science II will foster students' creativity and innovation by presenting opportunities to design, implement, and present meaningful programs through a variety of media. Students will collaborate with one another, their instructor, and various electronic communities to solve the problems presented throughout the course. Through data analysis, students will identify task requirements, plan search strategies, and use computer science concepts to access, analyze, and evaluate information needed to solve problems. By using computer science knowledge and skills that support the work of individuals and groups in solving problems, students will select the technology appropriate for the task, synthesize knowledge, create solutions, and evaluate the results. Students will learn digital citizenship by researching current laws and regulations and by practicing integrity and respect. Students will gain an understanding of computer science through the study of technology operations, systems, and concepts. The six strands include creativity and innovation; communication and collaboration; research and information fluency; critical thinking;

problem solving, and decision making; digital citizenship; and technology operations and concepts.

    (4)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

    (5)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)   Knowledge and skills.

    (1)   Creativity and innovation. The student develops products and generates new understandings by extending existing knowledge. The student is expected to:

        (A)   use program design problem-solving strategies to create program solutions;

        (B)   demonstrate the ability to read and modify large programs, including the design description and process development;

        (C)   follow the systematic problem-solving process of identifying the specifications of purpose and goals, the data types and objects needed, and the subtasks to be performed;

        (D)   compare and contrast design methodologies and implementation techniques such as top-down, bottom-up, and black box;

        (E)   analyze, modify, and evaluate existing code by performing a case study on a large program, including inheritance and black box programming;

        (F)   identify the data types and objects needed to solve a problem;

        (G)   choose, identify, and use the appropriate abstract data type, advanced data structure, and supporting algorithms to properly represent the data in a program problem solution;

        (H)   use object-oriented programming development methodology, data abstraction, encapsulation with information hiding, and procedural abstraction in program development and testing; and

        (I)   create, edit, and manipulate bitmap images that are used to enhance user interfaces and program functionality.

    (2)   Communication and collaboration. The student communicates and collaborates with peers to contribute to his or her own learning and the learning of others. The student is expected to:

        (A)   use the principles of software engineering to work in software design teams, break a problem statement into specific solution requirements, create a program development plan, code part of a solution from a program development plan while a partner codes the remaining part, team test the solution for correctness, and develop presentations to report the solution findings;

        (B)   create interactive console display interfaces with appropriate user prompts;

        (C)   create interactive human interfaces to acquire data from a user and display program results using an advanced Graphical User Interface (GUI);

        (D)   write programs and communicate with proper programming style to enhance the readability and functionality of the code by using meaningful descriptive identifiers, internal comments, white space, indentation, and a standardized program style;

        (E)   improve data display by optimizing data visualization;

        (F)   display simple vector graphics to interpret and display program results; and

        (G)   display simple bitmap images.

    (3)   Research and information fluency. The student locates, analyzes, processes, and organizes data. The student is expected to:

(A)   use local area networks (LANs) and wide area networks (WANs), including the Internet and intranets, in research, file management, and collaboration;

(B)   understand programming file structure and file access for required resources;

(C)   acquire and process information from text files, including files of known and unknown sizes;

(D)   manipulate data structures using string processing;

(E)   manipulate data values by casting between data types;

(F)   identify and use the structured data type of one-dimensional arrays to traverse, search, modify, insert, and delete data;

(G)   identify and use the structured data type of two-dimensional arrays to traverse, search, modify, insert, and delete data; and

(H)   identify and use a list object data structure to traverse, search, insert, and delete data.

(4)   Critical thinking, problem solving, and decision making. The student uses appropriate strategies to analyze problems and design algorithms. The student is expected to:

(A)   develop sequential algorithms using branching control statements, including nested structures, to create solutions to decision-making problems;

(B)   develop choice algorithms using selection control statements based on ordinal values;

(C)   demonstrate proficiency in the use of short-circuit evaluation;

(D)   demonstrate proficiency in the use of Boolean algebra, including De Morgan's Law;

(E)   develop iterative algorithms using nested loops;

(F)   identify, trace, and appropriately use recursion in programming solutions, including algebraic computations;

(G)   design, construct, evaluate, and compare search algorithms, including linear searching and binary searching;

(H)   identify, describe, design, create, evaluate, and compare standard sorting algorithms, including selection sort, bubble sort, insertion sort, and merge sort;

(I)   measure time/space efficiency of various sorting algorithms;

(J)   compare and contrast search and sort algorithms, including linear, quadratic, and recursive strategies, for time/space efficiency;

(K)   analyze algorithms using "big-O" notation for best, average, and worst-case data patterns;

(L)   develop algorithms to solve various problems, including factoring, summing a series, finding the roots of a quadratic equation, and generating Fibonacci numbers;

(M)   test program solutions by investigating boundary conditions; testing classes, methods, and libraries in isolation; and performing stepwise refinement;

(N)   identify and debug compile, syntax, runtime, and logic errors;

(O)   compare and contrast algorithm efficiency by using informal runtime comparisons, exact calculation of statement execution counts, and theoretical efficiency values using "big-O" notation, including worst-case, best-case, and average-case time/space analysis;

(P)   demonstrate the ability to count, convert, and perform mathematical operations in the binary and hexadecimal number systems;

(Q)   demonstrate knowledge of the maximum integer boundary, minimum integer boundary, imprecision of real number representations, and round-off errors;

(R) create program solutions to problems using the mathematics library class;

(S) use random algorithms to create simulations that model the real world;

(T) identify, understand, and create class specifications and relationships among classes, including composition and inheritance relationships;

(U) understand and explain object relationships among defined classes, abstract classes, and interfaces;

(V) create object-oriented definitions using class declarations, variable declarations, constant declarations, method declarations, parameter declarations, and interface declarations;

(W) create robust classes that encapsulate data and the methods that operate on that data and incorporate overloading to enrich the object's behavior;

(X) design and implement a set of interactive classes;

(Y) design, create, and evaluate multiclass programs that use abstract classes and interfaces;

(Z) understand and implement a student-created class hierarchy;

(AA) extend, modify, and improve existing code using inheritance;

(BB) create adaptive behaviors, including overloading, using polymorphism;

(CC) understand and use reference variables for object and string data types;

(DD) understand and implement access scope modifiers;

(EE) understand and demonstrate how to compare objects;

(FF) duplicate objects using the appropriate deep and/or shallow copy;

(GG) define and implement abstract classes and interfaces in program problem solutions;

(HH) apply functional decomposition to a program solution;

(II) create simple and robust objects from class definitions through instantiation;

(JJ) apply class membership of variables, constants, and methods;

(KK) examine and mutate the properties of an object using accessors and modifiers;

(LL) understand and implement a composite class; and

(MM) design and implement an interface.

(5) Digital citizenship. The student explores and understands safety, legal, cultural, and societal issues relating to the use of technology and information. The student is expected to:

(A) model ethical acquisition and use of digital information;

(B) demonstrate proper digital etiquette, responsible use of software, and knowledge of acceptable use policies; and

(C) investigate digital rights management.

(6) Technology operations and concepts. The student understands technology concepts, systems, and operations as they apply to computer science. The student is expected to:

(A) compare and contrast types of operating systems, software applications, hardware platforms, and programming languages;

(B) demonstrate knowledge of major hardware components, including primary and secondary memory, a central processing unit (CPU), and peripherals;

(C) demonstrate knowledge of major networking components, including hosts, servers, switches, and routers;

(D) demonstrate knowledge of computer communication systems, including single-user, peer-to-peer, workgroup, client-server, and networked;

(E) demonstrate knowledge of computer addressing systems, including Internet Protocol (IP) address and Media Access Control (MAC) address; and

(F) differentiate among the categories of programming languages, including machine, assembly, high-level compiled, high-level interpreted, and scripted.

§130.423. Computer Science III (One Credit).

(a) General requirements. Students shall be awarded one credit for successful completion of this course. Prerequisite: Computer Science II, Advanced Placement (AP) Computer Science A, or International Baccalaureate (IB) Computer Science. This course is recommended for students in Grades 11 and 12.

(b) Introduction.

(1) Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

(2) The Science, Technology, Engineering, and Mathematics (STEM) Career Cluster focuses on planning, managing, and providing scientific research and professional and technical services, including laboratory and testing services, and research and development services.

(3) Computer Science III will foster students' creativity and innovation by presenting opportunities to design, implement, and present meaningful programs through a variety of media. Students will collaborate with one another, their instructor, and various electronic communities to solve the problems presented throughout the course. Through data analysis, students will identify task requirements, plan search strategies, and use computer science concepts to access, analyze, and evaluate information needed to solve problems. By using computer science knowledge and skills that support the work of individuals and groups in solving problems, students will select the technology appropriate for the task, synthesize knowledge, create solutions, and evaluate the results. Students will learn digital citizenship by researching current laws and regulations and by practicing integrity and respect. Students will gain an understanding of advanced computer science data structures through the study of technology operations, systems, and concepts. The six strands include creativity and innovation; communication and collaboration; research and information fluency; critical thinking; problem solving, and decision making; digital citizenship; and technology operations and concepts.

(4) Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(5) Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

(c) Knowledge and skills.

(1) Creativity and innovation. The student develops products and generates new understandings by extending existing knowledge. The student is expected to:

(A) apply data abstraction and encapsulation to manage complexity;

(B) implement a student-created class hierarchy;

(C) read and write class specifications using visual organizers, including Unified Modeling Language;

(D) use black box programming methodology;

(E) design, create, and use interfaces to apply protocols;

(F) identify, describe, design, create, evaluate, and compare standard sorting algorithms that perform sorting operations on data structures, including quick sort and heap sort;

(G)   select, identify, and use the appropriate abstract data type, advanced data structure, and supporting algorithms to properly represent the data in a program problem solution; and

(H)   manage complexity by using a systems approach.

(2)   Communication and collaboration. The student communicates and collaborates with peers to contribute to his or her own learning and the learning of others. The student is expected to:

(A)   use local area networks (LANs) and wide area networks (WANs), including the Internet and intranets, in research, file management, and collaboration;

(B)   create interactive human interfaces to acquire data from a user and display program results using an advanced Graphical User Interface (GUI);

(C)   write programs and communicate with proper programming style to enhance the readability and functionality of the code by using meaningful descriptive identifiers, internal comments, white space, indentation, and a standardized program style; and

(D)   work in software design teams.

(3)   Research and information fluency. The student locates, analyzes, processes, and organizes data. The student is expected to:

(A)   identify and use the structured data type of arrays of objects to traverse, search, modify, insert, and delete data;

(B)   identify and use two-dimensional ragged arrays to traverse, search, modify, insert, and delete data;

(C)   identify and use a list object data structure, including vector, to traverse, search, insert, and delete object data;

(D)   understand and trace a linked-list data structure;

(E)   create program solutions using a linked-list data structure, including unordered single, ordered single, double, and circular linked;

(F)   understand composite data structures, including a linked list of linked lists;

(G)   understand and create program solutions using stacks, queues, trees, heaps, priority queues, graph theory, and enumerated data types;

(H)   understand and create program solutions using sets, including HashSet and TreeSet;

(I)   understand and create program solutions using maps, including HashMap and TreeMap; and

(J)   write and modify text file data.

(4)   Critical thinking, problem solving, and decision making. The student uses appropriate strategies to analyze problems and design algorithms. The student is expected to:

(A)   develop choice algorithms using selection control statements, including break, label, and continue;

(B)   demonstrate proficiency in the use of the bitwise operators;

(C)   develop iterative algorithms using do-while loops;

(D)   demonstrate proficiency in the use of the ternary operator;

(E)   create program solutions that use iterators;

(F)   identify, trace, and appropriately use recursion;

(G)   understand and create program solutions using hashing;

(H)   perform pattern recognition using regular expressions;

	(I)	explore common algorithms, including matrix addition and multiplication, fractals, Towers of Hanoi, and magic square;
	(J)	create program solutions that exhibit robust behavior by understanding and avoiding runtime errors and handling anticipated errors;
	(K)	understand object-oriented design concepts of inner classes, outer classes, and anonymous classes;
	(L)	use object reference scope identifiers, including null, this, and super;
	(M)	provide object functionality to primitive data types;
	(N)	write program assumptions in the form of assertions;
	(O)	write a Boolean expression to test a program assertion; and
	(P)	construct assertions to make explicit program invariants.

(5) Digital citizenship. The student explores and understands safety, legal, cultural, and societal issues relating to the use of technology and information. The student is expected to:

    (A) model ethical acquisition and use of digital information; and

    (B) demonstrate proper digital etiquette, responsible use of software, and knowledge of acceptable use policies.

(6) Technology operations and concepts. The student understands technology concepts, systems, and operations as they apply to computer science. The student is expected to:

    (A) compare and contrast high-level programming languages;

    (B) create a small workgroup network;

    (C) create and apply a basic network addressing scheme; and

    (D) create discovery programs in a low-level language, high-level language, and scripting language.

§130.424. Digital Forensics (One Credit), Beginning with School Year 2019-2020.

(a) General requirements. Students shall be awarded one credit for successful completion of this course. This course is recommended for students in Grades 9-12.

(b) Introduction.

    (1) Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

    (2) The Science, Technology, Engineering, and Mathematics (STEM) Career Cluster focuses on planning, managing, and providing scientific research and professional and technical services, including laboratory and testing services, and research and development services.

    (3) Digital forensics is an evolving discipline concerned with analyzing anomalous activity on computers, networks, programs, and data. As a discipline, it has grown with the emergence of a globally-connected digital society. As computing has become more sophisticated, so too have the abilities of malicious agents to access systems and private information. By evaluating prior incidents, digital forensics professionals have the ability to investigate and craft appropriate responses to disruptions to corporations, governments, and individuals. Whereas cybersecurity takes a proactive approach to information assurance to minimize harm, digital forensics takes a reactive approach to incident response.

    (4) Digital Forensics introduces students to the knowledge and skills of digital forensics. The course provides a survey of the field of digital forensics and incident response.

(5)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

(6)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)   Knowledge and skills.

     (1)   Employability skills. The student identifies necessary skills for career development and employment opportunities. The student is expected to:

          (A)   investigate the need for digital forensics;

          (B)   research careers in digital forensics along with the education and job skills required for obtaining a job in both the public and private sector;

          (C)   identify job and internship opportunities as well as accompanying duties and tasks;

          (D)   identify and discuss certifications for digital forensics careers;

          (E)   explain ethical and legal responsibilities in relation to the field of digital forensics;

          (F)   identify and describe businesses and government agencies that use digital forensics;

          (G)   identify and describe the kinds of crimes investigated by digital forensics specialists; and

          (H)   solve problems and think critically.

     (2)   Employability skills. The student communicates and collaborates effectively. The student is expected to:

          (A)   apply effective teamwork strategies;

          (B)   collaborate with a community of peers and professionals;

          (C)   create, review, and edit a report summarizing technical findings; and

          (D)   present technical information to a non-technical audience.

     (3)   Ethics and laws. The student recognizes and analyzes ethical and current legal standards, rights, and restrictions related to digital forensics. The student is expected to:

          (A)   develop a plan to advocate for ethical and legal behaviors both online and offline among peers, family, community, and employers;

          (B)   research local, state, national, and international law such as the Electronic Communications Privacy Act of 1986, Title III (Pen Register Act); USA PATRIOT Act of 2001; and Digital Millennium Copyright Act;

          (C)   research historic cases or events regarding digital forensics or cyber;

          (D)   examine ethical and legal behavior when presented with confidential or sensitive information in various scenarios related to cyber activities;

          (E)   analyze case studies of computer incidents;

          (F)   use the findings of a computer incident investigation to reconstruct the incident;

          (G)   identify and discuss intellectual property laws, issues, and use;

          (H)   contrast legal and illegal aspects of information gathering;

          (I)   contrast ethical and unethical aspects of information gathering;

          (J)   analyze emerging legal and societal trends affecting digital forensics; and

          (K)   discuss how technological changes affect applicable laws.

(4)   Digital citizenship. The student understands and demonstrates the social responsibility of end users regarding digital technology, safety, digital hygiene, and cyberbullying. The student is expected to:

    (A)   identify and use digital information responsibly;

    (B)   use digital tools responsibly;

    (C)   identify and use valid and reliable sources of information; and

    (D)   gain informed consent prior to investigating incidents.

(5)   Digital forensics skills. The student locates, processes, analyzes, and organizes data. The student is expected to:

    (A)   identify sources of data;

    (B)   analyze and report data collected;

    (C)   maintain data integrity;

    (D)   examine metadata of a file; and

    (E)   examine how multiple data sources can be used for digital forensics, including investigating malicious software (malware) and email threats.

(6)   Digital forensics skills. The student understands software concepts and operations as they apply to digital forensics. The student is expected to:

    (A)   compare software applications as they apply to digital forensics;

    (B)   describe the purpose of various application types such as email, web, file sharing, security applications, and data concealment tools;

    (C)   identify the different purposes of data formats such as pdf, wav, jpeg, and exe;

    (D)   describe how application logs and metadata are used for investigations;

    (E)   describe digital forensics tools;

    (F)   select the proper software tool based on appropriateness, effectiveness, and efficiency for a given digital forensics scenario; and

    (G)   describe components of applications such as configurations settings, data, supporting files, and user interface.

(7)   Digital forensics skills. The student understands operating systems concepts and functions as they apply to digital forensics. The student is expected to:

    (A)   compare various operating systems;

    (B)   describe file attributes, including access and creation times;

    (C)   describe how operating system logs are used for investigations;

    (D)   compare and contrast the file systems of various operating systems;

    (E)   compare various primary and secondary storage devices; and

    (F)   differentiate between volatile and non-volatile memory.

(8)   Digital forensics skills. The student understands networking concepts and operations as they apply to digital forensics. The student is expected to:

    (A)   examine networks, including Internet Protocol (IP) addressing and subnets;

    (B)   describe the Open Systems Interconnection (OSI) model;

    (C)   describe the Transmission Control Protocol/Internet Protocol (TCP/IP) model;

    (D)   use network forensic analysis tools to examine network traffic data from sources such as firewalls, routers, intrusion detection systems (IDS), and remote access logs; and

    (E)   identify malicious or suspicious network activities such as mandatory access control (MAC) spoofing and rogue wireless access points.

(9)   Digital forensics skills. The student explains the principles of access controls. The student is expected to:

    (A)   define the principle of least privilege;

    (B)   describe the impact of granting access and permissions;

    (C)   identify different access components such as passwords, tokens, key cards, and biometric verification systems;

    (D)   explain the value of an access log to identify suspicious activity;

    (E)   describe the risks of granting third parties access to personal and proprietary data on social media and systems;

    (F)   describe the risks involved with accepting Terms of Service (ToS) or End User License Agreements (EULA) without a basic understanding of the terms or agreements; and

    (G)   identify various access control methods such as MAC, role-based access control (RBAC), and discretionary access control (DAC).

(10)   Incident response. The student follows a methodological approach to prepare for and respond to an incident. The student is expected to:

    (A)   define the components of the incident response cycle, including preparation; detection and analysis; containment, eradication, and recovery; and post-incident activity;

    (B)   describe incident response preparation;

    (C)   discuss incident response detection and analysis;

    (D)   discuss containment and eradication of and recovery from an incident;

    (E)   describe post-incident activities such as reflecting on lessons learned, using collected incident data, and retaining evidence of an incident;

    (F)   develop an incident response plan; and

    (G)   describe ways a user may compromise the validity of existing evidence.

(11)   Incident response. The student objectively analyzes collected data from an incident. The student is expected to:

    (A)   identify the role of chain of custody in digital forensics;

    (B)   describe safe data handling procedures;

    (C)   explain the fundamental concepts of confidentiality, integrity, availability, authentication, and authorization;

    (D)   identify and report information conflicts or suspicious activity;

    (E)   identify events of interest and suspicious activity by examining network traffic; and

    (F)   identify events of interest and suspicious activity by examining event logs.

(12)   Incident response. The student analyzes the various ways systems can be compromised. The student is expected to:

    (A)   analyze the different signatures of cyberattacks; and

    (B)   identify points of weakness and attack vectors such as online spoofing, phishing, and social engineering.

§130.425. Discrete Mathematics for Computer Science (One Credit), Beginning with School Year 2012-2013.

(a)   General requirements. Students shall be awarded one credit for successful completion of this course. Prerequisite: Algebra II. This course is recommended for students in Grades 11 and 12.

(b)   Introduction.

(1)   Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

(2)   The Science, Technology, Engineering, and Mathematics (STEM) Career Cluster focuses on planning, managing, and providing scientific research and professional and technical services, including laboratory and testing services, and research and development services.

(3)   Discrete Mathematics for Computer Science provides the tools used in most areas of computer science. Exposure to the mathematical concepts and discrete structures presented in this course is essential in order to provide an adequate foundation for further study. Discrete Mathematics for Computer Science is generally listed as a core requirement for Computer Science majors. Course topics are divided into six areas: sets, functions, and relations; basic logic; proof techniques; counting basics; graphs and trees; and discrete probability. Mathematical topics are interwoven with computer science applications to enhance the students' understanding of the introduced mathematics. Students will develop the ability to see computational problems from a mathematical perspective. Introduced to a formal system (propositional and predicate logic) upon which mathematical reasoning is based, students will acquire the necessary knowledge to read and construct mathematical arguments (proofs), understand mathematical statements (theorems), and use mathematical problem-solving tools and strategies. Students will be introduced to discrete data structures such as sets, discrete functions, and relations and graphs and trees. Students will also be introduced to discrete probability and expectations. The six strands include creativity and innovation; communication and collaboration; research and information fluency; critical thinking; problem solving, and decision making; digital citizenship; and technology operations and concepts.

(4)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

(5)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)   Knowledge and skills.

(1)   Creativity and innovation. The student develops products and generates new understanding by extending existing knowledge. The student is expected to:

(A)   model algorithms and real-world situations using formal tools of symbolic logic;

(B)   model computer science problems by using graphs and trees; and

(C)   calculate the probabilities of events and expectations of random variables for such problems as games of chance.

(2)   Communication and collaboration. The student communicates and collaborates with peers to contribute to his or her own learning and the learning of others. The student is expected to:

(A)   convert spoken language statements to appropriate statements in propositional logic;

(B)   explain basic terminology of sets, functions, and relations;

(C)   state the definition of the Master theorem;

(D)   use the context of a particular application to interpret the meaning derived when computing the permutations and combinations of a set;

(E)   interpret associated operations and terminology in context; and

(F)   define and provide examples of logical equivalence, normal forms, validity, and modus ponens/modus tollens.

(3)   Research and information fluency. The student locates, analyzes, processes, and organizes data. The student is expected to:

      (A)   construct truth tables for negation, conjunction, disjunction, implication, biconditional, and bit operators; and

      (B)   use truth tables to demonstrate propositional relations.

(4)   Critical thinking, problem solving, and decision making. The student uses appropriate strategies to analyze problems and design algorithms. The student is expected to:

      (A)   analyze practical examples using appropriate models of sets, functions, and relations;

      (B)   compare and contrast tautology, contradiction, and contingency as related to propositional equivalences;

      (C)   compare and contrast examples and use of counterexamples, contrapositions, and contradictions;

      (D)   describe the appropriate use and limitations of predicate logic;

      (E)   apply formal methods of symbolic propositional and predicate logic;

      (F)   use formal logic proofs and logical reasoning to solve problems;

      (G)   outline the basic structure of proofs, including direct, indirect, contradiction, induction, existence, and constructive proofs;

      (H)   compare and contrast the types of problems best satisfied by direct, indirect, contradiction, induction, existence, and constructive proofs;

      (I)   relate mathematical induction to recursion and recursively defined structures;

      (J)   compare and contrast weak, strong, and structural induction, including when each is most appropriately used and examples of each;

      (K)   compare and contrast dependent and independent events;

      (L)   use recurrence equations to analyze algorithms and other practical problems;

      (M)   use counting techniques to analyze algorithms and other practical problems;

      (N)   apply probability tools to solve problems; and

      (O)   define, compare, and contrast simple graphs, multigraphs, and directed and undirected graphs using definitions, properties, and examples, including special cases.

(5)   Digital citizenship. The student explores and understands safety, legal, cultural, and societal issues relating to the use of technology and information. The student is expected to:

      (A)   model ethical acquisition and use of digital information;

      (B)   demonstrate proper digital etiquette, responsible use of software, and knowledge of acceptable use policies; and

      (C)   investigate how the concepts of discrete mathematics are related to relevant problems and significant questions.

(6)   Technology operations and concepts. The student understands technology concepts, systems, and operations as they apply to computer science. The student is expected to:

      (A)   perform operations associated with sets, functions, and relations;

      (B)   apply basic counting principles, including cardinality and the pigeonhole principle;

      (C)   apply appropriate precedence when using logical operators;

(D)   use appropriate strategies, including De Morgan's Laws, to identify propositional equivalences;

(E)   identify and appropriately use predicates, existential and universal quantifiers, and valid arguments;

(F)   identify possible applications of proofs, including evaluating algorithmic complexity;

(G)   state and appropriately use the product and sum rules;

(H)   compute permutations and combinations of a set;

(I)   solve a variety of basic recurrence equations;

(J)   apply the binomial theorem to independent events;

(K)   apply Bayes' theorem to dependent events;

(L)   demonstrate transversal methods for trees and graphs; and

(M)   relate graphs and trees to data structures, algorithms, and counting.

§130.426. Game Programming and Design (One Credit).

(a)   General requirements. Students shall be awarded one credit for successful completion of this course. Prerequisite: Algebra I. This course is recommended for students in Grades 9-12.

(b)   Introduction.

(1)   Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

(2)   The Science, Technology, Engineering, and Mathematics (STEM) Career Cluster focuses on planning, managing, and providing scientific research and professional and technical services, including laboratory and testing services, and research and development services.

(3)   Game Programming and Design will foster student creativity and innovation by presenting students with opportunities to design, implement, and present meaningful programs through a variety of media. Students will collaborate with one another, their instructor, and various electronic communities to solve gaming problems. Through data analysis, students will include the identification of task requirements, plan search strategies, and use programming concepts to access, analyze, and evaluate information needed to design games. By acquiring programming knowledge and skills that support the work of individuals and groups in solving problems, students will select the technology appropriate for the task, synthesize knowledge, create solutions, and evaluate the results. Students will learn digital citizenship by researching current laws and regulations and by practicing integrity and respect. Students will create a computer game that is presented to an evaluation panel. The six strands include creativity and innovation; communication and collaboration; research and information fluency; critical thinking; problem solving, and decision making; digital citizenship; and technology operations and concepts.

(4)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

(5)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)   Knowledge and skills.

(1)   Creativity and innovation. The student develops products and generates new understanding by extending existing knowledge. The student is expected to:

(A)   understand the basic game design elements, including conceptual ideas, storyline, visualization, storyboard, game effects, sound elements, game play, game controls, and player tutorial;

(B)   create a design concept document;

(C)   create a storyboard;

(D)   demonstrate an understanding of the fundamentals of game art, including the look and feel, graphics coordinate system, basics of color, and color palettes;

(E)   use bitmap graphics images, including designing, creating, reading, and manipulating images;

(F)   create backgrounds, including solid, image, and tiled backgrounds;

(G)   write programs creating images using geometric shapes;

(H)   create games using sprites by evaluating the role of sprites, creating sprites, and managing sprites;

(I)   create programs using sprite sheets;

(J)   demonstrate an understanding of image rendering, including transparency, refresh rate, hardware acceleration, and animation;

(K)   find, create, and edit game audio sound effects and music; and

(L)   implement game sound mechanics, including playing, pausing, and looping.

(2)   Communication and collaboration. The student communicates and collaborates with peers to contribute to his or her own learning and the learning of others. The student is expected to:

(A)   design and implement procedures to set timelines for, track the progress of, and evaluate a game product;

(B)   seek and respond to input from peers and professionals in evaluating a game project;

(C)   demonstrate knowledge and appropriate use of operating systems, program development tools, and networking resources;

(D)   use network resources to acquire, organize, maintain, and evaluate information;

(E)   collaborate to research the business of games, including the roles of developer, marketing, publisher, and retail sales; and

(F)   demonstrate an understanding of and evaluate online technology, including online interaction and massive multiplayer games.

(3)   Research and information fluency. The student locates, analyzes, processes, and organizes data. The student is expected to:

(A)   play board games to research and collect game play data;

(B)   evaluate, analyze, and document game styles and playability; and

(C)   research the dramatic elements in games, including kinds of fun, player types, and nonlinear storytelling.

(4)   Critical thinking, problem solving, and decision making. The student uses appropriate strategies to analyze problems and design algorithms. The student is expected to:

(A)   demonstrate an understanding of the game design process, including generating ideas, brainstorming, and paper prototyping;

(B)   write programs using variables of different data types;

(C)   evaluate game rules and instructions;

(D)   demonstrate an understanding of the user experience by comparing rules and game-play patterns;

(E)   write game rules and instructions;

(F)   develop game software;

(G)   write computer game code, resolve game defects, and revise existing game code; and

(H)   test a finished game product by implementing sound testing techniques.

(5)   Digital citizenship. The student explores and understands safety, legal, cultural, and societal issues relating to the use of technology and information. The student is expected to:

     (A)   explore intellectual property, privacy, sharing of information, copyright laws, and software licensing agreements;

     (B)   model ethical acquisition and use of digital information;

     (C)   demonstrate proper digital etiquette when using networks, responsible use of software, and knowledge of acceptable use policies;

     (D)   model respect of intellectual property, including manipulating graphics, morphing graphics, editing graphics, and editing sound;

     (E)   discuss and evaluate the social issues surrounding gaming; and

     (F)   evaluate the cultural aspects of game design fundamentals, including rationale for games and types of games.

(6)   Technology operations and concepts. The student understands technology concepts, systems, and operations as they apply to game programming. The student is expected to:

     (A)   identify basic game components, including the game engine, game play subsystems, data structures, models, and interfaces;

     (B)   generate random numbers in a program;

     (C)   create a program implementing conditional statements;

     (D)   develop an appropriate data model;

     (E)   demonstrate an understanding of and apply object-oriented game programming;

     (F)   demonstrate an understanding of game programming essentials, including event-driven programming, communicating with messages, and device management;

     (G)   demonstrate an understanding of the role of game events, the animation loop, and game timing;

     (H)   demonstrate an understanding of the role of game engines;

     (I)   demonstrate an understanding of video display flicker and double buffering;

     (J)   apply basic game screen design and layout, including visual controls, user interfaces, menus, and options;

     (K)   use game control design to understand, access, and control input devices, including keyboard, mouse, and joystick;

     (L)   demonstrate an understanding of and apply game animation, including the principles of animation and frame-based animation;

     (M)   demonstrate an understanding of decision making and types of decisions;

     (N)   demonstrate an understanding of game events, including listeners, triggers, and timed events;

     (O)   demonstrate an understanding of and implement collision detection, including bounding boxes and sprite collisions;

     (P)   implement a tile-based game, including loading tile maps, drawing tile maps, rendering a tile map, and layering sprites;

(Q)   demonstrate an understanding of artificial intelligence and develop and implement artificial intelligence;

(R)   demonstrate an understanding of game balance and tuning; and

(S)   demonstrate an understanding of player progression, including leveling, linear progression, and maintaining high score data.

§130.427. Mobile Application Development (One Credit).

(a)   General requirements. Students shall be awarded one credit for successful completion of this course. Prerequisite: Algebra I. This course is recommended for students in Grades 9-12.

(b)   Introduction.

(1)   Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

(2)   The Science, Technology, Engineering, and Mathematics (STEM) Career Cluster focuses on planning, managing, and providing scientific research and professional and technical services, including laboratory and testing services, and research and development services.

(3)   Mobile Application Development will foster students' creativity and innovation by presenting opportunities to design, implement, and deliver meaningful projects using mobile computing devices. Students will collaborate with one another, their instructor, and various electronic communities to solve problems presented throughout the course. Through data analysis, students will identify task requirements, plan search strategies, and use software development concepts to access, analyze, and evaluate information needed to program mobile devices. By using software design knowledge and skills that support the work of individuals and groups in solving problems, students will select the technology appropriate for the task, synthesize knowledge, create solutions, and evaluate the results. Students will learn digital citizenship by researching current laws and regulations and by practicing integrity and respect. Students will gain an understanding of the principles of mobile application development through the study of development platforms, programming languages, and software design standards. The six strands include creativity and innovation; communication and collaboration; research and information fluency; critical thinking; problem solving, and decision making; digital citizenship; and technology operations and concepts.

(4)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

(5)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)   Knowledge and skills.

(1)   Creativity and innovation. The student develops products and generates new understanding by extending existing knowledge. The student is expected to:

(A)   create effective user interfaces appropriate for a specified mobile device that is best suited for an identified purpose;

(B)   create effective user interfaces for browser-based, native, and hybrid mobile applications;

(C)   create mobile application components appropriate for identified needs;

(D)   create browser-based applications for mobile devices;

(E)   create native applications that can reside on specified mobile devices; and

(F)   create mobile applications that combine native and hybrid components.

(2)   Communication and collaboration. The student communicates and collaborates with peers to contribute to his or her own learning and the learning of others. The student is expected to:

    (A)   demonstrate an understanding of and discuss how teams function;

    (B)   use teamwork to solve problems;

    (C)   describe the development workflow of mobile applications;

    (D)   use time-management techniques to develop and maintain work schedules, meet deadlines, and establish mobile application project criteria;

    (E)   describe a problem solution; and

    (F)   document and share problem solutions through various media.

(3)   Research and information fluency. The student locates, analyzes, processes, and organizes data. The student is expected to:

    (A)   analyze, identify, and describe mobile application project stakeholders and their perspectives;

    (B)   collect and analyze available data to identify mobile application project requirements;

    (C)   analyze, identify, and describe input, output, and processing requirements; and

    (D)   analyze, identify, and define hardware and software specifications.

(4)   Critical thinking, problem solving, and decision making. The student uses appropriate strategies to analyze problems and design algorithms. The student is expected to:

    (A)   compare and contrast design decisions based on the hardware considerations of a mobile device;

    (B)   compare and contrast available mobile technologies, including platforms and their operating systems;

    (C)   compare and contrast available development approaches, including application to specific technologies and platforms;

    (D)   determine the most appropriate solution for the development of a given mobile application, including browser-based, native, and hybrid approaches;

    (E)   compare and contrast available programming languages and how their use might be applied to specific technologies and platforms;

    (F)   identify and justify the selection of an appropriate programming language, including available resources and required interfaces;

    (G)   select an appropriate program development environment;

    (H)   identify and use available libraries;

    (I)   evaluate and justify the selection of appropriate options and components;

    (J)   compare and contrast available networks and their implications for mobile application development; and

    (K)   compare and contrast design strategies related to mobile network and device security.

(5)   Digital citizenship. The student explores and understands safety, legal, cultural, and societal issues relating to the use of technology and information. The student is expected to:

    (A)   discuss copyright laws and issues;

    (B)   model ethical acquisition and use of digital information;

    (C)   cite sources using established methods;

(D)   demonstrate proper digital etiquette and knowledge of acceptable use policies;

(E)   investigate mobile device security measures such as passwords, virus detection, and virus prevention;

(F)   describe potential risks and benefits associated with the use of a mobile application;

(G)   identify current and emerging technologies related to mobile applications; and

(H)   evaluate technologies and assess their applicability to current mobile applications.

(6)   Technology operations and concepts. The student understands technology concepts, systems, and operations as they apply to computer science. The student is expected to:

(A)   demonstrate an understanding of the difference between desktop and mobile applications;

(B)   demonstrate an understanding of hardware and software structures and requirements in the design of mobile applications;

(C)   recognize multiple platforms and demonstrate an understanding of their associated requirements;

(D)   recognize various program development environments;

(E)   demonstrate an understanding of event-based programming and its appropriate use;

(F)   describe how memory management affects mobile application design;

(G)   demonstrate an understanding of how low bandwidth and the mobility of a device affect the design of mobile applications;

(H)   identify applications that are best suited for mobile devices;

(I)   demonstrate an understanding of the use of libraries when designing mobile applications;

(J)   use a simulation tool to emulate a mobile device's functionality; and

(K)   use actual mobile devices to test mobile applications.

§130.428. Foundations of Cybersecurity (One Credit).

(a)   General requirements. Students shall be awarded one credit for successful completion of this course. This course is recommended for students in Grades 9-12.

(b)   Introduction.

(1)   Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

(2)   The Science, Technology, Engineering, and Mathematics (STEM) Career Cluster focuses on planning, managing, and providing scientific research and professional and technical services, including laboratory and testing services, and research and development services.

(3)   Cybersecurity is an evolving discipline concerned with safeguarding computers, networks, programs, and data from unauthorized access. As a field, it has gained prominence with the emergence of a globally-connected society. As computing has become more sophisticated, so too have the abilities of malicious agents looking to penetrate networks and seize private information. By evaluating prior incidents, cybersecurity professionals have the ability to craft appropriate responses to minimize disruptions to corporations, governments, and individuals.

(4)   In the Foundations of Cybersecurity course, students will develop the knowledge and skills needed to explore fundamental concepts related to the ethics, laws, and operations of cybersecurity. Students will examine trends and operations of cyberattacks, threats, and vulnerabilities. Students will review and explore security policies designed to mitigate risks. The skills obtained in this course prepare students for additional study in cybersecurity. A variety of courses are available to

students interested in this field. Foundations of Cybersecurity may serve as an introductory course in this field of study.

    (5)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

    (6)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)   Knowledge and skills.

    (1)   Employability skills. The student demonstrates necessary skills for career development and successful completion of course outcomes. The student is expected to:

        (A)   identify and demonstrate employable work behaviors such as regular attendance, punctuality, maintenance of a professional work environment, and effective written and verbal communication;

        (B)   identify and demonstrate positive personal qualities such as authenticity, resilience, initiative, and a willingness to learn new knowledge and skills;

        (C)   solve problems and think critically;

        (D)   demonstrate leadership skills and function effectively as a team member; and

        (E)   demonstrate an understanding of ethical and legal responsibilities in relation to the field of cybersecurity.

    (2)   Employability skills. The student identifies various employment opportunities and requirements in the cybersecurity field. The student is expected to:

        (A)   identify job and internship opportunities as well as accompanying duties and tasks;

        (B)   research careers in cybersecurity and information assurance along with the education and job skills required for obtaining a job in both the public and private sectors;

        (C)   identify and discuss certifications for cybersecurity-related careers; and

        (D)   research and develop resumes, digital portfolios, or professional profiles in the cybersecurity field.

    (3)   Ethics and laws. The student understands ethical and current legal standards, rights and restrictions governing technology, technology systems, digital media, and the use of social media. The student is expected to:

        (A)   demonstrate and advocate for ethical and legal behaviors both online and offline among peers, family, community, and employers;

        (B)   research local, state, national, and international cyber law such as the PATRIOT Act of 2001, General Data Protection Regulation, and Digital Millennium Copyright Act;

        (C)   research historic cases or events regarding cyber;

        (D)   demonstrate an understanding of ethical and legal behavior when presented with various scenarios related to cyber activities;

        (E)   define and identify techniques such as hacking, phishing, social engineering, online piracy, spoofing, and data vandalism; and

        (F)   identify and use appropriate methods for citing sources.

    (4)   Ethics and laws. The student identifies the consequences of ethical versus malicious hacking. The student is expected to:

        (A)   identify motivations for hacking;

   (B) identify and describe the impact of cyberattacks on the global community, society, and individuals;

   (C) distinguish between a cyber attacker and a cyber defender;

   (D) differentiate types of hackers such as black hats, white hats, and gray hats;

   (E) determine possible outcomes and legal ramifications of ethical versus malicious hacking practices; and

   (F) debate the varying perspectives of ethical versus malicious hacking.

  (5) Ethics and laws. The student identifies and defines cyberterrorism and counterterrorism. The student is expected to:

   (A) define cyberterrorism, state-sponsored cyberterrorism, and hacktivism;

   (B) compare and contrast physical terrorism and cyberterrorism, including domestic and foreign actors;

   (C) define and explain intelligence gathering and counterterrorism;

   (D) identify the role of cyber defenders in protecting national interests and corporations;

   (E) identify the role of cyber defense in society and the global economy; and

   (F) explain the importance of protecting public infrastructures such as electrical power grids, water systems, pipelines, transportation, and nuclear plants.

  (6) Digital citizenship. The student understands and demonstrates the social responsibility of end users regarding significant issues related to digital technology, digital hygiene, and cyberbullying. The student is expected to:

   (A) identify and understand the nature and value of privacy;

   (B) analyze the positive and negative implications of a digital footprint and the maintenance and monitoring of an online presence;

   (C) discuss the role and impact of technology on privacy;

   (D) identify the signs, emotional effects, and legal consequences of cyberbullying and cyberstalking; and

   (E) identify and discuss effective ways to prevent, deter, and report cyberbullying.

  (7) Cybersecurity skills. The student understands basic cybersecurity concepts and definitions. The student is expected to:

   (A) define information security and cyber defense;

   (B) identify basic risk management and risk assessment principles related to cybersecurity threats and vulnerabilities;

   (C) explain the fundamental concepts of confidentiality, integrity, availability, authentication, and authorization;

   (D) describe the inverse relationship between privacy and security;

   (E) identify and analyze cybersecurity breaches and incident responses;

   (F) identify and analyze security concerns in areas such as physical, network, cloud, and web;

   (G) define and discuss challenges faced by cybersecurity professionals;

   (H) identify common risks, alerts, and warning signs of compromised computer and network systems;

   (I) understand and explore the vulnerability of network-connected devices; and

(J)   use appropriate cybersecurity terminology.

(8)   Cybersecurity skills. The student understands and explains various types of malicious software (malware). The student is expected to:

(A)   define malware, including spyware, ransomware, viruses, and rootkits;

(B)   identify the transmission and function of malware such as Trojans, worms, and viruses;

(C)   discuss the impact malware has had on the cybersecurity landscape;

(D)   explain the role of reverse engineering for detecting malware and viruses;

(E)   compare free and commercial antivirus software alternatives; and

(F)   compare free and commercial anti-malware software alternatives.

(9)   Cybersecurity skills. The student understands and demonstrates knowledge of techniques and strategies to prevent a system from being compromised. The student is expected to:

(A)   define system hardening;

(B)   demonstrate basic use of system administration privileges;

(C)   explain the importance of patching operating systems;

(D)   explain the importance of software updates;

(E)   describe standard practices to configure system services;

(F)   explain the importance of backup files; and

(G)   research and understand standard practices for securing computers, networks, and operating systems.

(10)   Cybersecurity skills. The student understands basic network operations. The student is expected to:

(A)   identify basic network addressing and devices, including switches and routers;

(B)   analyze incoming and outgoing rules for traffic passing through a firewall;

(C)   identify well known ports by number and service provided, including port 22 (ssh), port 80 (http), and port 443 (https);

(D)   identify commonly exploited ports and services, including ports 20 and 21 (ftp) and port 23 (telnet); and

(E)   identify common tools for monitoring ports and network traffic.

(11)   Cybersecurity skills. The student identifies standard practices of system administration. The student is expected to:

(A)   define what constitutes a secure password;

(B)   create a secure password policy, including length, complexity, account lockout, and rotation;

(C)   identify methods of password cracking such as brute force and dictionary attacks; and

(D)   examine and configure security options to allow and restrict access based on user roles.

(12)   Cybersecurity skills. The student demonstrates necessary steps to maintain user access on the computer system. The student is expected to:

(A)   identify the different types of user accounts and groups on an operating system;

(B)   explain the fundamental concepts and standard practices related to access control, including authentication, authorization, and accounting;

      (C)   compare methods for single- and dual-factor authentication such as passwords, biometrics, personal identification numbers (PINs), and security tokens;

      (D)   define and explain the purpose of an air-gapped computer; and

      (E)   explain how hashes and checksums may be used to validate the integrity of transferred data.

(13)   Cybersecurity skills. The student explores the field of digital forensics. The student is expected to:

      (A)   explain the importance of digital forensics to law enforcement, government agencies, and corporations;

      (B)   identify the role of chain of custody in digital forensics;

      (C)   explain the four steps of the forensics process, including collection, examination, analysis, and reporting;

      (D)   identify when a digital forensics investigation is necessary;

      (E)   identify information that can be recovered from digital forensics investigations such as metadata and event logs; and

      (F)   analyze the purpose of event logs and identify suspicious activity.

(14)   Cybersecurity skills. The student explores the operations of cryptography. The student is expected to:

      (A)   explain the purpose of cryptography and encrypting data;

      (B)   research historical uses of cryptography; and

      (C)   review simple cryptography methods such as shift cipher and substitution cipher.

(15)   Risk assessment. The student understands information security vulnerabilities, threats, and computer attacks. The student is expected to:

      (A)   define and describe vulnerability, payload, exploit, port scanning, and packet sniffing as they relate to hacking;

      (B)   define and describe cyberattacks, including man-in-the-middle, distributed denial of service, and spoofing;

      (C)   explain how computer vulnerabilities leave systems open to cyberattacks;

      (D)   identify threats to systems such as back-door attacks and insider threats;

      (E)   differentiate types of social engineering attacks such as phishing, shoulder surfing, hoaxes, and dumpster diving;

      (F)   explain how users are the most common vehicle for compromising a system at the application level; and

      (G)   identify various types of application-specific attacks.

(16)   Risk assessment. The student understands, identifies, and explains the strategies and techniques of both ethical and malicious hackers. The student is expected to:

      (A)   identify internal and external threats to computer systems;

      (B)   identify the capabilities of vulnerability assessment tools, including open source tools; and

      (C)   explain the concept of penetration testing, tools, and techniques.

(17)   Risk assessment. The student evaluates the risks of wireless networks. The student is expected to:

      (A)   compare risks associated with connecting devices to public and private wireless networks;

(B)   explain device vulnerabilities and security solutions on a wireless network;

(C)   compare wireless encryption protocols;

(D)   debate the broadcasting or hiding of a wireless service set identifier (SSID); and

(E)   research and discuss wireless threats such as MAC spoofing and war driving.

(18)   Risk assessment. The student analyzes threats to computer applications. The student is expected to:

(A)   define application security;

(B)   identify methods of application security such as secure development practices;

(C)   discuss methods of online spoofing such as web links in email, instant messaging, social media, and other online communication with malicious links;

(D)   explain the purpose and function of vulnerability scanners;

(E)   explain how coding errors may create system vulnerabilities; and

(F)   analyze the risks of distributing insecure programs.

(19)   Risk assessment. The student understands the implications of sharing information and access with others. The student is expected to:

(A)   describe the impact of granting applications unnecessary permissions;

(B)   describe the risks of granting third parties access to personal and proprietary data on social media and systems; and

(C)   describe the risks involved with accepting Terms of Service (ToS) or End User License Agreements (EULA) without a basic understanding of the terms or agreements.

§130.429. Cybersecurity Capstone (One Credit).

(a)   General requirements. Students shall be awarded one credit for successful completion of this course. This course is recommended for students in Grades 11 and 12. Recommended prerequisite: Foundations of Cybersecurity.

(b)   Introduction.

(1)   Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging foundations.

(2)   The Science, Technology, Engineering, and Mathematics (STEM) Career Cluster focuses on planning, managing, and providing scientific research and professional and technical services, including laboratory and testing services, and research and development services.

(3)   Cybersecurity is an evolving discipline concerned with safeguarding computers, networks, programs, and data from unauthorized access. As a field, it has gained prominence with the emergence of a globally-connected society. As computing has become more sophisticated, so too have the abilities of malicious agents looking to penetrate networks and seize private information. By evaluating prior incidents, cybersecurity professionals have the ability to craft appropriate responses to minimize disruptions to corporations, governments, and individuals.

(4)   In the Cybersecurity Capstone course, students will develop the knowledge and skills needed to explore advanced concepts related to the ethics, laws, and operations of cybersecurity. Students will examine trends and operations of cyberattacks, threats, and vulnerabilities. Students will develop security policies to mitigate risks. The skills obtained in this course prepare students for additional study toward industry certification. A variety of courses are available to students interested in the cybersecurity field. Cybersecurity Capstone may serve as a culminating course in this field of study.

(5) Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

(6) Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c) Knowledge and skills.

(1) Employability skills. The student demonstrates necessary skills for career development and successful completion of course outcomes. The student is expected to:

(A) identify and demonstrate employable work behaviors such as regular attendance, punctuality, maintenance of a professional work environment, and effective written and verbal communication;

(B) identify and demonstrate positive personal qualities such as authenticity, resilience, initiative, and a willingness to learn new knowledge and skills;

(C) solve problems and think critically;

(D) demonstrate leadership skills and function effectively as a team member; and

(E) demonstrate an understanding of ethical and legal responsibilities in relation to the field of cybersecurity.

(2) Employability skills. The student identifies various employment opportunities in the cybersecurity field. The student is expected to:

(A) develop a personal career plan along with the education, job skills, and experience necessary to achieve career goals;

(B) develop a resume or a portfolio appropriate to a chosen career plan; and

(C) illustrate interview skills for successful job placement.

(3) Ethics and laws. The student evaluates ethical and current legal standards, rights and restrictions governing technology, technology systems, digital media and information technology, and the use of social media in the context of today's society. The student is expected to:

(A) analyze and apply to a scenario local, state, national, and international cyber law such as David's Law and Digital Millennium Copyright Act;

(B) evaluate historic cases or events regarding cyber; and

(C) explore compliance requirements such as Section 508 of the Rehabilitation Act of 1973, Family Educational Rights and Privacy Act of 1974 (FERPA), Health Insurance Portability and Accountability Act of 1996 (HIPAA), and Gramm-Leach-Bliley Act (GLBA).

(4) Digital citizenship. The student understands and demonstrates the social responsibility of end users regarding significant issues relating to digital technology, safety, digital hygiene, and cyberbullying. The student is expected to:

(A) debate the relationship between privacy and security; and

(B) identify ethical or unethical behavior when presented with various scenarios related to cyber activities.

(5) Cybersecurity skills. The student explains the importance and process of penetration testing. The student is expected to:

(A) define the phases of penetration testing, including plan, discover, attack, and report;

(B) develop a plan to gain authorization for penetration testing;

(C) identify commonly used vulnerability scanning tools such as port scanning, packet sniffing, and password crackers;

(D) develop a list of exploits based on results of scanning tool reports; and

(E) prioritize a list of mitigations based on results of scanning tool reports.

(6) Cybersecurity skills. The student understands common cryptographic methods. The student is expected to:

(A) evaluate symmetric and asymmetric algorithms such as substitution cipher, Advanced Encryption Standard (AES), Diffie-Hellman, and Rivest-Shamir-Adleman (RSA);

(B) explain the purpose of hashing algorithms, including blockchain;

(C) explain the function of password salting;

(D) explain and create a digital signature; and

(E) explain steganography.

(7) Cybersecurity skills. The student understands the concept of cyber defense. The student is expected to:

(A) explain the purpose of establishing system baselines;

(B) evaluate the role of physical security;

(C) evaluate the functions of network security devices such as firewalls, intrusion detection systems (IDS), intrusion prevention systems (IPS), and intrusion detection prevention systems (IDPS);

(D) analyze log files for anomalies; and

(E) develop a plan demonstrating the concept of defense in depth.

(8) Cybersecurity skills. The student demonstrates an understanding of secure network design. The student is expected to:

(A) explain the benefits of network segmentation, including sandboxes, air gaps, and virtual local area networks (VLAN);

(B) investigate the role of software-managed networks, including virtualization;

(C) discuss the role of honeypots and honeynets in networks; and

(D) create an incoming and outgoing network policy for a firewall.

(9) Cybersecurity skills. The student integrates principles of digital forensics. The student is expected to:

(A) identify cyberattacks by their signatures;

(B) explain proper data acquisition;

(C) examine evidence from devices for suspicious activities; and

(D) research current cybercrime cases involving digital forensics.

(10) Cybersecurity skills. The student explores emerging technology. The student is expected to:

(A) describe the integration of artificial intelligence and machine learning in cybersecurity;

(B) investigate impacts made by predictive analytics on cybersecurity; and

(C) research other emerging trends such as augmented reality and quantum computing.

(11) Cybersecurity skills. The student uses various operating system environments. The student is expected to:

(A) issue commands via the command line interface (CLI) such as ls, cd, pwd, cp, mv, chmod, ps, sudo, and passwd;

        (B)   describe the file system structure for multiple operating systems;

        (C)   manipulate and edit files within the CLI; and

        (D)   determine network status using the CLI with commands such as ping, ifconfig/ipconfig, traceroute/tracert, and netstat.

(12)   Cybersecurity skills. The student clearly and effectively communicates technical information. The student is expected to:

        (A)   collaborate with others to create a technical report;

        (B)   create, review, and edit a report summarizing technical findings; and

        (C)   present technical information to a non-technical audience.

(13)   Risk assessment. The student analyzes various types of threats, attacks, and vulnerabilities. The student is expected to:

        (A)   differentiate types of attacks, including operating systems, software, hardware, network, physical, social engineering, and cryptographic;

        (B)   explain blended threats such as combinations of software, hardware, network, physical, social engineering, and cryptographic;

        (C)   discuss risk response techniques, including accept, transfer, avoid, and mitigate;

        (D)   develop a plan of preventative measures to address cyberattacks;

        (E)   describe common web vulnerabilities such as cross-site scripting, buffer overflow, injection, spoofing, and denial of service;

        (F)   describe common data destruction and media sanitation practices such as wiping, shredding, and degaussing; and

        (G)   develop an incident response plan for a given scenario or recent attack.

(14)   Risk assessment. The student understands risk management processes and concepts. The student is expected to:

        (A)   describe various access control methods such as mandatory access control (MAC), role-based access control (RBAC), and discretionary access control (DAC);

        (B)   develop and defend a plan for multi-factor access control using components such as biometric verification systems, key cards, tokens, and passwords; and

        (C)   review a disaster recovery plan (DRP) that includes backups, redundancies, system dependencies, and alternate sites.

(15)   Risk assessment. The student investigates the role and effectiveness of environmental controls. The student is expected to:

        (A)   explain commonly used physical security controls, including lock types, fences, barricades, security doors, and mantraps; and

        (B)   describe the role of embedded systems such as fire suppression; heating, ventilation, and air conditioning (HVAC) systems; security alarms; and video monitoring.

§130.430. Advanced Placement (AP) Computer Science A (Two Credits).

(a)   General requirements. Students shall be awarded two credits for successful completion of this course. Recommended prerequisites: Algebra I or a student should be comfortable with functions and the concepts found in the uses of functional notation such as $f(x) = x + 2$ and $f(x) = g(h(x))$.

(b)   Content requirements. Content requirements for Advanced Placement (AP) Computer Science A are prescribed in the College Board Publication Advanced Placement Course Description: Computer Science A, published by The College Board.

§130.431. Advanced Placement (AP) Computer Science Principles (One Credit).

(a)   General requirements. Students shall be awarded one credit for successful completion of this course. Recommended prerequisite: Algebra I.

(b)   Content requirements. Content requirements for Advanced Placement (AP) Computer Science Principles are prescribed in the College Board Publication Advanced Placement® Curriculum Framework: AP Computer Science Principles, published by The College Board.

§130.432. International Baccalaureate (IB) Computer Science Standard Level (Two Credits)

(a)   General requirements. Students shall be awarded two credits for successful completion of this course. Recommended prerequisites: Computer Science I, Algebra II.

(b)   Content requirements. Content requirements for IB Computer Science Standard Level are prescribed by the International Baccalaureate Organization. Subject guides may be obtained from International Baccalaureate of North America.

§130.433. International Baccalaureate (IB) Computer Science Higher Level (Two Credits).

(a)   General requirements. Students shall be awarded two credits for successful completion of this course. Recommended prerequisites: Computer Science I, Algebra II.

(b)   Content requirements. Content requirements for IB Computer Science Higher Level are prescribed by the International Baccalaureate Organization. Subject guides may be obtained from International Baccalaureate of North America.

§130.434. International Baccalaureate (IB) Information Technology in a Global Society Standard Level (Two Credits).

(a)   General requirements. Students shall be awarded two credits for successful completion of this course. Recommended prerequisites: Computer Science I, Algebra II.

(b)   Content requirements. Content requirements for IB Information Technology in a Global Society Standard Level are prescribed by the International Baccalaureate Organization. Subject guides may be obtained from International Baccalaureate of North America.

§130.435. International Baccalaureate (IB) Information Technology in a Global Society Higher Level (Two Credits).

(a)   General requirements. Students shall be awarded two credits for successful completion of this course. Recommended prerequisites: Computer Science I, Algebra II.

(b)   Content requirements. Content requirements for IB Information Technology in a Global Society Higher Level are prescribed by the International Baccalaureate Organization. Subject guides may be obtained from International Baccalaureate of North America.

Subchapter Q. Energy

§130.485. Oil and Gas Production I (One Credit).

(a)   General requirements. This course is recommended for students in Grades 9-12. Students shall be awarded one credit for successful completion of this course.

(b)   Introduction.

    (1)   Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

    (2)   The Energy Career Cluster focuses on Texas's diverse economic landscape, geography and natural resources, including renewable energy potential, transportation system, labor force, and leadership in environmental research.

    (3)   In Oil and Gas Production I, students will identify specific career opportunities and skills, abilities, tools, certification, and safety measures associated with each career. Students will also understand components, systems, equipment, and production and safety regulations associated with oil and gas wells. To prepare for careers in oil and gas production, students must attain academic skills and knowledge, acquire technical knowledge and skills related to oil and gas production and the workplace, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer their knowledge and skills and technologies in a variety of settings.

    (4)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

    (5)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)   Knowledge and skills.

    (1)   The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:

        (A)   identify career development, education, and entrepreneurship opportunities in the oil and gas production field;

        (B)   apply competencies related to resources, information, interpersonal skills, problem solving, critical thinking, and systems of operation;

        (C)   demonstrate knowledge of personal and occupational safety, environmental regulations, and first-aid policy in the workplace;

        (D)   analyze employers' expectations such as appropriate work habits, ethical conduct, legal responsibilities, and good citizenship skills; and

        (E)   demonstrate leadership skills to accomplish organizational goals and objectives.

    (2)   The student understands the history of and process for drilling a well. The student is expected to:

        (A)   describe the history of drilling for petroleum in the United States and abroad;

        (B)   describe and appraise routine drilling operations, offshore drilling, and new drilling technologies;

        (C)   describe the tools and techniques for directional drilling;

        (D)   examine the differences between fishing, retrieving, and repairing pipe;

        (E)   describe the methods for completing a well in order for production to begin;

        (F)   assess fluid pressure;

(G)   determine how the flow is initiated in a new well;

(H)   differentiate between major components of a well and discuss the purpose, design, and operation of each component;

(I)   describe activities associated with completing a well;

(J)   describe the well completion processes and equipment;

(K)   summarize the instruments and techniques used when logging and testing during the drilling and completion of a well;

(L)   list the factors that are analyzed when studying a poorly producing well; and

(M)   identify the responsibilities, characteristics, abilities, and work behaviors of personnel that are involved in well service.

(3)   The student discusses and identifies components, systems, equipment, production, and safety regulations associated with oil and gas wells. The student is expected to:

(A)   identify the major systems and equipment used in the production of oil and gas;

(B)   identify and describe the wellhead equipment that controls fluid flow;

(C)   trace the process flow through the oil and gas production systems and equipment;

(D)   discuss the purpose of the wellhead and identify the major components;

(E)   describe the purpose, design, and operation of each wellhead component;

(F)   compare and contrast the major differences in wellhead construction;

(G)   compare and contrast onshore and offshore facilities;

(H)   compare and contrast oil and gas regions within the United States;

(I)   describe the safety, health, and environmental concerns associated with working around a wellhead;

(J)   explain how the wellhead system affects other production systems tied to the wellhead;

(K)   describe the activities associated with monitoring and regulating well flow;

(L)   describe the wellhead maintenance activities performed by the production technician;

(M)   operate and troubleshoot a wellhead using a computer simulator, pilot plant, or tabletop unit; and

(N)   identify the operating conditions that would warrant a manual or automatic shut-in of a well and steps involved in a manual shut-in of a well.

(4)   The student discusses safety issues related to the oil and gas industry. The student is expected to:

(A)   describe the safety, health, and environmental concerns associated with drilling, production, and maintenance; and

(B)   research safety standards in the petroleum industry such as the Bureau of Safety and Environmental Enforcement (BSEE), United States Coast Guard (USCG), American Petroleum Institute (API), Department of Transportation (DOT), Occupational Safety and Health Administration (OSHA), Environmental Protection Agency (EPA), American Society for Testing and Materials (ASTM), American National Standards Institute (ANSI), and others.

§130.486. Oil and Gas Production II (One Credit).

(a)   General requirements. This course is recommended for students in Grades 10-12. Prerequisite: Oil and Gas Production I. Students shall be awarded one credit for successful completion of this course.

(b)   Introduction.

    (1)   Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

    (2)   The Energy Career Cluster focuses on Texas's diverse economic landscape, geography and natural resources, including renewable energy potential, transportation system, labor force, and leadership in environmental research.

    (3)   In Oil and Gas Production II, students will gain knowledge of the specific requirements for entry into post-secondary education and employment in the petroleum industry; research and discuss petroleum economics; research and discuss the modes of transportation in the petroleum industry; research and discuss environmental, health, and safety concerns; research and discuss different energy sources; and prepare for industry certification. To prepare for careers in oil and gas production, students must attain academic skills and knowledge, acquire technical knowledge and skills related to oil and gas production and the workplace, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer their knowledge and skills and technologies in a variety of settings.

    (4)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

    (5)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)   Knowledge and skills.

    (1)   The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:

        (A)   identify career development, education, and entrepreneurship opportunities in the oil and gas production field;

        (B)   identify careers in oil and gas production with required aptitudes in science, technology, engineering, mathematics, language arts, and/or social studies;

        (C)   apply technology skills to create an electronic portfolio of skills and abilities;

        (D)   apply competencies related to resources, information, interpersonal skills, problem solving, critical thinking, and systems of operation;

        (E)   demonstrate knowledge of personal and occupational safety, health, environmental regulations, and first-aid policy in the workplace; and

        (F)   analyze employers' expectations, including appropriate work habits, ethical conduct, legal responsibilities, and good citizenship skills.

    (2)   The student researches and discusses the modes of transportation and environmental, health, and safety concerns. The student is expected to:

        (A)   describe evolution of transportation in the petroleum industry;

        (B)   research and access the various ground methods of transportation;

        (C)   survey health and safety policies, procedures, regulations, and practices as they relate to transportation in the petroleum industry;

        (D)   research and discuss petroleum economics;

        (E)   compare marketing, sales, and distribution of petroleum products;

        (F)   identify supply chain businesses that create new supplies of oil and gas;

        (G)   identify supply creation companies and how they operate;

(H) discuss the factors in investment decision making; and

(I) calculate rates of return to evaluate prospects.

(3) The student researches the different methods of disposing of oil and gas waste and methods of cleanup. The student is expected to:

(A) discuss the disposal methods of exploration and production wastes;

(B) identify cleanup methods for blowouts and spills; and

(C) identify refining processes that minimize environmental impact.

(4) The student researches and identifies the different energy sources and priorities for the oil and gas industry. The student is expected to:

(A) research the petroleum industry to identify renewable energy sources;

(B) present the challenges and priorities of the petroleum industry;

(C) research the critical technologies needed in the future; and

(D) research the nontechnical solutions to energy needs.

§130.487. Oil and Gas Production III (One Credit).

(a) General requirements. This course is recommended for students in Grades 11 and 12. Prerequisite: Oil and Gas Production II. Students shall be awarded one credit for successful completion of this course.

(b) Introduction.

(1) Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

(2) The Energy Career Cluster focuses on Texas's diverse economic landscape, geography and natural resources, including renewable energy potential, transportation system, labor force, and leadership in environmental research.

(3) In Oil and Gas Production III, students will gain knowledge of hydraulic and pneumatic systems and skill requirements to work in oil and gas and related industries. Students complete an advance core curriculum that includes hydraulic and pneumatic systems involved in oil and gas production. This program is designed to train students in all areas of down and mid-stream operation skills.

(4) Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

(5) Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c) Knowledge and skills.

(1) The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:

(A) identify career development, education, and entrepreneurship opportunities in the oil and gas production field;

(B) identify careers in oil and gas production with required aptitudes in science, technology, engineering, mathematics, language arts, and/or social studies;

(C) apply technology skills to create an electronic portfolio of skills and abilities;

(D) apply competencies related to resources, information, interpersonal skills, problem solving, critical thinking, and systems of operation;

(E)   demonstrate knowledge of personal and occupational safety, health, environmental regulations, and first-aid policy in the workplace; and

(F)   analyze employers' expectations, including appropriate work habits, ethical conduct, legal responsibilities, and good citizenship skills.

(2)   The student identifies the importance of oil field hydraulics and its contributions to the oil and gas industry. The student is expected to:

(A)   identify companies that contributed to oil field hydraulics and fracturing and discuss those contributions;

(B)   explain the history of hydraulic fracturing and its importance to the oil field industry and the process of producing wells in North America;

(C)   describe the impact of hydraulics on energy in North America; and

(D)   explain the impact on new oil and natural gas production in North America as it relates to technology.

(3)   The student demonstrates an understanding of pneumatics and hydraulics and their significance and application in the petroleum engineering industry. The student is expected to:

(A)   describe and define the basic functional components of the pneumatic system and the function of a pneumatic schematic;

(B)   explain pneumatic pressure and identify its unit of measure during application procedures;

(C)   explain the importance of a hydraulic system and identify the hydraulic system's five basic components (hydraulic pump, control valves, actuators, reservoir, and accumulators), including the hydraulic system's significance in the petroleum engineering industry; and

(D)   define hydraulics and identify its unit of measure during application procedures.

(4)   The student explains and demonstrates the six pneumatic safety rules and the importance of the rules in the petroleum industry. The student is expected to:

(A)   explain the six pneumatic safety rules, including wearing safety glasses when building and operating pneumatics, keeping fingers clear of piston rods, never blowing compressed air at anyone, not turning the main air supply on until a circuit is connected, turning the air off if air is leaking from a joint, and turning the air off before altering a circuit;

(B)   demonstrate safety precaution measures in pneumatics and discuss the importance of safety equipment during this process; and

(C)   demonstrate and explain the importance of a pressure regulator in pneumatics, including the historical significance.

(5)   The student demonstrates an understanding of basic cylinder circuits and pneumatic cylinder circuits and their significance and applications in the petroleum engineering industry. The student is expected to:

(A)   explain the functions of the operation of a double acting pneumatic cylinder and each of its functions;

(B)   describe the operation of five-way three-position directional control valves (DCV);

(C)   describe the function of a pneumatic quick-connect fitting; and

(D)   demonstrate how to safely connect the pneumatic circuit with a quick-connect fitting.

(6)   The student understands the impact of a hydraulic schematic in oil field applications. The student is expected to:

(A)   describe ISO symbols and appropriately use them to draw a hydraulic schematic; and

(B)   create a hydraulic schematic.

(7)   The student identifies the principles of hydraulic pressure and flow and discusses the basic hydraulic cylinder circuits and their application. The student is expected to:

(A)   calculate the force output of an extending cylinder and the retraction force of a cylinder;

(B)   explain the relevance of Pascal's Law to hydraulics;

(C)   identify and discuss hydraulic motors and pumps; and

(D)   identify hydraulic cylinders and their impact on single and double acting circuits.

§130.488. Oil and Gas Production IV (One Credit).

(a)   General requirements. This course is recommended for students in Grades 11 and 12. Prerequisite: Oil and Gas Production III. Students shall be awarded one credit for successful completion of this course.

(b)   Introduction.

(1)   Career and technical education instruction provides content alignment with challenging academic standards and relevant knowledge and skills for students to further their education and succeed in current or emerging professions.

(2)   The Energy Career Cluster focuses on Texas's diverse economic landscape, geography and natural resources, including renewable energy potential, transportation system, labor force, and leadership in environmental research.

(3)   Oil and Gas Production IV is designed to extend training for future petroleum engineering technicians in all areas of down and mid-stream operations. Students complete an intense core curriculum in areas that include hydrocarbon safety, drilling, petroleum geology, oil and gas exploration and production, reservoir operations, well head completions, petroleum data management operations and analysis, natural gas production, and economics. In conjunction with this course, students employ the latest computer software in engineering and petroleum, operations, data mining, and geological mapping.

(4)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

(5)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)   Knowledge and skills.

(1)   The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:

(A)   identify career development, education, and entrepreneurship opportunities in the oil and gas production field;

(B)   identify careers in oil and gas production with required aptitudes in science, technology, engineering, mathematics, language arts, and/or social studies;

(C)   apply technology skills to create an electronic portfolio of skills and abilities;

(D)   apply competencies related to resources, information, interpersonal skills, problem solving, critical thinking, and systems of operation;

(E)   demonstrate knowledge of personal and occupational safety, health, environmental regulations, and first-aid policy in the workplace; and

(F)   analyze employers' expectations, including appropriate work habits, ethical conduct, legal responsibilities, and good citizenship skills.

(2)   The student explains the phases of well construction. The student is expected to:

    (A)   describe the function of the well completion phase and the different hole tests used in well completions;

    (B)   design the completion of the reservoir using technology such as computer designing software;

    (C)   describe the open hole completion and sand control completion processes; and

    (D)   describe conventional completions and their components and how they relate to production tubing.

(3)   The student explains the concepts of safety in well completions and indicates tools and procedures for completing a drilled wellbore. The student is expected to:

    (A)   research health and safety standards for the workplace and environment such as Standards and Wireline Operations and Procedures and Occupational Safety and Health Administration (OSHA) and standards provided by professional organizations in the oil and gas industry such as the American Chemical Society, American Institute of Chemical Engineers, Center for the Advancement of Process Technology, Gulf Coast Process Technology Alliance, and American Petroleum Institute (API);

    (B)   identify well completion tools and equipment and their use during each well completion phase; and

    (C)   analyze the cost of safety during well completions.

(4)   The student explains the concepts of hydraulic fracturing and its role during the well completion phase. The student is expected to:

    (A)   describe how the generic well design and drilling mud systems impact drilling;

    (B)   interpret ways in which generic platform wells, cuttings disposal routes, and drilling fluid design impact the generic well design; and

    (C)   evaluate the significance of reservoir formations.

(5)   The student discusses the potential hazards and possible solutions of well and equipment testing. The student is expected to:

    (A)   evaluate potential hazards and formulate a safety plan that covers safety guidelines and equipment, including first-aid and safety uniforms;

    (B)   describe and accurately measure the flow of oil, gas, and water in real time;

    (C)   ensure precautions and measures are considered during the surface well testing; and

    (D)   discuss the importance of knowing the surrounding environment when well testing.

(6)   The student researches the different types of coring and core analysis used in well completions and how they play an important role in well completion. The student is expected to:

    (A)   describe the role of coring and core analysis in well completions;

    (B)   identify the relationship between the factors such as core analysis and well logging that play an active role in well completions;

    (C)   explain well logging and its importance in formation evaluation;

    (D)   research different methods of formation testing by acquiring core samples;

    (E)   research drill stem testing;

    (F)   explain drill stem tests and their importance in measuring the flow of oil and gas in well completions; and

    (G)   evaluate the cost of completion operations for well completion.

§130.489. Introduction to Process Technology (One Credit).

(a)   General requirements. This course is recommended for students in Grades 11 and 12. Students shall be awarded one credit for successful completion of this course.

(b)   Introduction.

(1)   Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

(2)   The Energy Career Cluster focuses on Texas's diverse economic landscape, geography and natural resources, including renewable energy potential, transportation system, labor force, and leadership in environmental research.

(3)   In Introduction to Process Technology, students will learn the social significance and workforce impact of process technology in industry and the opportunities available at various levels of education and training in industries using process technology.

(4)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

(5)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)   Knowledge and skills.

(1)   The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:

(A)   demonstrate skills related to health and safety in the workplace as specified by appropriate government regulations;

(B)   demonstrate the standards required in the workplace such as interviewing skills, flexibility, willingness to learn new skills and acquire knowledge, self-discipline, self-worth, positive attitude, and integrity in a work situation;

(C)   collaborate with others to solve problems;

(D)   identify employers' work expectations; and

(E)   research, evaluate, and apply various time-management techniques to develop work schedules.

(2)   The student understands common definitions, terminology, and the basic foundations related to process technology. The student is expected to:

(A)   describe the types of industry utilizing process technology and identify fields related to process technology;

(B)   identify and describe the career opportunities in process technology, pathways to career development, and certification requirements of industries utilizing process technology, including job responsibilities, typical work schedules, and career opportunities;

(C)   demonstrate the use of content such as technical concepts and vocabulary when analyzing information and following directions;

(D)   identify currently emerging issues in process technology; and

(E)   identify principles of instruments and instrument technology used in industrial process technology.

(3)   The student identifies and discusses types of industrial piping, valves, and basic process equipment. The student is expected to:

(A)   discuss the basics of piping, valves, and equipment used in industry; and

        (B)   demonstrate the ability to read and interpret the various types of industrial drawings, diagrams, and data sheets related to industrial piping, valves, and equipment.

(4)   The student identifies and discusses the types of industrial electrical equipment and instrumentation used in process technology. The student is expected to:

        (A)   demonstrate the ability to read and interpret the various types of industrial drawings, diagrams, charts, and data sheets related to industrial electrical equipment;

        (B)   interpret industry standard circuit schematics;

        (C)   identify areas where quality, reliability, and safety can be integrated into a product; and

        (D)   describe the principles of electricity as applied in industrial process technology.

(5)   The student discusses safety issues related to industrial process technology. The student is expected to:

        (A)   describe the safety, health, and environmental concerns and requirements for industries using process technology along with the history that led to modern standards;

        (B)   analyze and execute safety guidelines as described in various manuals, instructions, and regulations;

        (C)   describe the implications of negligent or improper maintenance;

        (D)   discuss and demonstrate how precision measuring instruments are used in industrial process technology; and

        (E)   research agencies that govern safety in industrial process technology, including their authority and requirements.

(6)   The student demonstrates understanding of basic industrial mathematics. The student is expected to:

        (A)   perform common computations required in industrial process technology using mastered calculator skills;

        (B)   determine when to convert between fractions, decimals, whole numbers, and percentages mentally, on paper, or with a calculator when required in industrial process technology;

        (C)   identify and quantify causes and effects of uncertainties in measured data;

        (D)   demonstrate how exponents, symbols, and the order of operations are used to solve real world word problems commonly seen in process technology;

        (E)   determine appropriate formulas to compute cross sections, surface areas, and volumes of geometric figures such as circles, squares, and cylinders;

        (F)   estimate measurements and solve application problems involving industry drawings and data sheets using consistent units for all measurements and computation;

        (G)   describe and discuss how to use scientific notation and International System (SI) units to gather and record data with accuracy and precision;

        (H)   organize and evaluate data and make inferences from data, including the use of tables, charts, and graphs;

        (I)   determine a dimension of an object given a scaled drawing having no dimensions; and

        (J)   represent and solve problems involving proportional relationships, including conversions between measurement systems using multiplication by a given constant factor such as unit rate.

(7)   The student applies concepts of critical thinking and problem solving. The student is expected to:

        (A)   analyze elements of a problem to develop innovative solutions;

(B)   critically analyze information to determine value to the problem-solving task;

(C)   analyze a variety of problem-solving strategies and critical-thinking skills; and

(D)   conduct technical research to gather information necessary for decision making.

(8)   The student applies comprehensive knowledge in a simulation environment to demonstrate the mastery of the concepts covered in this course. The student is expected to:

    (A)   represent or simulate a portion of a process system by generating an appropriate drawing, diagram, or data sheet;

    (B)   demonstrate how to achieve a specific goal with the use of a simple mockup of a process system;

    (C)   execute a simple mockup of a process system to achieve a specified goal;

    (D)   demonstrate appropriate safety equipment selection for use in a variety of assigned tasks;

    (E)   identify and apply mathematical operations to complete calculations and specified computations, including unit conversions for a simulated process system;

    (F)   explain how visual depictions, data readouts, and trends in a computer-based process simulator relate to actual valves, piping, equipment, electrical gear, and instrumentation in a process system; and

    (G)   develop critical-thinking skills using simulations to identify and solve problems associated with process technology.

(9)   The student presents conclusions, research findings, and designs using a variety of media throughout the course. The student is expected to:

    (A)   discuss and critique the validity of conclusions supported by the data through various methods such as lab reports, labeled drawings, graphic organizers, journals, summaries, oral reports, and technology-based reports; and

    (B)   record, express, and manipulate relationships among data using graphs, charts, and equations.

§130.490. Foundations of Energy (One Credit).

(a)   General requirements This course is recommended for students in Grades 9-12. Students shall be awarded one credit for successful completion of the course.

(b)   Introduction.

(1)   Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and success in current or emerging energy professions.

(2)   The Energy Career Cluster focuses on Texas's diverse economic landscape, geography and natural resources, including renewable energy potential, transportation system, labor force, and leadership in environmental research.

(3)   In Foundations of Energy, students will conduct laboratory and field investigations, use scientific practices during investigations, and make informed decisions using critical thinking and scientific problem solving. Various systems will be described in terms of energy. Students will study a variety of topics that include energy transformation, the law of conservation of energy, energy efficiency, interrelationships among energy resources and society, and sources and flow of energy through the production, transmission, processing, and use of energy. Students will apply these concepts and perform investigations and experiments at least 40% of the time using safe practices.

(4)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

(5)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)   Knowledge and skills.

   (1)   The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:

      (A)   evaluate the importance of dressing appropriately, speaking politely, and conducting oneself in a manner appropriate for the profession;

      (B)   cooperate, contribute, and collaborate as a member of a group in an effort to achieve a positive collective outcome;

      (C)   present written and oral communication in a clear, concise, and effective manner;

      (D)   demonstrate time-management skills by prioritizing tasks, following schedules, and performing goal-relevant activities in a way that produces efficient results;

      (E)   demonstrate punctuality, dependability, reliability, and responsibility in performing assigned tasks as directed;

      (F)   discuss and exhibit teamwork and leadership skills necessary for the workplace;

      (G)   define and demonstrate effective problem-solving skills; and

      (H)   apply computer-based skills and other technologies relevant to the energy industry.

   (2)   The student analyzes current and future career opportunities in the energy sector, including oil and gas exploration and production, refining and chemical processing, and renewable energy. The student is expected to:

      (A)   evaluate energy systems and identify careers within those systems;

      (B)   examine past market and employment trends in the energy sector;

      (C)   discuss current issues in energy production and predict future needs and employment opportunities in this field;

      (D)   identify career development, education, credentialing, and entrepreneurship opportunities in the energy sector; and

      (E)   apply competencies related to resources, information, and systems of operation in the energy sector.

   (3)   The student conducts laboratory and field investigations using safe, environmentally appropriate, and ethical practices. The student is expected to:

      (A)   demonstrate safe practices during laboratory and field investigations;

      (B)   use a wide variety of additional course apparatuses, equipment, techniques, and procedures as appropriate such as satellite imagery and other remote sensing data, Geographic Information Systems (GIS), Global Positioning System (GPS), scientific probes, microscopes, telescopes, modern video and image libraries, weather stations, fossil and rock kits, tectonic plate models, and planetary globes;

      (C)   engage in meaningful hands-on, minds-on conceptual activities in the areas of energy; and

      (D)   demonstrate an understanding of the use and conservation of resources and proper disposal or recycling of materials.

   (4)   The student uses critical thinking and problem solving to make informed decisions within and outside the classroom. The student is expected to:

- (A) communicate and present valid conclusions from energy information extracted from various sources such as current events, news reports, published journal articles, and marketing materials;
- (B) explain the impacts of energy discoveries by a variety of historical and contemporary scientists and entrepreneurs on current societal attitudes;
- (C) compare advantages and disadvantages in the use of the various energy sources; and
- (D) distinguish between scientific decision making (scientific methods) and ethical and social decisions that involve science (the application of scientific information).

(5) The student presents conclusions, research findings, and designs using a variety of media throughout the course. The student is expected to:

- (A) develop written and oral presentation skills related to energy issues and solutions by researching and describing the history of energy production in Texas and contributions of scientists and entrepreneurs; and
- (B) develop data retrieval and analysis skills related to energy production and use by researching information about energy sources, including renewable and non-renewable sources, and energy efficiency and how each source is used to produce electrical energy.

(6) The student examines and explains concepts and procedures related to energy. The student is expected to:

- (A) identify general purposes for energy, including transportation, light, cooking, heating or cooling, entertainment, and cleaning;
- (B) explain and demonstrate transformations among various energy forms, including potential, kinetic, chemical, mechanical, electrical, and light energy;
- (C) analyze the role of gravity in transforming energy;
- (D) investigate and calculate the relationship between work, potential energy, and kinetic energy;
- (E) examine various types of energy transfer mechanisms, determine the original form of energy and what form that energy is being transformed into, and use examples to analyze and calculate the relationships among work, kinetic energy, and potential energy;
- (F) describe and apply the law of conservation of energy; and
- (G) use basic calorimetry to determine the amount of energy stored in substances such as coal.

(7) The student understands the basics of fluid mechanics related to energy discovery, production, and transportation. The student is expected to:

- (A) identify fluids used as fuels, including liquids and gases;
- (B) identify fluids used in the discovery, production, and transportation of energy sources;
- (C) explain capillary action and relate it to energy production; and
- (D) explain, using formulas, how pressure and temperature affect the behavior of fluids.

(8) The student understands how and where energy is produced and identifies Texas energy resources. The student is expected to:

- (A) research the location of energy resources and power production plants in Texas;
- (B) compile information on the history of energy production in Texas and describe its past and current importance to the U.S. economy;
- (C) investigate the role of technology in the future development of energy usage;

  (D) identify ways to conserve energy;

  (E) map the major sources of energy used in Texas;

  (F) assess the impact of the various energy sources on the economy in Texas;

  (G) analyze how supply and demand impacts Texas's economy in relation to energy; and

  (H) compare and contrast the impact of energy sources and supply and demand in Texas with national and global data.

(9) The student investigates how energy resources such as water, oil, and natural gas are stored underground in rock formations. The student is expected to:

  (A) assess the properties and geological histories of rocks and rock formations that enable energy storage;

  (B) determine the physical properties of permeability and porosity of rock formations and relate these properties to the amount of water, oil, and natural gas held in these formations;

  (C) explain how aquifers function and locate major aquifers in Texas; and

  (D) investigate how innovations such as hydraulic fracturing and high-power transmission lines have made massive energy resources such as oil, gas, wind, and electricity available in Texas.

(10) The student knows differences between renewable and non-renewable resources. The student is expected to:

  (A) identify and describe various renewable and non-renewable resources;

  (B) describe and compare the energy efficiency of renewable and non-renewable energy derived from natural and alternative sources such as oil, natural gas, coal, nuclear, solar, geothermal, hydroelectric, and wind;

  (C) examine the benefits and hazards of using renewable and non-renewable energy sources;

  (D) research methods by which benefits can be increased and hazards reduced in the use of renewable and non-renewable energy sources;

  (E) examine different viewpoints of an energy source regarding availability, cost, potential pollution, impact to plant and animal habitat, and sustainability;

  (F) analyze an energy source's relative availability and renewability and discuss how these factors inform decision making regarding a source's use; and

  (G) analyze changing social perspectives and how they can influence scientific practices.

(11) The student knows how energy impacts the student's life and the role energy plays in international relations, the environment, standards of living, and the economy. The student is expected to:

  (A) analyze the impact energy has on the environment;

  (B) research and discuss the ethical and social issues surrounding Earth's energy resources;

  (C) analyze the advantages and disadvantages of an energy source's long-term use;

  (D) explain the relationship between energy and quality of life;

  (E) research and describe the connection between energy production, transmission, processing, and marketing; and

  (F) analyze the impact and effectiveness of the measures taken by the United States and other countries to use energy to reduce greenhouse gases, improve water and air quality, and extend life expectancy.

(12)   The student investigates extended learning experiences such as career and technical student organizations and area energy museums and displays. The student is expected to:

   (A)   identify a minimum of three energy professionals for potential speaking invitations either in person or via the Internet;

   (B)   research and describe an energy-related organization such as a museum or local business; and

   (C)   compare educational requirements for different energy industry jobs in Texas.

§130.491. Petrochemical Safety, Health, and Environment (One Credit).

(a)   General requirements. The course is recommended for students in Grades 11 and 12. Students shall be awarded one credit for successful completion of this course.

(b)   Introduction.

   (1)   Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

   (2)   The Energy Career Cluster focuses on Texas's diverse economic landscape, geography and natural resources, including renewable energy potential, transportation system, labor force, and leadership in environmental research.

   (3)   Petrochemical Safety, Health, and Environment addresses the shortage of process technology operators/technicians by educating students on the safety rules, regulations, and operations of the petrochemical process technology operator. Students enrolled in this course will learn about the knowledge and skills required in occupational safety, health, and environment as well as the governing regulatory authorities and the legal aspects of the industry in order to maintain a safe work environment.

   (4)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

   (5)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)   Knowledge and skills.

   (1)   The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:

   (A)   research the three major roles of safety, health, and environment as it pertains to process technology operators/technicians;

   (B)   describe the role of process technicians in relation to safety, health, and environmental issues;

   (C)   identify the importance of safety, health, and environment as they relate to the performance of all job tasks and regulatory compliance issues within the industries, including, but not limited to, petrochemical plants, refineries, oil and gas production, and power generation; and

   (D)   explain the importance of interpreting the safety, health, and environmental procedures standards, requirements, and regulations as a process technology operator/technician.

   (2)   The student examines compliance standards to ensure safe work practices as they relate to safety, health, and environmental regulations. The student is expected to:

   (A)   identify the legal governing agencies and describe regulatory requirements as they apply to the petrochemical industry, its employees, and the community;

      (B)   identify specific state and federal regulations and the related specific tasks performed by process technology operators/technicians;

      (C)   identify safety programs used in the gulf coast area;

      (D)   determine types of administrative controls and permitting systems to ensure safe work practices, especially as the controls relate to confined spaces and log-out and tag-out (LOTO);

      (E)   demonstrate the proper usage of typical safety equipment and systems used in local plants;

      (F)   describe how engineering controls are designed to allow process technology operators/technicians to operate equipment with system safeguards;

      (G)   describe the different types of personal protective equipment (PPE), including fire resistant clothing (FRC), hard hats, safety shoes, hearing protection, safety glasses, and acid suits;

      (H)   evaluate the types of monitors that measure exposure ratings for noise, heat, and radiation;

      (I)   describe the different types of respiratory protection according to their levels of protection, including air purifying, air supply, escape packs, and self-contained breathing apparatus (SCBA); and

      (J)   identify the types of monitoring instruments that process operators/technicians use to monitor the atmosphere, oxygen content, explosive atmosphere, and toxicity.

(3)   The student summarizes the environmental requirements that are designed to safeguard society. The student is expected to:

      (A)   describe the types of spills and releases and the environmental factors that can impact them;

      (B)   identify specific systems that are in place to mitigate or prevent hazards to the environment and to individuals, including safe disposal of hazardous materials;

      (C)   identify the regulatory governmental agencies, including Occupational Safety and Health Administration (OSHA), Mining Safety and Health Administration (MSHA), Texas Commission on Environmental Quality (TCEQ), and the Environmental Protection Agency (EPA), that protect our safety, health, and environment;

      (D)   identify the Hazard Communication (HAZCOM) program and its components, including written Emergency Response Plans (ERPs), labeling containers that contain hazardous chemicals, and Safety Data Sheets (SDS) for hazardous chemicals produced or imported;

      (E)   describe the different types of hazards, including fire and explosions, ergonomic, biological, and blood borne pathogens; and

      (F)   describe the Maritime Security Act (MARSEC), which protects against terroristic threats.

(4)   The student describes equipment and energy and work surface hazards. The student is expected to:

      (A)   define the types of equipment and energy and work surface hazards, including electrical, rotating equipment, thermal, elevation/heights/fall protection, chemical, slip and trips, and machine guarding;

      (B)   identify hazards as they pertain to construction, vehicles, weather, and security, and describe how to protect the point of access and the site, including contractors who might have limited safety knowledge, new equipment installation, traffic control, and training on heavy machinery; and

(C) determine how weather conditions can adversely impact safety at a petrochemical plant or other process industry, including heat stress, hurricanes, freeze precautions, adverse weather conditions, lightning, and wind.

(5) The student identifies environmental pollutants as well as regulations to protect the environment. The student is expected to:

 (A) describe environmental pollutants, including toxic chemicals;

 (B) identify the Material Safety Data Sheet (MSDS) manual list of the hazardous and toxic chemicals for process control sites;

 (C) summarize the EPA petition process for approval of chemicals created by a plant;

 (D) determine the permissions that must be acquired before site production begins, including a toxicology report such as a Chemical Inventory Management System (CIMS) for a local plant; and

 (E) describe the types of environmental controls that are in place to protect the environment such as monitoring and air and water permits.

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Chapter 130. Texas Essential Knowledge and Skills for Career and Technical Education

Subchapter A. Agriculture, Food, and Natural Resources

[§130.13. Oil and Gas Production I (One Credit), Adopted 2015.]

[(a)   General requirements. This course is recommended for students in Grades 9-12. Students shall be awarded one credit for successful completion of this course.

(b)   Introduction.

   (1)   Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

   (2)   The Agriculture, Food, and Natural Resources Career Cluster focuses on the production, processing, marketing, distribution, financing, and development of agricultural commodities and resources, including food, fiber, wood products, natural resources, horticulture, and other plant and animal products/resources.

   (3)   In Oil and Gas Production I, students will identify specific career opportunities and skills, abilities, tools, certification, and safety measures associated with each career. Students will also understand components, systems, equipment, and production and safety regulations associated with oil and gas wells. To prepare for careers in oil and gas production, students must attain academic skills and knowledge, acquire technical knowledge and skills related to oil and gas production and the workplace, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer their knowledge and skills and technologies in a variety of settings.

   (4)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

   (5)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)   Knowledge and skills.

   (1)   The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:

      (A)   identify career development, education, and entrepreneurship opportunities in the oil and gas production field;

      (B)   apply competencies related to resources, information, interpersonal skills, problem solving, critical thinking, and systems of operation;

      (C)   demonstrate knowledge of personal and occupational safety, environmental regulations, and first-aid policy in the workplace;

      (D)   analyze employers' expectations such as appropriate work habits, ethical conduct, legal responsibilities, and good citizenship skills; and

      (E)   demonstrate leadership skills to accomplish organizational goals and objectives.

   (2)   The student develops a supervised agriculture experience program. The student is expected to:

      (A)   plan, propose, conduct, document, and evaluate a supervised agriculture experience program as an experiential learning activity;

      (B)   apply proper record-keeping skills as they relate to the supervised agriculture experience;

(C)   participate in youth leadership opportunities to create a well-rounded experience program; and

(D)   produce and participate in a local program of activities using a strategic planning process.

(3)   The student understands the history and process for drilling a well. The student is expected to:

(A)   describe the history of drilling for petroleum in the United States and abroad;

(B)   describe and appraise routine drilling operations, offshore drilling, and new drilling technologies;

(C)   describe the tools and techniques for directional drilling;

(D)   examine the differences between fishing, retrieving, and repairing pipe;

(E)   describe the methods for completing a well in order for production to begin;

(F)   assess fluid pressure;

(G)   determine how the flow is initiated in a new well;

(H)   differentiate between major components of a well and discuss the purpose, design, and operation of each component;

(I)   describe activities associated with completing a well;

(J)   describe the well completion processes and equipment;

(K)   summarize the instruments and techniques used when logging and testing during the drilling and completion of a well;

(L)   list the factors that are analyzed when studying a poorly producing well; and

(M)   identify the responsibilities, characteristics, abilities, and work behaviors of personnel that are involved in well service.

(4)   The student discusses and identifies components, systems, equipment, production, and safety regulations associated with oil and gas wells. The student is expected to:

(A)   identify the major systems and equipment used in the production of oil and gas;

(B)   identify and describe the wellhead equipment that controls fluid flow;

(C)   trace the process flow through the oil and gas production systems and equipment;

(D)   discuss the purpose of the wellhead and identify the major components;

(E)   describe the purpose, design, and operation of each wellhead component;

(F)   compare and contrast the major differences in wellhead construction;

(G)   compare and contrast onshore and offshore facilities;

(H)   compare and contrast oil and gas regions within the United States;

(I)   describe the safety, health, and environmental concerns associated with working around a wellhead;

(J)   explain how the wellhead system affects other production systems tied to the wellhead;

(K)   describe the activities associated with monitoring and regulating well flow;

(L)   describe the wellhead maintenance activities performed by the production technician;

(M)   operate and troubleshoot a wellhead using a computer simulator, pilot plant, or tabletop unit; and

(N)   identify the operating conditions that would warrant a manual or automatic shut-in of a well and steps involved in a manual shut-in of a well.

(5) The student discusses safety issues related to the oil and gas industry. The student is expected to:

    (A) describe the safety, health, and environmental concerns associated with drilling, production, and maintenance; and

    (B) research safety standards in the petroleum industry such as the Bureau of Safety and Environmental Enforcement (BSEE), United States Coast Guard (USCG), American Petroleum Institute (API), Department of Transportation (DOT), Occupational Safety and Health Administration (OSHA), Environmental Protection Agency (EPA), American Society for Testing and Materials (ASTM), American National Standards Institute (ANSI), and others.]

[§130.14. Oil and Gas Production II (One Credit), Adopted 2015.]

[(a) General requirements. This course is recommended for students in Grades 10-12. Prerequisite: Oil and Gas Production I. Students shall be awarded one credit for successful completion of this course.

(b) Introduction.

    (1) Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

    (2) The Agriculture, Food, and Natural Resources Career Cluster focuses on the production, processing, marketing, distribution, financing, and development of agricultural commodities and resources, including food, fiber, wood products, natural resources, horticulture, and other plant and animal products/resources.

    (3) In Oil and Gas Production II, students will gain knowledge of the specific requirements for entry into post-secondary education and employment in the petroleum industry; research and discuss petroleum economics; research and discuss the modes of transportation in the petroleum industry; research and discuss environmental, health, and safety concerns; research and discuss different energy sources; and prepare for industry certification. To prepare for careers in oil and gas production, students must attain academic skills and knowledge, acquire technical knowledge and skills related to oil and gas production and the workplace, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer their knowledge and skills and technologies in a variety of settings.

    (4) Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

    (5) Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c) Knowledge and skills.

    (1) The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:

        (A) identify career development, education, and entrepreneurship opportunities in the field of agriculture, food, and natural resources;

        (B) identify careers in agriculture, food, and natural resources with required aptitudes in science, technology, engineering, mathematics, language arts, and/or social studies;

        (C) apply technology skills to create an electronic portfolio of skills and abilities;

        (D) apply competencies related to resources, information, interpersonal skills, problem solving, critical thinking, and systems of operation in agriculture, food, and natural resources;

  (E) ~~demonstrate knowledge of personal and occupational safety, health, environmental regulations, and first-aid policy in the workplace; and~~

  (F) ~~analyze employers' expectations, including appropriate work habits, ethical conduct, legal responsibilities, and good citizenship skills.~~

(2) ~~The student develops a supervised agriculture experience program. The student is expected to:~~

  (A) ~~plan, propose, conduct, document, and evaluate a supervised agriculture experience program as an experiential learning activity;~~

  (B) ~~apply proper record-keeping skills as they relate to the supervised agriculture experience;~~

  (C) ~~participate in youth leadership opportunities to create a well-rounded experience program; and~~

  (D) ~~produce and participate in a local program of activities using a strategic planning process.~~

(3) ~~The student researches and discusses the modes of transportation and environmental, health, and safety concerns. The student is expected to:~~

  (A) ~~describe evolution of transportation in the petroleum industry;~~

  (B) ~~research and access the various ground methods of transportation;~~

  (C) ~~survey health and safety policies, procedures, regulations, and practices as they relate to transportation in the petroleum industry;~~

  (D) ~~research and discuss petroleum economics;~~

  (E) ~~compare and contrast marketing, sales, and distribution of petroleum products;~~

  (F) ~~identify supply chain businesses that create new supplies of oil and gas;~~

  (G) ~~identify supply creation companies and how they operate;~~

  (H) ~~discuss the factors in investment decision-making; and~~

  (I) ~~calculate rates of return to evaluate prospects.~~

(4) ~~The student researches the different methods of disposing of oil and gas waste and methods of cleanup. The student is expected to:~~

  (A) ~~discuss the disposal methods of exploration and production wastes;~~

  (B) ~~identify cleanup methods for blowouts and spills; and~~

  (C) ~~identify refining processes that minimize environmental impact.~~

(5) ~~The student researches and identifies the different energy sources and priorities for the oil and gas industry. The student is expected to:~~

  (A) ~~research the petroleum industry to identify renewable energy sources;~~

  (B) ~~present the challenges and priorities of the petroleum industry;~~

  (C) ~~research the critical technologies needed in the future; and~~

  (D) ~~research the nontechnical solutions to energy needs.~~]

Subchapter C. Arts, Audio/Video Technology, and Communications

§130.123. Digital Design and Media Production (One Credit).

(a)   General requirements. Students shall be awarded one credit for successful completion of this course. This course is recommended for students in Grades 9-12.

(b)   Introduction.

    (1)   Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

    (2)   The Arts, Audio/Video Technology, and Communications Career Cluster focuses on careers in designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services.

    (3)   Digital Design and Media Production will allow students to demonstrate creative thinking, develop innovative strategies, and use communication tools in order to work effectively with others as well as independently. Students will gather information electronically, which will allow for problem solving and making informed decisions regarding media projects. Students will learn digital citizenship by researching current laws and regulations and by practicing integrity and respect. Students will demonstrate a thorough understanding of digital design principles that is transferable to other disciplines. The six strands include creativity and innovation; communication and collaboration; research and information fluency; critical thinking; problem solving, and decision making; digital citizenship; and technology operations and concepts.

    (4)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

    (5)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)   Knowledge and skills.

    (1)   Creativity and innovation. The student employs a creative design process to create original projects as they relate to purposes and audiences. The student is expected to:

        (A)   create designs for defined projects such as graphics, logos, and page layouts;

        (B)   apply design elements and typography standards; and

        (C)   use visual composition principles.

    (2)   Communication and collaboration. The student understands professional digital media communications strategies. The student is expected to:

        (A)   adapt the language and design of a project for audience, purpose, situation, and intent;

        (B)   organize oral, written, and graphic information into formal and informal publications;

        (C)   interpret and communicate information to multiple audiences; and

        (D)   collaborate to create original projects, including seeking and responding to advice from others such as peers or experts in the creation and evaluation process.

    (3)   Research and information fluency. The student uses a variety of strategies to plan, obtain, evaluate, and use valid information. The student is expected to:

        (A)   obtain print and digital information such as graphics, audio, and video from a variety of resources while citing the sources;

        (B)   evaluate information for accuracy and validity; and

        (C)   present accurate information using techniques appropriate for the intended audience.

(4) Critical thinking, problem solving, and decision making. The student implements problem-solving methods using critical-thinking skills to plan, implement, manage, and evaluate projects; solve problems; and make informed decisions using appropriate digital tools and resources. The student is expected to:

  (A) employ critical-thinking and interpersonal skills to solve problems and make decisions through planning and gathering, interpreting, and evaluating data;

  (B) identify and organize the tasks for completion of a project using the most appropriate digital tools;

  (C) distinguish design requirements as they relate to the purposes and audiences of a project and apply appropriate design elements;

  (D) seek and respond to input from others, including peers, teachers, and outside collaborators;

  (E) evaluate a process and project both independently and collaboratively and make suggested revisions; and

  (F) transfer critical-thinking, problem-solving, and decision-making processes when using new technologies.

(5) Digital citizenship. The student complies with standard practices and behaviors and upholds legal and ethical responsibilities. The student is expected to:

  (A) examine copyright and fair use guidelines with regard to print and digital media;

  (B) model ethical and legal acquisition and use of digital resources such as licensing and established methods of citing sources;

  (C) demonstrate proper digital etiquette, personal security guidelines, use of network resources, and application of the district's acceptable use policy for technology; and

  (D) identify and demonstrate positive personal qualities such as flexibility, open-mindedness, initiative, listening attentively to speakers, willingness to learn new knowledge and skills, and pride in quality work.

(6) Technology operations and concepts. The student uses technology concepts, systems, and operations as appropriate for a project. The student is expected to:

  (A) define the purpose of a product and identify the specified audience;

  (B) demonstrate appropriate project management to:

    (i) create a plan for a media project such as a storyboard, stage development, and identification of equipment and resources; and

    (ii) evaluate design, content delivery, purpose, and audience throughout a project's timeline and make suggested revisions until completion of the project;

  (C) use hardware, software, and information appropriate to a project and its audience to:

    (i) acquire readily available digital information, including text, audio, video, and graphics, citing the sources;

    (ii) create digital content through the use of various devices such as video camera, digital camera, scanner, microphone, interactive whiteboard, video capture, and musical instrument;

    (iii) collaborate via online tools such as blogs, discussion boards, email, and online learning communities;

    (iv) make decisions regarding the selection and use of software, taking into consideration operating system platform, quality, appropriateness, effectiveness, and efficiency;

          (v)   delineate and make necessary adjustments regarding compatibility issues, including digital file formats and cross-platform connectivity; and

          (vi)   demonstrate the ability to import and export elements from one program to another;

(D)   use digital typography standards such as:

          (i)   one space after punctuation, the use of em- and en-dashes, and smart quotation marks;

          (ii)   categories of type, font, size, style, and alignment appropriate for the task;

          (iii)   type techniques such as drop cap, decorative letters, or embedded text frames as graphic elements;

          (iv)   leading and kerning, automatic text flow into linked columns, widows and orphans, and text wrap; and

          (v)   type measurement for inches and picas;

(E)   apply design and layout principles and techniques to:

          (i)   incorporate the principles of design, including balance, contrast, dominant element, white space, consistency, repetition, alignment, and proximity;

          (ii)   apply the elements of design, including text, graphics, and white space;

          (iii)   apply color principles appropriate to the product in order to communicate the mood for the specific audience;

          (iv)   identify the parts of pages, including inside margin, outside margin, and gutter;

          (v)   create a master template, including page specifications and other repetitive elements; and

          (vi)   use style sheets, including a variety of type specifications such as typeface, style, size, alignment, indents, and tabs;

(F)   demonstrate appropriate use of digital photography and editing to:

          (i)   use digital photography equipment to capture still-shot images that incorporate various photo composition techniques, including lighting, perspective, candid versus posed, rule of thirds, and filling the frame;

          (ii)   transfer digital images from equipment to the computer; and

          (iii)   demonstrate image enhancement techniques such as feathering, layering, color enhancement, and image selection using appropriate digital manipulation software;

(G)   demonstrate appropriate use of videography equipment and techniques to:

          (i)   use digital photography equipment to capture video that incorporates video principles such as lighting, zooming, panning, and stabilization;

          (ii)   transfer video from equipment to the computer;

          (iii)   demonstrate videographic enhancement and editing techniques such as transitions, zooming, content editing, and synchronizing audio and video using appropriate digital manipulation software; and

          (iv)   export video in digital formats to be used in various delivery systems such as podcasting, downloadable media, embedding, and streaming; and

(H)   deploy digital media into print, web, and video products to:

(i)   produce digital files in various formats such as portable document format (PDF), portable network graphics (PNG), and HyperText Markup Language (HTML);

(ii)   publish integrated digital content such as video, audio, text, graphics, and motion graphics following appropriate digital etiquette standards;

(iii)   publish and share projects using online methods such as social media and collaborative sites;

(iv)   incorporate various digital media into a printed document such as a newsletter, poster, or report;

(v)   use printing options such as tiling, color separations, and collation; and

(vi)   collect and organize student-created products to build an individual portfolio.

§130.124. Digital Art and Animation (One Credit).

(a)   General requirements. Students shall be awarded one credit for successful completion of this course. Recommended prerequisite: Art, Level I. This course is recommended for students in Grades 9-12. This course satisfies the high school fine arts graduation requirement.

(b)   Introduction.

(1)   Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

(2)   The Arts, Audio/Video Technology, and Communications Career Cluster focuses on careers in designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services.

(3)   Digital Art and Animation consists of computer images and animations created with digital imaging software. Digital Art and Animation has applications in many careers, including graphic design, advertising, web design, animation, corporate communications, illustration, character development, script writing, storyboarding, directing, producing, inking, project management, editing, and the magazine, television, film, and game industries. Students in this course will produce various real-world projects and animations. The six strands include creativity and innovation; communication and collaboration; research and information fluency; critical thinking; problem solving, and decision making; digital citizenship; and technology operations and concepts.

(4)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

(5)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)   Knowledge and skills.

(1)   Creativity and innovation. The student demonstrates creative thinking, constructs knowledge, and develops innovative products and processes using technology. The student is expected to:

(A)   evaluate, edit, and create scripts for animations;

(B)   identify and apply color theories, including harmony rules, tints, shades, gradients, color mixing, new color creation, and the visual impacts of specific color combinations using a digital format;

(C)   compare, contrast, and integrate the basic sound editing principles, including mixing and manipulating wave forms, audio tracks, and effects;

(D)   compare and contrast the rules of composition such as the rule of thirds or the golden section/rectangle with respect to harmony and balance;

(E)   evaluate the fundamental concepts of a digital art and design such as composition, perspective, angles, lighting, repetition, proximity, white space, balance, and contrast;

(F)   analyze digital art designs to interpret the point of interest, the prominence of the subject, and visual parallels between the structures of natural and human-made environments;

(G)   distinguish among typefaces while recognizing and resolving conflicts that occur through the use of typography as a design element;

(H)   use perspective, including backgrounds, light, shades and shadows, hue and saturation, and scale, to capture a focal point and create depth;

(I)   use the basic principles of design such as proportion, balance, variety, emphasis, harmony, symmetry, and unity in type, color, size, line thickness, shape, and space;

(J)   edit files using appropriate digital editing tools and established design principles such as consistency, repetition, alignment, proximity, white space, image file size, color use, and font size, type, and style; and

(K)   identify pictorial qualities in a design such as shape and form, space and depth, or pattern and texture to create visual unity and desired effects in designs.

(2)   Communication and collaboration. The student uses digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning experience of others. The student is expected to:

(A)   use vocabulary as it relates to digital art, audio, and animation;

(B)   demonstrate the use of technology to participate in self-directed and collaborative activities within the global community;

(C)   participate in electronic communities;

(D)   create technology specifications for tasks and rubrics for the evaluation of products;

(E)   design and implement procedures to track trends, set timelines, and evaluate products;

(F)   collaborate with peers in delineating technological tasks;

(G)   publish and save information in a variety of ways, including print or digital formats;

(H)   analyze and evaluate projects for design, content delivery, purpose, and audience; and

(I)   critique original digital artwork, portfolios, and products with peers.

(3)   Research and information fluency. The student applies digital tools to gather, evaluate, and use information. The student is expected to:

(A)   distinguish between and correctly apply process color (RGB and CYMK), spot color, and black or white;

(B)   research the history of digital art and animation;

(C)   research career choices in digital art and animation;

(D)   use the Internet to retrieve information in an electronic format;

(E)   demonstrate the appropriate use of digital imaging, video integration, and sound retrieved from an electronic format;

(F)   import sounds from a variety of sources; and

(G)   create planning designs such as rough sketches, storyboards, and brainstorming materials.

(4)   Critical thinking, problem solving, and decision making. The student uses critical-thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources. The student is expected to:

(A) distinguish between and use the components of animation software programs such as cast, score, stage, and the animation manipulation interface;

(B) distinguish between and use different animation techniques such as path and cell animation, onion skinning, and tweening;

(C) create three-dimensional effects by layering images such as foreground, middle distance, and background images;

(D) apply a variety of color schemes such as monochromatic, analogous, complementary, primary/secondary triads, cool/warm colors, and split complements to digital designs;

(E) use the basic concepts of color and design theory such as working in a bitmapped and vector mode to create backgrounds, characters, and other cast members as needed for the animation;

(F) use the appropriate scripting language or program code to create an animation;

(G) use a variety of lighting techniques such as shadows and shading to create effects; and

(H) define the design attributes and requirements of products created for a variety of purposes such as posters, billboards, logos, corporate identity, advertisements, book jackets, brochures, and magazines.

(5) Digital citizenship. The student understands human, cultural, and societal issues related to technology and practices legal and ethical behavior. The student is expected to:

(A) discuss copyright laws/issues and use of digital information such as attributing ideas and citing sources using established methods;

(B) define plagiarism and model respect of intellectual property;

(C) demonstrate proper digital etiquette and knowledge of acceptable use policies when using technology; and

(D) evaluate the validity and reliability of sources.

(6) Technology operations and concepts. The student demonstrates a sound understanding of technology concepts, systems, and operations. The student is expected to:

(A) demonstrate knowledge and appropriate use of operating systems, software applications, and communication and networking components;

(B) make decisions regarding the selection and use of software and Internet resources;

(C) make necessary adjustments regarding compatibility issues with digital file formats, importing and exporting data, and cross-platform compatibility; and

(D) read, use, and develop technical documentation.

§130.125. 3-D Modeling and Animation (One Credit)

(a) General requirements. Students shall be awarded one credit for successful completion of this course. Recommended prerequisite: Art, Level I. This course is recommended for students in Grades 9-12. This course satisfies the high school fine arts graduation requirement.

(b) Introduction.

(1) Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

(2) The Arts, Audio/Video Technology, and Communications Career Cluster focuses on careers in designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services.

(3)   3-D Modeling and Animation consists of computer images created in a virtual three-dimensional (3-D) environment. 3-D Modeling and Animation has applications in many careers, including criminal justice, crime scene, and legal applications; construction and architecture; engineering and design; and the movie and game industries. Students in this course will produce various 3-D models of real-world objects. The six strands include creativity and innovation; communication and collaboration; research and information fluency; critical thinking; problem solving, and decision making; digital citizenship; and technology operations and concepts.

(4)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

(5)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)   Knowledge and skills.

(1)   Creativity and innovation. The student demonstrates creative thinking, constructs knowledge, and develops innovative products and processes using technology. The student is expected to:

(A)   evaluate, edit, and create scripts for animations;

(B)   identify and apply color theories, including harmony rules, tints, shades, gradients, color mixing, new color creation, and the visual impacts of specific color combinations using a digital format;

(C)   apply texture, transparency, skinning, and contour along a 3-D object surface;

(D)   compare, contrast, and integrate the basic sound editing principles, including mixing and manipulating wave forms, audio tracks, and effects;

(E)   compare and contrast the rules of composition such as the rule of thirds or the golden section/rectangle with respect to harmony and balance;

(F)   evaluate the fundamental concepts of 3-D modeling and design such as composition, perspective, angles, lighting, repetition, proximity, white space, balance, and contrast;

(G)   analyze 3-D model objects to interpret the point of interest, the prominence of the subject, and visual parallels between the structures of natural and human-made environments;

(H)   distinguish among typefaces while recognizing and resolving conflicts that occur through the use of typography as a design element;

(I)   use perspective, including spot and directional light, backgrounds, ambience, shades and shadows, and hue and saturation;

(J)   use the basic principles of design such as proportion, balance, variety, emphasis, harmony, symmetry, and unity in type, color, size, line thickness, shape, and space;

(K)   edit files using appropriate digital editing tools and established design principles such as consistency, repetition, alignment, proximity, white space, image file size, color use, font size, type, and style; and

(L)   identify pictorial qualities in a design such as shape and form, space and depth, or pattern and texture to create visual unity and desired effects in designs.

(2)   Communication and collaboration. The student uses digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning experience of others. The student is expected to:

(A)   use vocabulary as it relates to digital art, audio, and animation;

(B)   demonstrate the use of technology to participate in self-directed and collaborative activities within the global community;

(C)   participate in electronic communities;

(D)   create technology specifications for tasks and rubrics for the evaluation of products;

(E)   design and implement procedures to track trends, set timelines, and evaluate products;

(F)   collaborate with peers in delineating technological tasks;

(G)   publish and save information in a variety of ways, including print or digital formats;

(H)   analyze and evaluate projects for design, content delivery, purpose, and audience; and

(I)   critique original 3-D digital artwork, portfolios, and products with peers.

(3)   Research and information fluency. The student applies digital tools to gather, evaluate, and use information. The student is expected to:

(A)   distinguish among and correctly apply process color (RGB and CYMK), spot color, and black or white;

(B)   research the history of 3-D modeling and 3-D animation;

(C)   research career choices in 3-D modeling and 3-D animation;

(D)   use the Internet to retrieve information in an electronic format;

(E)   demonstrate the appropriate use of 3-D objects, digital imaging, video integration, and sound retrieved from an electronic format;

(F)   import sounds from a variety of sources; and

(G)   create planning designs such as rough sketches, storyboards, and brainstorming materials.

(4)   Critical thinking, problem solving, and decision making. The student uses critical-thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources. The student is expected to:

(A)   distinguish between and use the components of 3-D animation software programs such as cast, score, environment, the X-Y-Z coordinate system, and the animation manipulation interface;

(B)   distinguish between and use the different 3-D modeling techniques such as box modeling, transformation, and polygon primitives using extrusion and rotation;

(C)   distinguish between and use the different 3-D animation techniques such as path and rendering using dynamics and physics;

(D)   apply a variety of color schemes such as monochromatic, analogous, complementary, primary/secondary triads, cool/warm colors, and split complements to digital designs;

(E)   use the basic concepts of color and design theory such as working with 3-D models and environments, characters, objects, and other cast members as needed for the animation;

(F)   use the appropriate rendering techniques to create an animation;

(G)   use a variety of lighting techniques such as shadow, shading, point, spot, directional, and ambient to create effects; and

(H)   define the design attributes and requirements of a 3-D animation project.

(5)   Digital citizenship. The student understands human, cultural, and societal issues related to technology and practices legal and ethical behavior. The student is expected to:

(A)   discuss copyright laws/issues and use of digital information such as attributing ideas and citing sources using established methods;

(B)   define plagiarism and model respect of intellectual property;

(C)   demonstrate proper digital etiquette and knowledge of acceptable use policies when using technology; and

<div style="text-align: right;">(D)   evaluate the validity and reliability of sources.</div>

(6)   Technology operations and concepts. The student demonstrates a sound understanding of technology concepts, systems, and operations. The student is expected to:

       (A)   demonstrate knowledge and appropriate use of operating systems, software applications, and communication and networking components;

       (B)   make decisions regarding the selection and use of software and Internet resources;

       (C)   make necessary adjustments regarding compatibility issues with digital file formats, importing and exporting data, and cross-platform compatibility; and

       (D)   read, use, and develop technical documentation.

§130.126. Digital Communications in the 21st Century (One Credit).

(a)   General requirements. Students shall be awarded one credit for successful completion of this course. This course is recommended for students in Grades 9-12.

(b)   Introduction.

(1)   Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

(2)   The Arts, Audio/Video Technology, and Communications Career Cluster focuses on careers in designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services.

(3)   Digital Communications in the 21st Century will prepare students for the societal demands of increased civic literacy, independent working environments, global awareness, and the mastery of a base set of analysis and communication skills. Students will be expected to design and present an effective product based on well-researched issues in order to thoughtfully propose suggested solutions to authoritative stakeholders. The outcome of the process and product approach is to provide students an authentic platform to demonstrate effective application of multimedia tools within the contexts of global communication and collaborative communities and appropriately share their voices to affect change that concerns their future. The six strands include creativity and innovation; communication and collaboration; research and information fluency; critical thinking; problem solving, and decision making; digital citizenship; and technology operations and concepts.

(4)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

(5)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)   Knowledge and skills.

(1)   Creativity and innovation. The student demonstrates the ability to analyze, evaluate, and adapt during the creative problem-solving process and demonstrates creative thinking in developing solutions to real-world issues using digital tools. The student is expected to:

       (A)   generate innovative, sustainable solutions for real-world issues such as global warming, immigration, or the global economy using emerging digital tools;

       (B)   gather and evaluate accurate information for feasibility and practicality as a basis for making communication decisions; and

       (C)   analyze the ethical and social responsibilities as a project team when communicating with peers, stakeholders, and experts.

(2)   Creativity and innovation. The student uses innovative thinking to develop new ideas and processes for solving real-world issues and conveying those ideas to a global audience through a persuasive digital product. The student is expected to:

(A)   examine real-world issues relating to current topics such as health care, government, business, or aerospace;

(B)   develop innovative solutions to address issues;

(C)   create unique methods and products conveying solutions to audiences beyond the classroom such as school officials, non-profit organizations, higher education officials, government, or other stakeholders;

(D)   demonstrate the effective use and importance of verbal and nonverbal communication skills when presenting ideas and solutions to diverse audiences; and

(E)   use appropriate techniques to manage communication apprehension, build self-confidence, and gain command of information.

(3)   Communication and collaboration. The student develops a process to effectively communicate with peers, experts, and other audiences about current issues and solutions to global problems. The student is expected to:

(A)   demonstrate innovative uses of a wide range of emerging technologies, including online learning, mobile devices, digital content, and Web 2. 0 tools such as podcasting, wikis, and blogs;

(B)   participate within appropriate electronic communities as a learner, initiator, and contributor;

(C)   extend the learning environment beyond the school walls using appropriate digital tools;

(D)   collaborate with a variety of field experts;

(E)   prepare for, organize, and participate in an informative or persuasive group discussion with an audience; and

(F)   participate appropriately in conversations by making clear requests, giving accurate directions, and asking purposeful questions.

(4)   Communication and collaboration. The student uses digital tools to facilitate collaboration and communication in the design, development, and evaluation of products offering solutions to real-world issues. The student is expected to:

(A)   design and organize resources to create an effective collaborative working environment that enables a group to investigate a local, state, national, or global issue;

(B)   analyze and evaluate effective communication;

(C)   demonstrate leadership by managing project activities such as timelines, research, product development, marketing material, and effective communication skills;

(D)   demonstrate effective management of diverse peer-group dynamics such as solving problems, managing conflicts, and building consensus; and

(E)   evaluate original products for accuracy, validity, and compliance with copyright laws.

(5)   Research and information fluency. The student uses a variety of strategies to acquire and evaluate information relating to real-world issues. The student is expected to:

(A)   locate authoritative information from primary and secondary sources such as field experts, online full-text databases, or current news databases;

(B)   make decisions regarding the selection, acquisition, and use of information gathered, taking into consideration its quality, appropriateness, effectiveness, and level of interest to society; and

(C)   demonstrate fluency in the use of a variety of electronic sources such as cloud computing, emerging collaboration technologies, data mining strategies, and mobile or other technologies.

(6)   Research and information fluency. The student uses a variety of digital tools to synthesize information related to real-world issues in student-created materials. The student is expected to:

     (A)   construct real-world informational materials that inform, persuade, or recommend reform of selected issues;

     (B)   identify and employ a method to evaluate the design, functionality, and accuracy of the student-created materials; and

     (C)   use effective strategies to organize and outline presentations to support and clarify points.

(7)   Critical thinking, problem solving, and decision making. The student uses critical-thinking skills to conduct research, manage products, solve problems, and make informed decisions for real-world local, state, national, and global issues. The student is expected to:

     (A)   identify and define authentic problems and significant questions for investigation;

     (B)   design and implement procedures to track trends, set timelines, and review and evaluate progress for project completion;

     (C)   read and use technical documentation, including appropriate help options, to complete tasks; and

     (D)   analyze the audience, occasion, and purpose when designing presentations.

(8)   Critical thinking, problem solving, and decision making. The student creates a product presenting solutions for real-world local, state, national, and global issues. The student is expected to:

     (A)   create technology specifications for tasks and rubrics to evaluate products and product quality against established criteria;

     (B)   resolve information conflicts and validate information by comparing data;

     (C)   represent diverse perspectives in problem solutions; and

     (D)   prepare and use visual or auditory aids such as scripts, notes, or digital applications to enhance presentations.

(9)   Digital citizenship. The student examines ethical and legal behavior to demonstrate leadership as a digital citizen. The student is expected to:

     (A)   model safe and ethical use of digital information;

     (B)   model respect of intellectual property when manipulating, morphing, or editing graphics, video, text, and sound;

     (C)   use technology applications in a positive manner that supports productivity, collaboration, and continuing education; and

     (D)   use professional etiquette and protocol in situations such as making introductions, offering and receiving criticism, and communicating with digital tools.

(10)   Digital citizenship. The student demonstrates ethical and legal behavior in the creation of student products. The student is expected to:

     (A)   use collaborative tools and strategies; and

     (B)   use digital tools to correctly document sources such as in bibliographies or works cited.

(11)   Technology operations and concepts. The student makes decisions regarding the selection, acquisition, and use of digital tools in a multimedia classroom/lab, taking into consideration the quality, appropriateness, effectiveness, and efficiency of the tools. The student is expected to:

(A)　　determine the most appropriate file type based on universally recognized file formats such as portable document format (PDF), text format (TXT), rich text format (RTF), and Joint Photographic Experts Group format (JPEG);

(B)　　use compression schemes for photo, animation, video, and graphics; and

(C)　　distinguish among appropriate color, sound, and design principles such as consistency, repetition, alignment, proximity, and ratio of text to white space.

(12)　　Technology operations and concepts. The student demonstrates knowledge through various cloud and network technologies such as web-based interactive presentations, document sharing, and online scholarly databases. The student is expected to:

(A)　　use necessary vocabulary related to digital tools;

(B)　　retrieve and discriminate between authoritative and non-authoritative data sources; and

(C)　　adopt, adapt, and transfer prior knowledge to multiple situations when retrieving, manipulating, and creating original digital projects.

§130.127. Web Game Development (One Credit).

(a)　　General requirements. Students shall be awarded one credit for successful completion of this course. Recommended prerequisite: Web Design. This course is recommended for students in Grades 11 and 12.

(b)　　Introduction.

(1)　　Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

(2)　　The Arts, Audio/Video Technology, and Communications Career Cluster focuses on careers in designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services.

(3)　　Web Game Development will allow students to demonstrate creative thinking, develop innovative strategies, and use digital and communication tools necessary to develop fully functional online games. Web Game Development has career applications for many aspects of the game industry, including programming, art principles, graphics, web design, storyboarding and scripting, and business and marketing. The six strands include creativity and innovation; communication and collaboration; research and information fluency; critical thinking; problem solving, and decision making; digital citizenship; and technology operations and concepts.

(4)　　Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

(5)　　Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)　　Knowledge and skills.

(1)　　Creativity and innovation. The student demonstrates creative thinking, constructs knowledge, and develops innovative products and processes using technology. The student is expected to:

(A)　　research, evaluate, and demonstrate appropriate design of a web-based gaming site;

(B)　　illustrate ideas for web artwork from direct observations, experiences, and imagination;

(C)　　create original designs for web applications; and

(D)　　demonstrate the effective use of art media to create original web designs.

(2)　　Communication and collaboration. The student uses digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning experience of others. The student is expected to:

(A)   understand and evaluate the use and appropriateness of webinars;

(B)   examine, discuss, and summarize interactive online learning environments;

(C)   distinguish between distance learning, virtual learning, and online learning;

(D)   define and evaluate Voice over Internet Protocol (VoIP);

(E)   identify and apply end-user, peer, self-, and professional evaluations; and

(F)   work collaboratively to create functioning programs and gaming products.

(3)   Research and information fluency. The student applies digital tools to gather, evaluate, and use information. The student is expected to:

(A)   research, evaluate, and create web forms for database processing;

(B)   identify the various programming languages and differentiate among the available web programming languages;

(C)   research, evaluate, and summarize content management systems (CMS);

(D)   differentiate between Common Gateway Interface (CGI) and computer-generated imagery (CGI);

(E)   discuss, analyze, and summarize streaming media/content and game broadcasting;

(F)   define and evaluate instant messaging (IM) within a game environment;

(G)   analyze and discuss the history of gaming;

(H)   discuss, analyze, compare, and contrast game types such as action, action-adventure, adventure, construction and management simulation, life simulation, massively multiplayer online role-playing (MMORPG), music, party, puzzle, role-playing, sports, strategy, trivia, and vehicle simulation;

(I)   discuss, analyze, compare, and contrast gaming hardware, including console, personal computer, mobile, and web;

(J)   compare and contrast web standards versus browser-specific languages;

(K)   research, evaluate, and summarize e-commerce;

(L)   investigate career opportunities in programming, gaming, art, design, business, and marketing;

(M)   research the characteristics of existing gaming websites to determine local, state, national, and global trends;

(N)   compare and contrast historical and contemporary styles of art as applied to website development;

(O)   compare and contrast the use of the art elements of color, texture, form, line, space, and value and the art principles of emphasis, pattern, rhythm, balance, proportion, and unity in personal web game artwork and the web game artwork of others, using vocabulary accurately;

(P)   describe general characteristics in artwork from a variety of cultures that influence web game design;

(Q)   research and evaluate emerging technologies; and

(R)   research and evaluate augmented reality (the supplementing of reality with computer-generated imagery) such as heads-up display and virtual digital projectors.

(4)   Critical thinking, problem solving, and decision making. The student uses critical-thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources. The student is expected to:

(A)   select an appropriate web programming language based on given criteria;

(B)   develop requirements for a database and determine the appropriate means to insert, delete, and modify records;

(C)   develop Structured Query Language (SQL) statements to retrieve, insert, modify, and delete records in a database;

(D)   design and create a flow diagram to plan a database, program, and game;

(E)   define and identify proper use of gaming graphics, including skins, textures, environment appearance, environment mapping, raster graphics, and vector graphics;

(F)   plan an animation that includes the movement of characters, camera movements, camera angles, user point of view, mechanics of motion, backgrounds, settings, ambient objects, and environments;

(G)   compare and contrast two-dimensional (2-D) and three-dimensional (3-D) animation;

(H)   develop and create a gaming storyboard and script that shows the overall development of a storyline;

(I)   identify and implement graphic and game design elements, including color, environment, time to completion, difficulty, story complexity, character development, device control, backstory, delivery, and online player(s);

(J)   design and create decision trees for a game's artificial intelligence engine;

(K)   compare and contrast available audio formats for optimal delivery;

(L)   identify the similarities and differences among platforms, including the application of coding on a personal computer, mobile device, and gaming console;

(M)   research and identify existing online game development tools;

(N)   evaluate and determine network requirements for the delivery of online games to end users; and

(O)   create visual solutions by elaborating on direct observation, experiences, and imagination as they apply to original web design.

(5)   Digital citizenship. The student understands human, cultural, and societal issues related to technology and practices legal and ethical behavior. The student is expected to:

(A)   explain game ratings and why games fit into certain ratings;

(B)   assess games and game ratings in terms of their impact on societal interactions;

(C)   model the ethical and legal acquisition of digital information following copyright laws, fair-use guidelines, and the student code of conduct;

(D)   define and practice the ethical and legal acquisition, sharing, and use of files taking into consideration their primary ownership and copyright;

(E)   examine original web game artwork to comply with appropriate behavioral, communication, and privacy guidelines, including ethics, online bullying and harassment, personal security, appropriate audience language, ethical use of files/file sharing, technical documentation, and online communities;

(F)   interpret, evaluate, and justify artistic decisions in the creation of original art for web game design; and

(G)   analyze original web game artwork and digital portfolios created by peers and others to form precise conclusions about formal qualities, historical and cultural contexts, intents, and meanings.

(6)   Technology operations and concepts. The student demonstrates a sound understanding of technology concepts, systems, and operations. The student is expected to:

(A)   create a website that includes:

(i)   an interactive database with elements such as SQL statements, Extensible Markup Language (XML), and Open Database Connectivity (ODBC);

(ii)   javascript; and

(iii)   server-side processing, including Common Gateway Interface (CGI); bitmap and vector graphics; database creation, modification, and deletion; creation and maintenance of user accounts; user authentication; and documentation;

(B)   create a fully functional online game that includes:

(i)   multiple game levels with increasing difficulty;

(ii)   high-score ranking;

(iii)   physics, including center of mass, collision detection, lighting, shading, perspective, anatomy, motion blur, lens flare, and reflections;

(iv)   art principles, including color theory, texture, balance, lighting, shading, skinning, and drawing;

(v)   graphics resolution, including pixel depth and compression;

(vi)   database creation, modification, and deletion;

(vii)   creation and maintenance of user accounts;

(viii) user authentication;

(ix)   artificial intelligence;

(x)   game-level saving;

(xi)   mathematical functions;

(xii)   varying camera angles;

(xiii) VoIP for online web games; and

(xiv)   documentation; and

(C)   create a digital portfolio.

Subchapter K. Information Technology

[**§130.308. Web Technologies (One Credit), Adopted 2015.**]

[(a)   General requirements. This course is recommended for students in Grades 10-12. Recommended prerequisite: Principles of Information Technology. Students shall be awarded one credit for successful completion of this course.

(b)   Introduction.

(1)   Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

(2)   The Information Technology (IT) Career Cluster focuses on building linkages in IT occupations for entry level, technical, and professional careers related to the design, development, support, and management of hardware, software, multimedia, and systems integration services.

(3)   In Web Technologies, students will learn to make informed decisions and apply the decisions to the field of IT. Students will implement personal and interpersonal skills to prepare for a rapidly evolving workplace environment. The knowledge and skills acquired and practiced will enable students to successfully perform and interact in a technology-driven society. Students will enhance reading, writing, computing, communication, and critical thinking and apply them to the IT environment.

(4)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

(5)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)   Knowledge and skills.

(1)   The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:

(A)   identify and demonstrate work behaviors and qualities that enhance employability and job advancement such as regular attendance, attention to proper attire, maintenance of a clean and safe work environment, pride in work, flexibility, and initiative;

(B)   employ effective verbal and nonverbal communication skills;

(C)   examine the role of certifications, resumes, and portfolios in the web technology profession;

(D)   solve problems and think critically;

(E)   demonstrate leadership skills and function effectively as a team member; and

(F)   demonstrate planning and time-management skills such as storyboarding and project management, including initiating, planning, executing, monitoring and controlling, and closing a project.

(2)   The student identifies employment opportunities in the IT field with a focus in the area of interactive media. The student is expected to:

(A)   identify job opportunities and accompanying job duties and tasks;

(B)   research careers of personal interest along with the education, job skills, and experience required to achieve personal career goals;

(C)   demonstrate an understanding of the functions of resumes and portfolios; and

(D)   create a portfolio.

(3)   The student demonstrates knowledge and appropriate use of hardware, software, and connectivity technologies. The student is expected to:

       (A)   identify networking components and define the impact of networking components on web development;

       (B)   evaluate the various input, processing, output, and storage devices and storage services;

       (C)   identify current and future Internet protocols such as hypertext transfer protocol, file transfer protocol, telnet, and email; and

       (D)   describe new trends in web technology and evaluate their impact on web development.

(4)   The student complies with practices and behaviors that meet legal and ethical responsibilities. The student is expected to:

       (A)   explain and demonstrate ethical use of technology and online resources;

       (B)   differentiate between copyright and trademarks;

       (C)   explain the concept of intellectual property laws, including copyright, trademarks, and patents and consequences of violating each type of law;

       (D)   examine the consequences of plagiarism;

       (E)   adhere to copyright and trademark intellectual property laws and regulations, including demonstrating correct acquisition and citation of sources;

       (F)   discuss the process of acquiring rights to use copyrighted and trademarked content in a website;

       (G)   demonstrate appropriate behavior and adherence to acceptable use policies when accessing and using online resources;

       (H)   explain the importance of information privacy such as securing credit card information, passwords, and personal information;

       (I)   describe the function of a non-disclosure agreement; and

       (J)   discuss website accessibility concerns.

(5)   The student evaluates electronic information. The student is expected to:

       (A)   identify appropriate methods to analyze the design and functionality of web pages;

       (B)   demonstrate skill in testing the accuracy and validity of information acquired; and

       (C)   synthesize information from data acquired from online resources.

(6)   The student creates and modifies web and digital media designs. The student is expected to:

       (A)   implement functional design elements such as proximity, repetition, contrast, alignment, color theory, consistency, image file size, and typography;

       (B)   identify, create, modify, and use common file formats such as text, image, video analog and digital, and audio files;

       (C)   select, create, modify, and integrate effective digital content such as vector-based and raster graphics, motion graphics, video, and audio;

       (D)   create web pages using current web standards and web development skills such as version control, documentation, web application security, validation, accessibility, and compatibility across multiple browsers and devices;

       (E)   demonstrate proper use of folder structure hierarchy; and

       (F)   use web coding standards to evaluate the design and functionality of web pages such as the World Wide Web Consortium (W3C) guidelines.

(7)   The student demonstrates and employs knowledge of Internet programming strategies to develop and maintain web applications. The student is expected to:

     (A)   explain the importance of Internet programming standards;

     (B)   differentiate among various web coding standards such as HyperText Markup Language, and cascading style sheets;

     (C)   use standard applications to develop web applications such as text-based editing programs, word processors, and web authoring software;

     (D)   compare and contrast the impact of different browsers on web development;

     (E)   explain client-server applications and describe the process of a client-server transaction;

     (F)   identify the advantages and disadvantages of client-side processing;

     (G)   identify security issues related to client-side processing;

     (H)   use standard scripting languages to produce interactive web applications;

     (I)   identify characteristics of various scripting languages; and

     (J)   explain the process to construct secure transaction interfaces from the web server to the customer.

(8)   The student employs knowledge of web administration to develop and maintain web applications. The student is expected to:

     (A)   compare the advantages and disadvantages of running a personal server versus using a server provider;

     (B)   explain the Transmission Control Protocol/Internet Protocol;

     (C)   identify hardware and software requirements for web servers;

     (D)   evaluate server providers;

     (E)   describe the process of establishing a domain name;

     (F)   simulate the administration of web servers, including uploading and managing files;

     (G)   collect and analyze usage statistics;

     (H)   maintain documentation of the server environment such as specifications, passwords, and software versions;

     (I)   summarize the process of server backup and restoration of software features;

     (J)   propose security measures to protect web servers from electronic threats such as unauthorized access and negative intentions; and

     (K)   evaluate security measures such as using a firewall, Secure Socket Layer (SSL) connections, and Hypertext Transfer Protocol Secure (HTTPS) transactions.

(9)   The student evaluates a problem and creates a project management plan for meeting client requirements. The student is expected to:

     (A)   communicate with clients to analyze requirements to meet the needs of the client and target audience;

     (B)   document design properties, necessary tools, and resources and identify and address risks;

     (C)   develop and use a timeline task list such as critical milestones, potential challenges, and interdependencies; and

     (D)   use various methods to evaluate the progress of the plan and modify as necessary.

(10) The student creates and implements a web product using a project management plan. The student is expected to:

    (A) create and simulate the publication of a multipage web product using client required content and web design concepts;

    (B) develop a test plan for a multipage web product for testing usability, effectiveness, reliability, and customer acceptance;

    (C) explain the quality assurance process; and

    (D) develop and implement a quality assurance plan.]

[§130.309. Computer Programming I (One Credit), Adopted 2015.]

[(a) General requirements. This course is recommended for students in Grades 10-12. Recommended prerequisites: Principles of Information Technology and Algebra I. Students shall be awarded one credit for successful completion of this course.

(b) Introduction.

    (1) Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

    (2) The Information Technology (IT) Career Cluster focuses on building linkages in IT occupations for entry level, technical, and professional careers related to the design, development, support, and management of hardware, software, multimedia, and systems integration services.

    (3) In Computer Programming I, students will acquire knowledge of structured programming techniques and concepts appropriate to developing executable programs and creating appropriate documentation. Students will analyze the social responsibility of business and industry regarding the significant issues relating to the environment, ethics, health, safety, and diversity in society and in the workplace as related to computer programming. Students will apply technical skills to address business applications of emerging technologies.

    (4) Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

    (5) Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c) Knowledge and skills.

    (1) The student demonstrates the necessary skills for career development, maintenance of employability, and successful completion of course outcomes. The student is expected:

        (A) employ effective reading and writing skills;

        (B) employ effective verbal and nonverbal communication skills;

        (C) solve problems and think critically;

        (D) demonstrate leadership skills and function effectively as a team member;

        (E) demonstrate an understanding of legal and ethical responsibilities in relation to the field of IT;

        (F) demonstrate planning and time-management skills such as project management, including initiating, planning, executing, monitoring and controlling, and closing a project; and

        (G) identify job opportunities and accompanying job duties and tasks.

    (2) The student differentiates the concepts of integrity and confidentiality as related to technology in the business environment. The student is expected to:

(A)   define business ethics;

(B)   distinguish between honest and dishonest business practices;

(C)   examine copyright and licensing issues in the software industry; and

(D)   analyze the effects of unethical practices on a business.

(3)   The student identifies and analyzes the client project software needs and requirements. The student is expected to:

(A)   gather data to identify client and project requirements;

(B)   identify input and output requirements;

(C)   identify system processing requirements; and

(D)   develop program requirements and specifications.

(4)   The student develops an IT-based project plan to solve a specific problem. The student is expected to:

(A)   define scope of work to meet client-based project needs;

(B)   identify software development processes and issues; and

(C)   explain the software system life cycle approach.

(5)   The student designs a software application plan. The student is expected to:

(A)   articulate the principles of system design such as procedural, object-oriented, and event-driven processes;

(B)   perform a logical design using appropriate software tools;

(C)   apply algorithmic and data structure concepts;

(D)   identify constraints;

(E)   identify modular design concepts; and

(F)   document the design specification using a defined procedure.

(6)   The student solves problems using different types and levels of programming languages and quality assurances. The student is expected to:

(A)   differentiate among the concepts of data such as procedural, object-oriented, and event-driven representation;

(B)   identify current programming languages and the environment in which each is used;

(C)   produce procedural and object-oriented programs using structured coding with appropriate style and clarity of expression;

(D)   demonstrate skill in program testing;

(E)   compare computed results with anticipated results to determine the reasonableness of the solutions;

(F)   troubleshoot technological problems;

(G)   explain the software quality assurance process; and

(H)   follow established quality assurance procedures for testing, identifying problems, and tracking resolutions.

(7)   The student recognizes issues and complies with procedures for maintaining the security of computerized information. The student is expected to:

[§130.310. Computer Programming II (One Credit), Adopted 2015.]

[(a)   General requirements. This course is recommended for students in Grades 11 and 12. Recommended prerequisites: Principles of Information Technology and Computer Programming I. Students shall be awarded one credit for successful completion of this course.

(b)   Introduction.

(1)   Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

(2)   The Information Technology (IT) Career Cluster focuses on building linkages in IT occupations for entry level, technical, and professional careers related to the design, development, support, and management of hardware, software, multimedia, and systems integration services.

(3)   In Computer Programming II, students will expand their knowledge and skills in structured programming techniques and concepts by addressing more complex problems and developing comprehensive programming solutions. Students will analyze the social responsibility of business and industry regarding the significant issues relating to environment, ethics, health, safety, and diversity in society and in the workplace as related to computer programming. Students will apply technical skills to address business applications of emerging technologies.

(4)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

(5)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)   Knowledge and skills.

(1)   The student demonstrates professional standards/employability skills as required by business and industry. The student is expected:

(A)   employ effective reading and writing skills;

(B)   employ effective verbal and nonverbal communication skills;

(C)   illustrate interview skills for successful job placement;

(D)   solve problems and think critically;

(E)   demonstrate leadership skills and function effectively as a team member;

(F)   identify and implement proper safety procedures;

(G)   demonstrate an understanding of legal and ethical responsibilities in relation to the field of IT; and

(H)   demonstrate planning and time-management skills such as project management, including initiating, planning, executing, monitoring and controlling, and closing a project.

(2)   The student identifies various employment opportunities in the IT field. The student is expected to:

(A)   create a personal career plan along with education, job skills, and experience necessary to achieve career goals; and

(B)   develop a resume that includes letters of recommendation appropriate to a chosen career plan.

(3)   The student identifies project software needs and requirements. The student is expected to:

(A)   identify input and output requirements;

(B)   identify system processing requirements;

(C)   identify hardware, networking, and software system functional requirements;

(D)   conduct a project needs analysis;

(E)   define a problem to be solved by a created application;

(F)   analyze requirement specifications using current approaches;

(G)   identify project constraints; and

(H)   use advanced modeling and analysis of functional requirements.

(4)   The student produces an IT-based strategy and project plan to solve a provided class problem. The student is expected to:

(A)   identify key functions and subsystem capabilities of modern software products;

(B)   identify software resources and individual product risks; and

(C)   identify software development methodologies.

(5)   The student demonstrates knowledge of the software development environment. The student is expected to:

(A)   apply prototyping techniques;

(B)   use appropriate configuration management tools;

(C)   apply language-specific programming techniques;

(D)   develop programs using appropriate language;

(E)   apply the appropriate development environment for each selected language such as the compiler, debugger, test generator, and analyzer;

(F)   use appropriate modeling and analysis tools; and

(G)   use appropriate requirement tracking tools.

(6)   The student demonstrates knowledge of the software development process. The student is expected to:

(A)   articulate the information system life cycle;

(B)   identify system analysis issues related to design, testing, implementation, and maintenance;

(C)   identify the use of program design tools in a software development process; and

(D)   identify current information life cycle models.

(7)   The student designs a software application. The student is expected to:

(A)   apply principals of system design such as structured, object-oriented, and event-driven processes;

(B)   develop a logical design;

(C)   document design specifications according to a defined procedure;

   (D) ~~design system input, output, processing, and interfaces;~~

   (E) ~~identify the characteristics and uses of data processing such as batch, interactive, event driven, and object oriented;~~

   (F) ~~explain algorithmic and data structure concepts;~~

   (G) ~~identify constraints;~~

   (H) ~~identify modular design concepts;~~

   (I) ~~identify the features, functions, and architectures of client-server computing;~~

   (J) ~~articulate database-management concepts;~~

   (K) ~~define the objectives of a client-server application;~~

   (L) ~~design static and dynamic online processing systems; and~~

   (M) ~~employ interface techniques.~~

 (8) ~~The student codes a software application. The student is expected to:~~

   (A) ~~apply programming language concepts;~~

   (B) ~~identify the hardware-software connection;~~

   (C) ~~articulate the concept of data representation;~~

   (D) ~~apply structured, object-oriented, and event-driven programming techniques;~~

   (E) ~~articulate how a programming language can support multitasking and exception handling;~~

   (F) ~~identify how current key programming languages work in different operating system environments;~~

   (G) ~~translate data structures and program design into code in an appropriate language;~~

   (H) ~~demonstrate key constructs and commands specific to a language;~~

   (I) ~~identify current programming languages used in software development;~~

   (J) ~~explain how to resolve program implementation issues such as debugging, documentation, and auditing;~~

   (K) ~~articulate software development issues such as correctness, reliability, and productivity;~~

   (L) ~~explain code analysis issues related to design, testing, implementation, and maintenance;~~

   (M) ~~demonstrate how to design and implement programs in a top-down manner;~~

   (N) ~~demonstrate how to translate algorithmic and modular design into computer code;~~

   (O) ~~explain how programming control structures are used to verify correctness;~~

   (P) ~~compile and debug computer code; and~~

   (Q) ~~prepare appropriate commenting within code.~~

 (9) ~~The student demonstrates knowledge of software testing. The student is expected to:~~

   (A) ~~develop a test plan;~~

   (B) ~~define test procedures;~~

   (C) ~~develop test cases; and~~

   (D) ~~perform software testing.~~

 (10) ~~The student performs quality assurance testing. The student is expected to:~~

   (A) ~~explain the software quality assurance process;~~

§130.315. Web Communications (One-Half Credit).

(a)   General requirements. Students shall be awarded one-half credit for successful completion of this course. This course is recommended for students in Grade 9.

(b)   Introduction.

(1)   Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

(2)   The Information Technology (IT) Career Cluster focuses on building linkages in IT occupations for entry level, technical, and professional careers related to the design, development, support, and management of hardware, software, multimedia, and systems integration services.

(3)   In Web Communications, students will acquire knowledge of web communications and technological operations and concepts. This is an exploratory course in web communications. The six strands include creativity and innovation; communication and collaboration; research and information fluency; critical thinking; problem solving, and decision making; digital citizenship; and technology operations and concepts.

(4)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

(5)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)   Knowledge and skills.

(1)   Creativity and innovation. The student demonstrates creative thinking, constructs knowledge, and develops innovative products and processes using technology. The student is expected to:

(A)   demonstrate proficiency in the use of local and online collaboration;

(B)   create websites using web editors or web authoring programs;

(C)   evaluate the accessibility and usability of original websites; and

(D)   conceptualize possible technologies based on current technical trends.

(2)   Communication and collaboration. The student uses digital technology to work collaboratively toward his or her own learning and the learning of others. The student is expected to:

(A)   analyze and implement the proper and acceptable use of digital/virtual communications technologies such as instant messaging (IM), chat, email, and social networking;

(B)   define and implement the acquisition, sharing, and use of files taking into consideration primary ownership and copyright;

(C)   apply decisions regarding the selection, acquisition, and sharing of uniform resource locators (URLs) used in research, taking into consideration their quality, appropriateness, and effectiveness; and

(D)   solve problems using critical-thinking strategies.

(3)   Research and information fluency. The student applies digital tools to gather, evaluate, and use information. The student is expected to:

(A)   verify the accuracy, validity, and currency of acquired information;

(B)   conduct effective searches using Boolean operators;

(C)   acquire and use appropriate vocabulary terms;

(D)   cite sources appropriately using established methods;

(E)   model ethical and legal acquisition of digital information following guidelines in the student code of conduct, including plagiarism and copyright laws;

(F)   identify and discuss emerging technologies and their impact;

(G)   understand Internet history and structure and how they impact current use; and

(H)   demonstrate appropriate use of grammar, spelling, and vocabulary when creating original work.

(4)   Critical thinking, problem solving, and decision making. The student uses critical-thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources. The student is expected to:

(A)   demonstrate the transfer and adaptation of knowledge through the creation of original work;

(B)   evaluate and implement security measures such as firewalls and Hypertext Transfer Protocol Secure (HTTPS) to protect original work;

(C)   analyze and follow timelines needed to create, edit, and present original work;

(D)   verify current licensing issues for software being used for the creation of original work;

(E)   identify and evaluate the design and functionality of web pages using rubrics;

(F)   optimize web information for fast download such as dial-up and high-speed Internet and mobile devices; and

(G)   evaluate original work through self-, peer, and professional review of websites.

(5)   Digital citizenship. The student understands human, cultural, and societal issues related to technology and practices legal and ethical behavior. The student is expected to:

(A)   engage in online activities that follow appropriate behavioral, communication, and privacy guidelines, including ethics, personal security, and verbiage determined by the intended audience;

(B)   understand the negative impact of inappropriate technology use, including online bullying and harassment;

(C)   implement online security guidelines, including identity protection, limited personal information sharing, and password protection of a secure website; and

(D)   advocate and practice safe, legal, and responsible use of information and technology.

(6)   Technology operations and concepts. The student demonstrates a sound understanding of technology concepts, systems, and operations. The student is expected to:

<blockquote>

(A)   demonstrate knowledge of hardware such as scanners, cameras, printers, video cameras, and external hard drives;

(B)   identify the parts of a computer and explain their functions;

(C)   summarize the need, functionality, and use of servers;

(D)   identify the advantages and disadvantages of running a personal web server versus using a web server provider;

(E)   differentiate and appropriately use various input, processing, output, and primary/secondary storage devices;

(F)   create and implement universally accessible documents;

(G)   analyze bandwidth issues as they relate to audience, servers, connectivity, and cost;

(H)   establish a folder/directory hierarchy for storage of a web page and its related or linked files;

(I)   follow file and folder naming conventions, including spacing, special characters, and capitalization; and

(J)   identify basic design principles when creating a website.

</blockquote>

§130.316. Web Design (One Credit).

(a)   General requirements. Students shall be awarded one credit for successful completion of this course. This course is recommended for students in Grades 9-12.

(b)   Introduction.

(1)   Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

(2)   The Information Technology (IT) Career Cluster focuses on building linkages in IT occupations for entry level, technical, and professional careers related to the design, development, support, and management of hardware, software, multimedia, and systems integration services.

(3)   In Web Design students will acquire knowledge of web design and technological operations and concepts that support creativity, innovation, collaboration, information fluency, critical thinking and decision making. The six strands include creativity and innovation; communication and collaboration; research and information fluency; critical thinking; problem solving, and decision making; digital citizenship; and technology operations and concepts.

(4)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

(5)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)   Knowledge and skills.

(1)   Creativity and innovation. The student demonstrates creative thinking, constructs knowledge, and develops innovative products and processes using technology. The student is expected to:

(A)   demonstrate proficiency in local and online collaboration;

(B)   create a website using web editors and web authoring programs;

(C)   evaluate the accessibility and usability of an original website as it relates to a target audience;

(D)   conceptualize new possible technologies based on current technical trends;

	(E)	analyze the use of virtualization such as virtual classrooms, distance learning, virtual storage, and a virtual operating system;
	(F)	demonstrate knowledge and appropriate use of operating systems, software applications, and communication and networking components; and
	(G)	make decisions regarding the selection, acquisition, and use of software, taking into consideration its quality, appropriateness, effectiveness, and efficiency.

(2)   Communication and collaboration. The student uses digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning experience of others. The student is expected to:

(A)   analyze and implement the proper and acceptable use of digital/virtual communications technologies such as instant messaging (IM), chat, email, and social networking;

(B)   define and implement the acquisition, sharing, and use of files, taking into consideration their primary ownership and copyright;

(C)   apply decisions regarding the selection, acquisition, and sharing of uniform resource locators (URLs) used in research, taking into consideration their quality, appropriateness, and effectiveness;

(D)   solve problems using critical-thinking strategies; and

(E)   compare, evaluate, and implement the use of wired versus wireless access.

(3)   Research and information fluency. The student applies digital tools to gather, evaluate, and use information. The student is expected to:

(A)   verify the accuracy, validity, and currency of acquired information;

(B)   conduct effective searches with Boolean operators;

(C)   acquire and use appropriate vocabulary terms;

(D)   cite sources appropriately using established methods;

(E)   model ethical and legal acquisition of digital information following guidelines in the student code of conduct, including plagiarism and copyright laws;

(F)   identify and discuss emerging technologies and their impact;

(G)   understand Internet history and structure and how they impact current use;

(H)   demonstrate appropriate use of grammar, spelling, and vocabulary when creating original work;

(I)   acquire, evaluate, and use various web standards such as World Wide Web Consortium (W3C), Ecma International, and Internet Corporation for Assigned Names and Numbers (ICANN) to make informed decisions and implement standards in original work;

(J)   understand, analyze, and use interactive websites;

(K)   understand, evaluate, and determine the appropriate use of dynamic and static websites;

(L)   understand, evaluate, and determine the appropriate use of open/closed source file formats and software;

(M)   explain and demonstrate how search engines work such as advanced options, preferences, advertising, and search categories;

(N)   evaluate, create, and apply principles of project management, including web storyboards, site maps, job duties, time constraints, group dynamics, communication interaction, and project completion, evaluation, and feedback;

(O)   understand the use and application of a virtual private network (VPN);

(P)   distinguish among protocols, including Hypertext Transfer Protocol (HTTP) and File Transfer Protocol (FTP);

(Q)   summarize the technical needs of a World Wide Web server, including random access memory (RAM), hard disk capacity, central processing unit (CPU) speed, busses, methods of connectivity, and appropriate software;

(R)   demonstrate proficiency in the use of a variety of electronic input devices such as keyboard, scanner, voice/sound recorder, mouse, touch screen, or digital video by incorporating such components while publishing web pages;

(S)   demonstrate proper digital etiquette and knowledge of acceptable use policies when using networks, especially resources on the Internet and intranets;

(T)   demonstrate proficiency in and appropriate use and navigation of local area networks (LANs), wide area networks (WANs), the Internet, and intranets for research and resource sharing;

(U)   construct appropriate search strategies in the acquisition of information from the Internet, including keyword searches and searches with Boolean operators; and

(V)   acquire information in electronic formats, including text, audio, video, and graphics, citing the source.

(4)   Critical thinking, problem solving, and decision making. The student uses critical-thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources. The student is expected to:

(A)   demonstrate the transfer and adaptation of knowledge through the creation of original work;

(B)   evaluate and implement security measures to protect original work such as firewalls and Hypertext Transfer Protocol Secure (HTTPS);

(C)   analyze and follow timelines needed to create, edit, and present original work;

(D)   verify current licensing issues for software being used for the creation of original work;

(E)   identify and evaluate the design and functionality of web pages using rubrics;

(F)   optimize web information for fast download such as dial-up and high-speed Internet and mobile devices;

(G)   evaluate original work through self-, peer, and professional review of websites;

(H)   evaluate the types, functions, and target audiences of websites;

(I)   read, use, and develop technical documents;

(J)   analyze, examine, assess, and decide on servers as they relate to the management of a website;

(K)   analyze, examine, assess, and decide on a web host;

(L)   analyze, examine, assess, and decide on domain name acquisition and retention;

(M)   evaluate the functionality of a website such as color scheme, grammar, technological constraints, age appropriateness, cross-platform usability, and user relevant criteria as it relates to an intended audience;

(N)   identify software file formats and their characteristics and appropriate use;

(O)   identify and apply search engine optimization (SEO) to ensure optimal website visibility;

(P)   investigate and choose electronic security methods for a web server to protect from unauthorized access and negative intentions; and

(Q)   draw conclusions from data gathered from electronic and telecommunication resources.

(5)   Digital citizenship. The student understands human, cultural, and societal issues related to technology and practices legal and ethical behavior. The student is expected to:

(A)   engage in online activities that follow appropriate behavioral, communication, and privacy guidelines, including ethics, personal security, verbiage determined by the intended audience, and ethical use of files and file sharing;

(B)   understand the negative impact of inappropriate technology use, including online bullying and harassment;

(C)   implement online security guidelines, including identity protection, limited personal information sharing, and password protection of a secure website;

(D)   engage in safe, legal, and responsible use of information and technology;

(E)   understand and respond to local, state, national, and global issues to ensure appropriate cross-browser and cross-platform usability;

(F)   interpret, use, and develop a safe online shared computing environment;

(G)   identify legal, ethical, appropriate, and safe website marketing practices;

(H)   identify legal, ethical, appropriate, and safe multimedia usage, including video, audio, graphics, animation, and emerging trends;

(I)   analyze the impact of the World Wide Web on society through research, interviews, and personal observation; and

(J)   participate in relevant and meaningful activities in the larger community and society to create electronic projects.

(6)   Technology operations and concepts. The student demonstrates a sound understanding of technology concepts, systems, and operations. The student is expected to:

(A)   demonstrate knowledge of hardware, including scanners, cameras, printers, video cameras, and external hard drives;

(B)   identify the parts of a computer and explain its functions;

(C)   summarize the need for and functionality and use of servers;

(D)   identify the advantages and disadvantages of running a personal web server versus using a web server provider;

(E)   differentiate and appropriately use various input, processing, output, and primary/secondary storage devices;

(F)   create and implement universally accessible documents;

(G)   analyze bandwidth issues as related to audience, server, connectivity, and cost;

(H)   establish a folder/directory hierarchy for storage of a web page and its related or linked files;

(I)   create file and folder naming conventions to follow established guidelines, including spacing, special characters, and capitalization;

(J)   identify basic design principles when creating a website, including white space, color theory, background color, shape, line, proximity, unity, balance (ratio of text to white space), alignment, typography, font size, type, style, image file size, repetition, contrast, consistency, and aesthetics;

(K)   demonstrate knowledge of the six core domains (gov, net, com, mil, org, edu) and be familiar with new domain implementation;

(L)   implement escape codes, HyperText Markup Language (HTML), cascading style sheets (CSS), and javascript through hard coding, web editors, and web authoring programs;

(M)   identify and use FTP client software;

(N)   implement java applet insertion;

(O)   identify and differentiate various network topologies, including physical and logical;

(P)   create, evaluate, and use web-based animation;

(Q)   create, evaluate, and use video, including editing, compression, exporting, appropriateness, and delivery;

(R)   demonstrate the ability to conduct secure communications from a web server to a client; and

(S)   use hypertext linking appropriately when creating web pages.

§130.317. Independent Study in Technology Applications (One Credit), Beginning with School Year 2012-2013.

(a)   General requirements. Students shall be awarded one credit for successful completion of this course. Recommended prerequisite: a minimum of one credit from the courses in the Information Technology Career Cluster. This course may be taken at Grades 9-12.

(b)   Introduction.

(1)   Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

(2)   The Information Technology (IT) Career Cluster focuses on building linkages in IT occupations for entry level, technical, and professional careers related to the design, development, support, and management of hardware, software, multimedia, and systems integration services.

(3)   In Independent Study in Technology Applications, through the study of technology applications foundations, including technology-related terms, concepts, and data input strategies, students will communicate information in different formats and to diverse audiences using a variety of technologies. Students will learn to make informed decisions; develop and produce original work that exemplifies the standards identified by the selected profession or discipline; and publish the product in electronic media and print. Students will practice the efficient acquisition of information by identifying task requirements, using search strategies, and using technology to access, analyze, and evaluate the acquired information. By using technology as a tool that supports the work of individuals and groups in solving problems, students will select the technology appropriate for the task, synthesize knowledge, create solutions, and evaluate the results. The six strands include creativity and innovation; communication and collaboration; research and information fluency; critical thinking; problem solving, and decision making; digital citizenship; and technology operations and concepts.

(4)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

(5)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)   Knowledge and skills.

(1)   Creativity and innovation. The student demonstrates creative thinking, constructs knowledge, and develops innovative products and processes using technology. The student is expected to:

(A)   apply existing knowledge to promote creativity in designing new technology products or services;

(B)   design and implement procedures to track trends, set timelines, and review and evaluate progress for continual improvement in process and product;

(C)   produce electronic documentation to illustrate the progress of a project;

(D)   seek and respond to input from peers and professionals in delineating technological tasks and problem solving;

(E)   make necessary revisions and/or proceed to the next stage of study;

(F)   use technology terminology appropriate to the independent study course;

(G)   develop and apply advanced creativity and innovation employed in technology applications skills;

(H)   identify and solve problems, individually and with input from peers and professionals, using research methods and advanced creativity and innovation skills used in a selected profession or discipline;

(I)   develop products that meet standards identified by the selected profession or discipline; and

(J)   produce original work to solve an identified problem and publish a product in electronic media and print.

(2)   Communication and collaboration. The student uses digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning experience of others. The student is expected to:

     (A)   format developed projects according to defined output specifications, including target audience and viewing environment;

     (B)   present findings to a panel for comment and professional response;

     (C)   determine and implement the best method of presenting or publishing findings;

     (D)   synthesize and publish information in a variety of print or digital formats;

     (E)   use evolving network and Internet resources and appropriate technology skills to create, exchange, and publish information;

     (F)   develop cultural understanding and global awareness by interacting with learners of other cultures through evolving digital formats and communication methods;

     (G)   collaborate with others to identify a problem to be solved, hypotheses, and strategies to accomplish a task;

     (H)   participate with electronic communities as a learner, initiator, contributor, and facilitator/mentor; and

     (I)   participate in relevant, meaningful activities in the larger community and society to create electronic projects.

(3)   Research and information fluency. The student applies digital tools to gather, evaluate, and use information. The student is expected to:

     (A)   use evolving network and Internet resources for research and resource sharing of technology applications;

     (B)   apply appropriate search strategies in the acquisition of information from the Internet, including keyword and Boolean search strategies;

     (C)   pose hypotheses and questions related to a selected problem;

     (D)   acquire information using appropriate research strategies with source citations through electronic formats, including interactive components, text, audio, video, graphics, and simulations; and

(E)　　identify, create, and use available file formats, including text, image, video, and audio files.

(4)　　Critical thinking, problem solving, and decision making. The student uses critical-thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources. The student is expected to:

(A)　　evaluate the design, functionality, and accuracy of the accessed information;

(B)　　conduct systematic research;

(C)　　demonstrate creative-thinking and problem-solving skills;

(D)　　integrate appropriate productivity tools, including network, mobile access, and multimedia tools, in the creation of solutions to problems;

(E)　　use enriched curricular content in the creation of products;

(F)　　synthesize and generate new information from data gathered from electronic resources;

(G)　　read and use technical documentation; and

(H)　　write simple technical documentation relative to the audience.

(5)　　Digital citizenship. The student understands human, cultural, and societal issues related to technology and practices legal and ethical behavior. The student is expected to:

(A)　　discuss intellectual property, privacy, sharing of information, copyright laws, and software licensing agreements;

(B)　　model ethical acquisition and use of digital information;

(C)　　model respect of intellectual property when editing graphics, video, text, and sound files;

(D)　　demonstrate proper etiquette, responsible use of software, and knowledge of acceptable use policies when using network resources;

(E)　　demonstrate best practices in understanding and applying information security;

(F)　　develop and maintain a technical documentation library in a variety of formats; and

(G)　　investigate how technology has changed and the social and ethical ramifications of computer usage.

(6)　　Technology operations and concepts. The student demonstrates a sound understanding of technology concepts, systems, and operations. The student is expected to:

(A)　　demonstrate knowledge and appropriate use of input devices, operating systems, software applications, and communication and networking components;

(B)　　select, acquire, and use appropriate digital tools;

(C)　　delineate and make necessary adjustments regarding compatibility issues, including digital file formats and cross-platform connectivity; and

(D)　　use appropriate technology terminology and naming conventions.

§130.318. Independent Study in Evolving/Emerging Technologies (One Credit).

(a)　　General requirements. Students shall be awarded one credit for successful completion of this course. Recommended prerequisite: a minimum of one credit from the courses in the Information Technology Career Cluster. This course may be taken at Grades 9-12.

(b)　　Introduction.

(1)　　Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

(2)   The Information Technology (IT) Career Cluster focuses on building linkages in IT occupations for entry level, technical, and professional careers related to the design, development, support, and management of hardware, software, multimedia, and systems integration services.

(3)   In the Independent Study in Evolving/Emerging Technologies course, through the study of evolving/emerging technologies, including technology-related terms, concepts, and data input strategies, students will communicate information in different formats and to diverse audiences using a variety of technologies. Students will learn to make informed decisions, develop and produce original work that exemplifies the standards identified by the selected profession or discipline, and publish the product in electronic media and print. Students will demonstrate efficient acquisition of information by identifying task requirements, using search strategies, and using technology to access, analyze, and evaluate the acquired information. By using technology as a tool that supports the work of individuals and groups in solving problems, students will select the technology appropriate for the task, synthesize knowledge, create solutions, and evaluate the results. The six strands include creativity and innovation; communication and collaboration; research and information fluency; critical thinking; problem solving, and decision making; digital citizenship; and technology operations and concepts.

(4)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

(5)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)   Knowledge and skills.

(1)   Creativity and innovation. The student demonstrates creative thinking, constructs knowledge, and develops innovative products and processes using technology. The student is expected to:

(A)   apply existing knowledge to promote creativity in designing new technology products or services;

(B)   design and implement procedures to track trends, set timelines, and review and evaluate progress for continual improvement in process and product;

(C)   produce electronic documentation to illustrate the progress of a project;

(D)   seek and respond to input from peers and professionals in delineating technological tasks and problem solving;

(E)   make necessary revisions and/or proceed to the next stage of study;

(F)   use technology terminology appropriate to the independent study course;

(G)   develop and apply advanced creativity and innovation employed in technology applications skills;

(H)   identify and solve problems, individually and with input from peers and professionals, using research methods and advanced creativity and innovation skills used in a selected profession or discipline;

(I)   develop products that meet standards identified by a selected profession or discipline; and

(J)   produce original work to solve an identified problem and publish a product in electronic media and print.

(2)   Communication and collaboration. The student uses digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning experience of others. The student is expected to:

(A)   format developed projects according to defined output specifications, including target audience and viewing environment;

(B)   present findings to a panel for comment and professional response;

(C)   determine and implement the best method of presenting or publishing findings;

(D)   synthesize and publish information in a variety of print or digital formats;

(E)   use evolving network resources and appropriate technology skills to create, exchange, and publish information;

(F)   develop cultural understanding and global awareness by interacting with learners of other cultures through evolving digital formats and communication methods;

(G)   collaborate with others to identify a problem to be solved, hypotheses, and strategies to accomplish a task;

(H)   participate with electronic communities as a learner, initiator, contributor, and facilitator/mentor; and

(I)   participate in relevant, meaningful activities in the larger community and society to create electronic projects.

(3)   Research and information fluency. The student applies digital tools to gather, evaluate, and use information. The student uses a variety of strategies to acquire information from electronic resources, with appropriate supervision. The student is expected to:

(A)   use evolving network and Internet resources for research and resource sharing of technology applications;

(B)   apply appropriate search strategies in the acquisition of information from the Internet, including keyword and Boolean search strategies;

(C)   pose hypotheses and questions related to a selected problem;

(D)   acquire information using appropriate research strategies with source citations through electronic formats, including interactive components, text, audio, video, graphics, and simulations; and

(E)   identify, create, and use available file formats, including text, image, video, and audio files.

(4)   Critical thinking, problem solving, and decision making. The student uses critical-thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources. The student is expected to:

(A)   evaluate the design, functionality, and accuracy of the accessed information;

(B)   conduct systematic research;

(C)   demonstrate creative-thinking and problem-solving skills;

(D)   integrate appropriate productivity tools, including network, mobile access, and multimedia tools, in the creation of solutions to problems;

(E)   use enriched curricular content in the creation of products;

(F)   synthesize and generate new information from data gathered from electronic resources;

(G)   read and use technical documentation; and

(H)   write simple technical documentation relative to the audience.

(5)   Digital citizenship. The student understands human, cultural, and societal issues related to technology and practices legal and ethical behavior. The student is expected to:

(A)   discuss intellectual property, privacy, sharing of information, copyright laws, and software licensing agreements;

(B)   model ethical acquisition and use of digital information;

(C)   model respect of intellectual property when editing graphics, video, text, and sound files;

(D) demonstrate proper etiquette, responsible use of software, and knowledge of acceptable use policies when using network resources;

(E) demonstrate best practices in understanding and applying information security;

(F) develop and maintain a technical documentation library in a variety of formats; and

(G) investigate how technology has changed and the social and ethical ramifications of computer usage.

(6) Technology operations and concepts. The student demonstrates a sound understanding of technology concepts, systems, and operations. The student is expected to:

(A) demonstrate knowledge and appropriate use of input devices, operating systems, software applications, and communication and networking components;

(B) select, acquire, and use appropriate digital tools;

(C) delineate and make necessary adjustments regarding compatibility issues, including digital file formats and cross-platform connectivity; and

(D) use appropriate technology terminology and naming conventions.

Subchapter O. Science, Technology, Engineering, and Mathematics

§130.420. Fundamentals of Computer Science (One Credit).

(a)   General requirements. Students shall be awarded one credit for successful completion of this course. This course is recommended for students in Grades 9-12.

(b)   Introduction.

    (1)   Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

    (2)   The Science, Technology, Engineering, and Mathematics (STEM) Career Cluster focuses on planning, managing, and providing scientific research and professional and technical services, including laboratory and testing services, and research and development services.

    (3)   Fundamentals of Computer Science is intended as a first course for those students just beginning the study of computer science. Students will learn about the computing tools that are used every day. Students will foster their creativity and innovation through opportunities to design, implement, and present solutions to real-world problems. Students will collaborate and use computer science concepts to access, analyze, and evaluate information needed to solve problems. Students will learn the problem-solving and reasoning skills that are the foundation of computer science. By using computer science knowledge and skills that support the work of individuals and groups in solving problems, students will select the technology appropriate for the task, synthesize knowledge, create solutions, and evaluate the results. Students will learn digital citizenship by researching current laws and regulations and by practicing integrity and respect. Students will gain an understanding of the principles of computer science through the study of technology operations and concepts. The six strands include creativity and innovation; communication and collaboration; research and information fluency; critical thinking; problem solving, and decision making; digital citizenship; and technology operations and concepts.

    (4)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

    (5)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)   Knowledge and skills.

    (1)   Creativity and innovation. The student develops products and generates new understanding by extending existing knowledge. The student is expected to:

        (A)   investigate and explore various career opportunities within the computer science field and report findings through various media;

        (B)   create and publish interactive stories, games, and animations;

        (C)   create and publish interactive animations;

        (D)   create algorithms for the solution of various problems;

        (E)   create web pages using a mark-up language;

        (F)   use the Internet to create and publish solutions; and

        (G)   design creative and effective user interfaces.

    (2)   Communication and collaboration. The student communicates and collaborates with peers to contribute to his or her own learning and the learning of others. The student is expected to:

        (A)   seek and respond to advice from peers and professionals in evaluating problem solutions;

        (B)   debug and solve problems using reference materials and effective strategies; and

(C) publish information in a variety of ways such as print, monitor display, web pages, and video.

(3) Research and information fluency. The student locates, analyzes, processes, and organizes data. The student is expected to:

(A) construct appropriate electronic search strategies; and

(B) use a variety of resources, including other subject areas, together with various productivity tools to gather authentic data as a basis for individual and group programming projects.

(4) Critical thinking, problem solving, and decision making. The student uses appropriate strategies to analyze problems and design algorithms. The student is expected to:

(A) demonstrate the ability to insert applets into web pages;

(B) find, download, and insert scripting code into web pages to enhance interactivity;

(C) understand binary representation of data in computer systems, perform conversions between decimal and binary number systems, and count in binary number systems;

(D) read and define a problem's description, purpose, and goals;

(E) demonstrate coding proficiency in a contemporary programming language by developing solutions that create stories, games, and animations;

(F) choose, identify, and use the appropriate data type to properly represent data in a problem solution;

(G) demonstrate an understanding of and use variables within a programmed story, game, or animation;

(H) demonstrate proficiency in the use of arithmetic operators to create mathematical expressions, including addition, subtraction, multiplication, real division, integer division, and modulus division;

(I) demonstrate an understanding of and use sequence within a programmed story, game, or animation;

(J) demonstrate an understanding of and use conditional statements within a programmed story, game, or animation;

(K) demonstrate an understanding of and use iteration within a programmed story, game, or animation;

(L) create an interactive story, game, or animation;

(M) use random numbers within a programmed story, game, or animation; and

(N) test program solutions by investigating valid and invalid data.

(5) Digital citizenship. The student explores and understands safety, legal, cultural, and societal issues relating to the use of technology and information. The student is expected to:

(A) discuss copyright laws/issues and model ethical acquisition of digital information by citing sources using established methods;

(B) demonstrate proper digital etiquette and knowledge of acceptable use policies when using networks, especially resources on the Internet and on intranets;

(C) investigate measures such as passwords or virus detection/prevention to protect computer systems and databases from unauthorized use and tampering;

(D) understand the safety risks associated with the use of social networking sites;

(E) discuss the impact of computing and computing related advancements on society; and

    (F) determine the reliability of information available through electronic media.

  (6) Technology operations and concepts. The student understands technology concepts, systems, and operations as they apply to computer science. The student is expected to:

    (A) demonstrate knowledge of the basic computer components, including a central processing unit (CPU), storage, and input/output devices;

    (B) use operating system tools, including appropriate file management;

    (C) demonstrate knowledge and appropriate use of different operating systems;

    (D) demonstrate knowledge and understanding of basic network connectivity;

    (E) describe, compare, and contrast the differences between an application and an operating system; and

    (F) compare, contrast, and appropriately use various input, processing, output, and primary/secondary storage devices.

§140.421. Computer Science I (One Credit).

(a) General requirements. Students shall be awarded one credit for successful completion of this course. Prerequisite: Algebra I. This course is recommended for students in Grades 9-12.

(b) Introduction.

  (1) Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

  (2) The Science, Technology, Engineering, and Mathematics (STEM) Career Cluster focuses on planning, managing, and providing scientific research and professional and technical services, including laboratory and testing services, and research and development services.

  (3) Computer Science I will foster students' creativity and innovation by presenting opportunities to design, implement, and present meaningful programs through a variety of media. Students will collaborate with one another, their instructor, and various electronic communities to solve the problems presented throughout the course. Through data analysis, students will identify task requirements, plan search strategies, and use computer science concepts to access, analyze, and evaluate information needed to solve problems. By using computer science knowledge and skills that support the work of individuals and groups in solving problems, students will select the technology appropriate for the task, synthesize knowledge, create solutions, and evaluate the results. Students will learn digital citizenship by researching current laws and regulations and by practicing integrity and respect. Students will gain an understanding of the principles of computer science through the study of technology operations, systems, and concepts. The six strands include creativity and innovation; communication and collaboration; research and information fluency; critical thinking; problem solving, and decision making; digital citizenship; and technology operations and concepts.

  (4) Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

  (5) Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c) Knowledge and skills.

  (1) Creativity and innovation. The student develops products and generates new understandings by extending existing knowledge. The student is expected to:

    (A) participate with electronic communities as a learner, initiator, contributor, and teacher/mentor;

(B)   extend the learning environment beyond the school walls with digital products created to increase teaching and learning in the other subject areas; and

(C)   participate in relevant, meaningful activities in the larger community and society to create electronic projects.

(2)   Communication and collaboration. The student communicates and collaborates with peers to contribute to his or her own learning and the learning of others. The student is expected to:

(A)   create and properly display meaningful output;

(B)   create interactive console display interfaces, with appropriate user prompts, to acquire data from a user;

(C)   use Graphical User Interfaces (GUIs) to create interactive interfaces to acquire data from a user and display program results;

(D)   write programs with proper programming style to enhance the readability and functionality of the code by using meaningful descriptive identifiers, internal comments, white space, spacing, indentation, and a standardized program style;

(E)   improve numeric display by optimizing data visualization;

(F)   display simple vector graphics using lines, circles, and rectangles;

(G)   display simple bitmap images; and

(H)   seek and respond to advice from peers and professionals in evaluating quality and accuracy.

(3)   Research and information fluency. The student locates, analyzes, processes, and organizes data. The student is expected to:

(A)   use a variety of resources, including foundation and enrichment curricula, to gather authentic data as a basis for individual and group programming projects; and

(B)   use various productivity tools to gather authentic data as a basis for individual and group programming projects.

(4)   Critical thinking, problem solving, and decision making. The student uses appropriate strategies to analyze problems and design algorithms. The student is expected to:

(A)   use program design problem-solving strategies to create program solutions;

(B)   define and specify the purpose and goals of solving a problem;

(C)   identify the subtasks needed to solve a problem;

(D)   identify the data types and objects needed to solve a problem;

(E)   identify reusable components from existing code;

(F)   design a solution to a problem;

(G)   code a solution from a program design;

(H)   identify and debug errors;

(I)   test program solutions with appropriate valid and invalid test data for correctness;

(J)   debug and solve problems using error messages, reference materials, language documentation, and effective strategies;

(K)   explore common algorithms, including finding greatest common divisor, finding the biggest number out of three, finding primes, making change, and finding the average;

(L)   analyze and modify existing code to improve the underlying algorithm;

(M) create program solutions that exhibit robust behavior by understanding, avoiding, and preventing runtime errors, including division by zero and type mismatch;

(N) select the most appropriate algorithm for a defined problem;

(O) demonstrate proficiency in the use of the arithmetic operators to create mathematical expressions, including addition, subtraction, multiplication, real division, integer division, and modulus division;

(P) create program solutions to problems using available mathematics libraries, including absolute value, round, power, square, and square root;

(Q) develop program solutions that use assignment;

(R) develop sequential algorithms to solve non-branching and non-iterative problems;

(S) develop algorithms to decision-making problems using branching control statements;

(T) develop iterative algorithms and code programs to solve practical problems;

(U) demonstrate proficiency in the use of the relational operators;

(V) demonstrate proficiency in the use of the logical operators; and

(W) generate and use random numbers.

(5) Digital citizenship. The student explores and understands safety, legal, cultural, and societal issues relating to the use of technology and information. The student is expected to:

(A) discuss intellectual property, privacy, sharing of information, copyright laws, and software licensing agreements;

(B) model ethical acquisition and use of digital information;

(C) demonstrate proper digital etiquette, responsible use of software, and knowledge of acceptable use policies;

(D) investigate measures, including passwords and virus detection/prevention, to protect computer systems and databases from unauthorized use and tampering; and

(E) investigate how technology has changed and the social and ethical ramifications of computer usage.

(6) Technology operations, systems, and concepts. The student understands technology concepts, systems, and operations as they apply to computer science. The student is expected to:

(A) compare and contrast types of operating systems, software applications, and programming languages;

(B) demonstrate knowledge of major hardware components, including primary and secondary memory, a central processing unit (CPU), and peripherals;

(C) differentiate among current programming languages, discuss the use of those languages in other fields of study, and demonstrate knowledge of specific programming terminology and concepts;

(D) differentiate between a high-level compiled language and an interpreted language;

(E) understand concepts of object-oriented design;

(F) use local and global scope access variable declarations;

(G) encapsulate data and associated subroutines into an abstract data type;

(H) create subroutines that do not return values with and without the use of arguments and parameters;

(I)	create subroutines that return typed values with and without the use of arguments and parameters;

(J)	understand and identify the data-binding process between arguments and parameters;

(K)	compare objects using reference values and a comparison routine;

(L)	understand the binary representation of numeric and nonnumeric data in computer systems;

(M)	understand the finite limits of numeric data;

(N)	perform numerical conversions between the decimal and binary number systems and count in the binary number system;

(O)	choose, identify, and use the appropriate data types for integer, real, and Boolean data when writing program solutions;

(P)	demonstrate an understanding of the concept of a variable;

(Q)	demonstrate an understanding of and use reference variables for objects;

(R)	demonstrate an understanding of how to represent and manipulate text data, including concatenation and other string functions;

(S)	demonstrate an understanding of the concept of scope;

(T)	identify and use the structured data type of one-dimensional arrays to traverse, search, and modify data;

(U)	choose, identify, and use the appropriate data type and structure to properly represent the data in a program problem solution; and

(V)	compare and contrast strongly typed and un-typed programming languages.

§130.422. Computer Science II (One Credit).

(a)	General requirements. Students shall be awarded one credit for successful completion of this course. Prerequisite: Algebra I and either Computer Science I or Fundamentals of Computer Science. This course is recommended for students in Grades 11 and 12.

(b)	Introduction.

(1)	Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

(2)	The Science, Technology, Engineering, and Mathematics (STEM) Career Cluster focuses on planning, managing, and providing scientific research and professional and technical services, including laboratory and testing services, and research and development services.

(3)	Computer Science II will foster students' creativity and innovation by presenting opportunities to design, implement, and present meaningful programs through a variety of media. Students will collaborate with one another, their instructor, and various electronic communities to solve the problems presented throughout the course. Through data analysis, students will identify task requirements, plan search strategies, and use computer science concepts to access, analyze, and evaluate information needed to solve problems. By using computer science knowledge and skills that support the work of individuals and groups in solving problems, students will select the technology appropriate for the task, synthesize knowledge, create solutions, and evaluate the results. Students will learn digital citizenship by researching current laws and regulations and by practicing integrity and respect. Students will gain an understanding of computer science through the study of technology operations, systems, and concepts. The six strands include creativity and innovation; communication and collaboration; research and information fluency; critical thinking;

problem solving, and decision making; digital citizenship; and technology operations and concepts.

    (4)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

    (5)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)   Knowledge and skills.

    (1)   Creativity and innovation. The student develops products and generates new understandings by extending existing knowledge. The student is expected to:

        (A)   use program design problem-solving strategies to create program solutions;

        (B)   demonstrate the ability to read and modify large programs, including the design description and process development;

        (C)   follow the systematic problem-solving process of identifying the specifications of purpose and goals, the data types and objects needed, and the subtasks to be performed;

        (D)   compare and contrast design methodologies and implementation techniques such as top-down, bottom-up, and black box;

        (E)   analyze, modify, and evaluate existing code by performing a case study on a large program, including inheritance and black box programming;

        (F)   identify the data types and objects needed to solve a problem;

        (G)   choose, identify, and use the appropriate abstract data type, advanced data structure, and supporting algorithms to properly represent the data in a program problem solution;

        (H)   use object-oriented programming development methodology, data abstraction, encapsulation with information hiding, and procedural abstraction in program development and testing; and

        (I)   create, edit, and manipulate bitmap images that are used to enhance user interfaces and program functionality.

    (2)   Communication and collaboration. The student communicates and collaborates with peers to contribute to his or her own learning and the learning of others. The student is expected to:

        (A)   use the principles of software engineering to work in software design teams, break a problem statement into specific solution requirements, create a program development plan, code part of a solution from a program development plan while a partner codes the remaining part, team test the solution for correctness, and develop presentations to report the solution findings;

        (B)   create interactive console display interfaces with appropriate user prompts;

        (C)   create interactive human interfaces to acquire data from a user and display program results using an advanced Graphical User Interface (GUI);

        (D)   write programs and communicate with proper programming style to enhance the readability and functionality of the code by using meaningful descriptive identifiers, internal comments, white space, indentation, and a standardized program style;

        (E)   improve data display by optimizing data visualization;

        (F)   display simple vector graphics to interpret and display program results; and

        (G)   display simple bitmap images.

    (3)   Research and information fluency. The student locates, analyzes, processes, and organizes data. The student is expected to:

(A)	use local area networks (LANs) and wide area networks (WANs), including the Internet and intranets, in research, file management, and collaboration;

(B)	understand programming file structure and file access for required resources;

(C)	acquire and process information from text files, including files of known and unknown sizes;

(D)	manipulate data structures using string processing;

(E)	manipulate data values by casting between data types;

(F)	identify and use the structured data type of one-dimensional arrays to traverse, search, modify, insert, and delete data;

(G)	identify and use the structured data type of two-dimensional arrays to traverse, search, modify, insert, and delete data; and

(H)	identify and use a list object data structure to traverse, search, insert, and delete data.

(4)	Critical thinking, problem solving, and decision making. The student uses appropriate strategies to analyze problems and design algorithms. The student is expected to:

(A)	develop sequential algorithms using branching control statements, including nested structures, to create solutions to decision-making problems;

(B)	develop choice algorithms using selection control statements based on ordinal values;

(C)	demonstrate proficiency in the use of short-circuit evaluation;

(D)	demonstrate proficiency in the use of Boolean algebra, including De Morgan's Law;

(E)	develop iterative algorithms using nested loops;

(F)	identify, trace, and appropriately use recursion in programming solutions, including algebraic computations;

(G)	design, construct, evaluate, and compare search algorithms, including linear searching and binary searching;

(H)	identify, describe, design, create, evaluate, and compare standard sorting algorithms, including selection sort, bubble sort, insertion sort, and merge sort;

(I)	measure time/space efficiency of various sorting algorithms;

(J)	compare and contrast search and sort algorithms, including linear, quadratic, and recursive strategies, for time/space efficiency;

(K)	analyze algorithms using "big-O" notation for best, average, and worst-case data patterns;

(L)	develop algorithms to solve various problems, including factoring, summing a series, finding the roots of a quadratic equation, and generating Fibonacci numbers;

(M)	test program solutions by investigating boundary conditions; testing classes, methods, and libraries in isolation; and performing stepwise refinement;

(N)	identify and debug compile, syntax, runtime, and logic errors;

(O)	compare and contrast algorithm efficiency by using informal runtime comparisons, exact calculation of statement execution counts, and theoretical efficiency values using "big-O" notation, including worst-case, best-case, and average-case time/space analysis;

(P)	demonstrate the ability to count, convert, and perform mathematical operations in the binary and hexadecimal number systems;

(Q)	demonstrate knowledge of the maximum integer boundary, minimum integer boundary, imprecision of real number representations, and round-off errors;

(R)   create program solutions to problems using the mathematics library class;

(S)   use random algorithms to create simulations that model the real world;

(T)   identify, understand, and create class specifications and relationships among classes, including composition and inheritance relationships;

(U)   understand and explain object relationships among defined classes, abstract classes, and interfaces;

(V)   create object-oriented definitions using class declarations, variable declarations, constant declarations, method declarations, parameter declarations, and interface declarations;

(W)   create robust classes that encapsulate data and the methods that operate on that data and incorporate overloading to enrich the object's behavior;

(X)   design and implement a set of interactive classes;

(Y)   design, create, and evaluate multiclass programs that use abstract classes and interfaces;

(Z)   understand and implement a student-created class hierarchy;

(AA)   extend, modify, and improve existing code using inheritance;

(BB)   create adaptive behaviors, including overloading, using polymorphism;

(CC)   understand and use reference variables for object and string data types;

(DD)   understand and implement access scope modifiers;

(EE)   understand and demonstrate how to compare objects;

(FF)   duplicate objects using the appropriate deep and/or shallow copy;

(GG)   define and implement abstract classes and interfaces in program problem solutions;

(HH)   apply functional decomposition to a program solution;

(II)   create simple and robust objects from class definitions through instantiation;

(JJ)   apply class membership of variables, constants, and methods;

(KK)   examine and mutate the properties of an object using accessors and modifiers;

(LL)   understand and implement a composite class; and

(MM)   design and implement an interface.

(5)   Digital citizenship. The student explores and understands safety, legal, cultural, and societal issues relating to the use of technology and information. The student is expected to:

     (A)   model ethical acquisition and use of digital information;

     (B)   demonstrate proper digital etiquette, responsible use of software, and knowledge of acceptable use policies; and

     (C)   investigate digital rights management.

(6)   Technology operations and concepts. The student understands technology concepts, systems, and operations as they apply to computer science. The student is expected to:

     (A)   compare and contrast types of operating systems, software applications, hardware platforms, and programming languages;

     (B)   demonstrate knowledge of major hardware components, including primary and secondary memory, a central processing unit (CPU), and peripherals;

     (C)   demonstrate knowledge of major networking components, including hosts, servers, switches, and routers;

<table>
<tr><td>(D)</td><td>demonstrate knowledge of computer communication systems, including single-user, peer-to-peer, workgroup, client-server, and networked;</td></tr>
<tr><td>(E)</td><td>demonstrate knowledge of computer addressing systems, including Internet Protocol (IP) address and Media Access Control (MAC) address; and</td></tr>
<tr><td>(F)</td><td>differentiate among the categories of programming languages, including machine, assembly, high-level compiled, high-level interpreted, and scripted.</td></tr>
</table>

§130.423. Computer Science III (One Credit).

(a)   General requirements. Students shall be awarded one credit for successful completion of this course. Prerequisite: Computer Science II, Advanced Placement (AP) Computer Science A, or International Baccalaureate (IB) Computer Science. This course is recommended for students in Grades 11 and 12.

(b)   Introduction.

   (1)   Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

   (2)   The Science, Technology, Engineering, and Mathematics (STEM) Career Cluster focuses on planning, managing, and providing scientific research and professional and technical services, including laboratory and testing services, and research and development services.

   (3)   Computer Science III will foster students' creativity and innovation by presenting opportunities to design, implement, and present meaningful programs through a variety of media. Students will collaborate with one another, their instructor, and various electronic communities to solve the problems presented throughout the course. Through data analysis, students will identify task requirements, plan search strategies, and use computer science concepts to access, analyze, and evaluate information needed to solve problems. By using computer science knowledge and skills that support the work of individuals and groups in solving problems, students will select the technology appropriate for the task, synthesize knowledge, create solutions, and evaluate the results. Students will learn digital citizenship by researching current laws and regulations and by practicing integrity and respect. Students will gain an understanding of advanced computer science data structures through the study of technology operations, systems, and concepts. The six strands include creativity and innovation; communication and collaboration; research and information fluency; critical thinking; problem solving, and decision making; digital citizenship; and technology operations and concepts.

   (4)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

   (5)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

(c)   Knowledge and skills.

   (1)   Creativity and innovation. The student develops products and generates new understandings by extending existing knowledge. The student is expected to:

      (A)   apply data abstraction and encapsulation to manage complexity;

      (B)   implement a student-created class hierarchy;

      (C)   read and write class specifications using visual organizers, including Unified Modeling Language;

      (D)   use black box programming methodology;

      (E)   design, create, and use interfaces to apply protocols;

      (F)   identify, describe, design, create, evaluate, and compare standard sorting algorithms that perform sorting operations on data structures, including quick sort and heap sort;

(G)   select, identify, and use the appropriate abstract data type, advanced data structure, and supporting algorithms to properly represent the data in a program problem solution; and

(H)   manage complexity by using a systems approach.

(2)   Communication and collaboration. The student communicates and collaborates with peers to contribute to his or her own learning and the learning of others. The student is expected to:

(A)   use local area networks (LANs) and wide area networks (WANs), including the Internet and intranets, in research, file management, and collaboration;

(B)   create interactive human interfaces to acquire data from a user and display program results using an advanced Graphical User Interface (GUI);

(C)   write programs and communicate with proper programming style to enhance the readability and functionality of the code by using meaningful descriptive identifiers, internal comments, white space, indentation, and a standardized program style; and

(D)   work in software design teams.

(3)   Research and information fluency. The student locates, analyzes, processes, and organizes data. The student is expected to:

(A)   identify and use the structured data type of arrays of objects to traverse, search, modify, insert, and delete data;

(B)   identify and use two-dimensional ragged arrays to traverse, search, modify, insert, and delete data;

(C)   identify and use a list object data structure, including vector, to traverse, search, insert, and delete object data;

(D)   understand and trace a linked-list data structure;

(E)   create program solutions using a linked-list data structure, including unordered single, ordered single, double, and circular linked;

(F)   understand composite data structures, including a linked list of linked lists;

(G)   understand and create program solutions using stacks, queues, trees, heaps, priority queues, graph theory, and enumerated data types;

(H)   understand and create program solutions using sets, including HashSet and TreeSet;

(I)   understand and create program solutions using maps, including HashMap and TreeMap; and

(J)   write and modify text file data.

(4)   Critical thinking, problem solving, and decision making. The student uses appropriate strategies to analyze problems and design algorithms. The student is expected to:

(A)   develop choice algorithms using selection control statements, including break, label, and continue;

(B)   demonstrate proficiency in the use of the bitwise operators;

(C)   develop iterative algorithms using do-while loops;

(D)   demonstrate proficiency in the use of the ternary operator;

(E)   create program solutions that use iterators;

(F)   identify, trace, and appropriately use recursion;

(G)   understand and create program solutions using hashing;

(H)   perform pattern recognition using regular expressions;

(I)　　explore common algorithms, including matrix addition and multiplication, fractals, Towers of Hanoi, and magic square;

　　　　(J)　　create program solutions that exhibit robust behavior by understanding and avoiding runtime errors and handling anticipated errors;

　　　　(K)　　understand object-oriented design concepts of inner classes, outer classes, and anonymous classes;

　　　　(L)　　use object reference scope identifiers, including null, this, and super;

　　　　(M)　　provide object functionality to primitive data types;

　　　　(N)　　write program assumptions in the form of assertions;

　　　　(O)　　write a Boolean expression to test a program assertion; and

　　　　(P)　　construct assertions to make explicit program invariants.

　　(5)　　Digital citizenship. The student explores and understands safety, legal, cultural, and societal issues relating to the use of technology and information. The student is expected to:

　　　　(A)　　model ethical acquisition and use of digital information; and

　　　　(B)　　demonstrate proper digital etiquette, responsible use of software, and knowledge of acceptable use policies.

　　(6)　　Technology operations and concepts. The student understands technology concepts, systems, and operations as they apply to computer science. The student is expected to:

　　　　(A)　　compare and contrast high-level programming languages;

　　　　(B)　　create a small workgroup network;

　　　　(C)　　create and apply a basic network addressing scheme; and

　　　　(D)　　create discovery programs in a low-level language, high-level language, and scripting language.

§130.424. Digital Forensics (One Credit), Beginning with School Year 2019-2020.

(a)　　General requirements. Students shall be awarded one credit for successful completion of this course. This course is recommended for students in Grades 9-12.

(b)　　Introduction.

　　(1)　　Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

　　(2)　　The Science, Technology, Engineering, and Mathematics (STEM) Career Cluster focuses on planning, managing, and providing scientific research and professional and technical services, including laboratory and testing services, and research and development services.

　　(3)　　Digital forensics is an evolving discipline concerned with analyzing anomalous activity on computers, networks, programs, and data. As a discipline, it has grown with the emergence of a globally-connected digital society. As computing has become more sophisticated, so too have the abilities of malicious agents to access systems and private information. By evaluating prior incidents, digital forensics professionals have the ability to investigate and craft appropriate responses to disruptions to corporations, governments, and individuals. Whereas cybersecurity takes a proactive approach to information assurance to minimize harm, digital forensics takes a reactive approach to incident response.

　　(4)　　Digital Forensics introduces students to the knowledge and skills of digital forensics. The course provides a survey of the field of digital forensics and incident response.

(5)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

(6)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)   Knowledge and skills.

(1)   Employability skills. The student identifies necessary skills for career development and employment opportunities. The student is expected to:

(A)   investigate the need for digital forensics;

(B)   research careers in digital forensics along with the education and job skills required for obtaining a job in both the public and private sector;

(C)   identify job and internship opportunities as well as accompanying duties and tasks;

(D)   identify and discuss certifications for digital forensics careers;

(E)   explain ethical and legal responsibilities in relation to the field of digital forensics;

(F)   identify and describe businesses and government agencies that use digital forensics;

(G)   identify and describe the kinds of crimes investigated by digital forensics specialists; and

(H)   solve problems and think critically.

(2)   Employability skills. The student communicates and collaborates effectively. The student is expected to:

(A)   apply effective teamwork strategies;

(B)   collaborate with a community of peers and professionals;

(C)   create, review, and edit a report summarizing technical findings; and

(D)   present technical information to a non-technical audience.

(3)   Ethics and laws. The student recognizes and analyzes ethical and current legal standards, rights, and restrictions related to digital forensics. The student is expected to:

(A)   develop a plan to advocate for ethical and legal behaviors both online and offline among peers, family, community, and employers;

(B)   research local, state, national, and international law such as the Electronic Communications Privacy Act of 1986, Title III (Pen Register Act); USA PATRIOT Act of 2001; and Digital Millennium Copyright Act;

(C)   research historic cases or events regarding digital forensics or cyber;

(D)   examine ethical and legal behavior when presented with confidential or sensitive information in various scenarios related to cyber activities;

(E)   analyze case studies of computer incidents;

(F)   use the findings of a computer incident investigation to reconstruct the incident;

(G)   identify and discuss intellectual property laws, issues, and use;

(H)   contrast legal and illegal aspects of information gathering;

(I)   contrast ethical and unethical aspects of information gathering;

(J)   analyze emerging legal and societal trends affecting digital forensics; and

(K)   discuss how technological changes affect applicable laws.

(4)   Digital citizenship. The student understands and demonstrates the social responsibility of end users regarding digital technology, safety, digital hygiene, and cyberbullying. The student is expected to:

    (A)   identify and use digital information responsibly;

    (B)   use digital tools responsibly;

    (C)   identify and use valid and reliable sources of information; and

    (D)   gain informed consent prior to investigating incidents.

(5)   Digital forensics skills. The student locates, processes, analyzes, and organizes data. The student is expected to:

    (A)   identify sources of data;

    (B)   analyze and report data collected;

    (C)   maintain data integrity;

    (D)   examine metadata of a file; and

    (E)   examine how multiple data sources can be used for digital forensics, including investigating malicious software (malware) and email threats.

(6)   Digital forensics skills. The student understands software concepts and operations as they apply to digital forensics. The student is expected to:

    (A)   compare software applications as they apply to digital forensics;

    (B)   describe the purpose of various application types such as email, web, file sharing, security applications, and data concealment tools;

    (C)   identify the different purposes of data formats such as pdf, wav, jpeg, and exe;

    (D)   describe how application logs and metadata are used for investigations;

    (E)   describe digital forensics tools;

    (F)   select the proper software tool based on appropriateness, effectiveness, and efficiency for a given digital forensics scenario; and

    (G)   describe components of applications such as configurations settings, data, supporting files, and user interface.

(7)   Digital forensics skills. The student understands operating systems concepts and functions as they apply to digital forensics. The student is expected to:

    (A)   compare various operating systems;

    (B)   describe file attributes, including access and creation times;

    (C)   describe how operating system logs are used for investigations;

    (D)   compare and contrast the file systems of various operating systems;

    (E)   compare various primary and secondary storage devices; and

    (F)   differentiate between volatile and non-volatile memory.

(8)   Digital forensics skills. The student understands networking concepts and operations as they apply to digital forensics. The student is expected to:

    (A)   examine networks, including Internet Protocol (IP) addressing and subnets;

    (B)   describe the Open Systems Interconnection (OSI) model;

    (C)   describe the Transmission Control Protocol/Internet Protocol (TCP/IP) model;

(D)   use network forensic analysis tools to examine network traffic data from sources such as firewalls, routers, intrusion detection systems (IDS), and remote access logs; and

(E)   identify malicious or suspicious network activities such as mandatory access control (MAC) spoofing and rogue wireless access points.

(9)   Digital forensics skills. The student explains the principles of access controls. The student is expected to:

(A)   define the principle of least privilege;

(B)   describe the impact of granting access and permissions;

(C)   identify different access components such as passwords, tokens, key cards, and biometric verification systems;

(D)   explain the value of an access log to identify suspicious activity;

(E)   describe the risks of granting third parties access to personal and proprietary data on social media and systems;

(F)   describe the risks involved with accepting Terms of Service (ToS) or End User License Agreements (EULA) without a basic understanding of the terms or agreements; and

(G)   identify various access control methods such as MAC, role-based access control (RBAC), and discretionary access control (DAC).

(10)   Incident response. The student follows a methodological approach to prepare for and respond to an incident. The student is expected to:

(A)   define the components of the incident response cycle, including preparation; detection and analysis; containment, eradication, and recovery; and post-incident activity;

(B)   describe incident response preparation;

(C)   discuss incident response detection and analysis;

(D)   discuss containment and eradication of and recovery from an incident;

(E)   describe post-incident activities such as reflecting on lessons learned, using collected incident data, and retaining evidence of an incident;

(F)   develop an incident response plan; and

(G)   describe ways a user may compromise the validity of existing evidence.

(11)   Incident response. The student objectively analyzes collected data from an incident. The student is expected to:

(A)   identify the role of chain of custody in digital forensics;

(B)   describe safe data handling procedures;

(C)   explain the fundamental concepts of confidentiality, integrity, availability, authentication, and authorization;

(D)   identify and report information conflicts or suspicious activity;

(E)   identify events of interest and suspicious activity by examining network traffic; and

(F)   identify events of interest and suspicious activity by examining event logs.

(12)   Incident response. The student analyzes the various ways systems can be compromised. The student is expected to:

(A)   analyze the different signatures of cyberattacks; and

(B)   identify points of weakness and attack vectors such as online spoofing, phishing, and social engineering.

§130.425. Discrete Mathematics for Computer Science (One Credit), Beginning with School Year 2012-2013.

(a)   General requirements. Students shall be awarded one credit for successful completion of this course. Prerequisite: Algebra II. This course is recommended for students in Grades 11 and 12.

(b)   Introduction.

(1)   Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

(2)   The Science, Technology, Engineering, and Mathematics (STEM) Career Cluster focuses on planning, managing, and providing scientific research and professional and technical services, including laboratory and testing services, and research and development services.

(3)   Discrete Mathematics for Computer Science provides the tools used in most areas of computer science. Exposure to the mathematical concepts and discrete structures presented in this course is essential in order to provide an adequate foundation for further study. Discrete Mathematics for Computer Science is generally listed as a core requirement for Computer Science majors. Course topics are divided into six areas: sets, functions, and relations; basic logic; proof techniques; counting basics; graphs and trees; and discrete probability. Mathematical topics are interwoven with computer science applications to enhance the students' understanding of the introduced mathematics. Students will develop the ability to see computational problems from a mathematical perspective. Introduced to a formal system (propositional and predicate logic) upon which mathematical reasoning is based, students will acquire the necessary knowledge to read and construct mathematical arguments (proofs), understand mathematical statements (theorems), and use mathematical problem-solving tools and strategies. Students will be introduced to discrete data structures such as sets, discrete functions, and relations and graphs and trees. Students will also be introduced to discrete probability and expectations. The six strands include creativity and innovation; communication and collaboration; research and information fluency; critical thinking; problem solving, and decision making; digital citizenship; and technology operations and concepts.

(4)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

(5)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)   Knowledge and skills.

(1)   Creativity and innovation. The student develops products and generates new understanding by extending existing knowledge. The student is expected to:

(A)   model algorithms and real-world situations using formal tools of symbolic logic;

(B)   model computer science problems by using graphs and trees; and

(C)   calculate the probabilities of events and expectations of random variables for such problems as games of chance.

(2)   Communication and collaboration. The student communicates and collaborates with peers to contribute to his or her own learning and the learning of others. The student is expected to:

(A)   convert spoken language statements to appropriate statements in propositional logic;

(B)   explain basic terminology of sets, functions, and relations;

(C)   state the definition of the Master theorem;

(D)   use the context of a particular application to interpret the meaning derived when computing the permutations and combinations of a set;

(E)   interpret associated operations and terminology in context; and

(F)   define and provide examples of logical equivalence, normal forms, validity, and modus ponens/modus tollens.

(3)   Research and information fluency. The student locates, analyzes, processes, and organizes data. The student is expected to:

        (A)   construct truth tables for negation, conjunction, disjunction, implication, biconditional, and bit operators; and

        (B)   use truth tables to demonstrate propositional relations.

(4)   Critical thinking, problem solving, and decision making. The student uses appropriate strategies to analyze problems and design algorithms. The student is expected to:

        (A)   analyze practical examples using appropriate models of sets, functions, and relations;

        (B)   compare and contrast tautology, contradiction, and contingency as related to propositional equivalences;

        (C)   compare and contrast examples and use of counterexamples, contrapositions, and contradictions;

        (D)   describe the appropriate use and limitations of predicate logic;

        (E)   apply formal methods of symbolic propositional and predicate logic;

        (F)   use formal logic proofs and logical reasoning to solve problems;

        (G)   outline the basic structure of proofs, including direct, indirect, contradiction, induction, existence, and constructive proofs;

        (H)   compare and contrast the types of problems best satisfied by direct, indirect, contradiction, induction, existence, and constructive proofs;

        (I)   relate mathematical induction to recursion and recursively defined structures;

        (J)   compare and contrast weak, strong, and structural induction, including when each is most appropriately used and examples of each;

        (K)   compare and contrast dependent and independent events;

        (L)   use recurrence equations to analyze algorithms and other practical problems;

        (M)   use counting techniques to analyze algorithms and other practical problems;

        (N)   apply probability tools to solve problems; and

        (O)   define, compare, and contrast simple graphs, multigraphs, and directed and undirected graphs using definitions, properties, and examples, including special cases.

(5)   Digital citizenship. The student explores and understands safety, legal, cultural, and societal issues relating to the use of technology and information. The student is expected to:

        (A)   model ethical acquisition and use of digital information;

        (B)   demonstrate proper digital etiquette, responsible use of software, and knowledge of acceptable use policies; and

        (C)   investigate how the concepts of discrete mathematics are related to relevant problems and significant questions.

(6)   Technology operations and concepts. The student understands technology concepts, systems, and operations as they apply to computer science. The student is expected to:

        (A)   perform operations associated with sets, functions, and relations;

        (B)   apply basic counting principles, including cardinality and the pigeonhole principle;

        (C)   apply appropriate precedence when using logical operators;

(D)   use appropriate strategies, including De Morgan's Laws, to identify propositional equivalences;

(E)   identify and appropriately use predicates, existential and universal quantifiers, and valid arguments;

(F)   identify possible applications of proofs, including evaluating algorithmic complexity;

(G)   state and appropriately use the product and sum rules;

(H)   compute permutations and combinations of a set;

(I)   solve a variety of basic recurrence equations;

(J)   apply the binomial theorem to independent events;

(K)   apply Bayes' theorem to dependent events;

(L)   demonstrate transversal methods for trees and graphs; and

(M)   relate graphs and trees to data structures, algorithms, and counting.

§130.426. Game Programming and Design (One Credit).

(a)   General requirements. Students shall be awarded one credit for successful completion of this course. Prerequisite: Algebra I. This course is recommended for students in Grades 9-12.

(b)   Introduction.

(1)   Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

(2)   The Science, Technology, Engineering, and Mathematics (STEM) Career Cluster focuses on planning, managing, and providing scientific research and professional and technical services, including laboratory and testing services, and research and development services.

(3)   Game Programming and Design will foster student creativity and innovation by presenting students with opportunities to design, implement, and present meaningful programs through a variety of media. Students will collaborate with one another, their instructor, and various electronic communities to solve gaming problems. Through data analysis, students will include the identification of task requirements, plan search strategies, and use programming concepts to access, analyze, and evaluate information needed to design games. By acquiring programming knowledge and skills that support the work of individuals and groups in solving problems, students will select the technology appropriate for the task, synthesize knowledge, create solutions, and evaluate the results. Students will learn digital citizenship by researching current laws and regulations and by practicing integrity and respect. Students will create a computer game that is presented to an evaluation panel. The six strands include creativity and innovation; communication and collaboration; research and information fluency; critical thinking; problem solving, and decision making; digital citizenship; and technology operations and concepts.

(4)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

(5)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)   Knowledge and skills.

(1)   Creativity and innovation. The student develops products and generates new understanding by extending existing knowledge. The student is expected to:

(A)   understand the basic game design elements, including conceptual ideas, storyline, visualization, storyboard, game effects, sound elements, game play, game controls, and player tutorial;

(B)   create a design concept document;

(C)   create a storyboard;

(D)   demonstrate an understanding of the fundamentals of game art, including the look and feel, graphics coordinate system, basics of color, and color palettes;

(E)   use bitmap graphics images, including designing, creating, reading, and manipulating images;

(F)   create backgrounds, including solid, image, and tiled backgrounds;

(G)   write programs creating images using geometric shapes;

(H)   create games using sprites by evaluating the role of sprites, creating sprites, and managing sprites;

(I)   create programs using sprite sheets;

(J)   demonstrate an understanding of image rendering, including transparency, refresh rate, hardware acceleration, and animation;

(K)   find, create, and edit game audio sound effects and music; and

(L)   implement game sound mechanics, including playing, pausing, and looping.

(2)   Communication and collaboration. The student communicates and collaborates with peers to contribute to his or her own learning and the learning of others. The student is expected to:

(A)   design and implement procedures to set timelines for, track the progress of, and evaluate a game product;

(B)   seek and respond to input from peers and professionals in evaluating a game project;

(C)   demonstrate knowledge and appropriate use of operating systems, program development tools, and networking resources;

(D)   use network resources to acquire, organize, maintain, and evaluate information;

(E)   collaborate to research the business of games, including the roles of developer, marketing, publisher, and retail sales; and

(F)   demonstrate an understanding of and evaluate online technology, including online interaction and massive multiplayer games.

(3)   Research and information fluency. The student locates, analyzes, processes, and organizes data. The student is expected to:

(A)   play board games to research and collect game play data;

(B)   evaluate, analyze, and document game styles and playability; and

(C)   research the dramatic elements in games, including kinds of fun, player types, and nonlinear storytelling.

(4)   Critical thinking, problem solving, and decision making. The student uses appropriate strategies to analyze problems and design algorithms. The student is expected to:

(A)   demonstrate an understanding of the game design process, including generating ideas, brainstorming, and paper prototyping;

(B)   write programs using variables of different data types;

(C)   evaluate game rules and instructions;

(D)   demonstrate an understanding of the user experience by comparing rules and game-play patterns;

(E)   write game rules and instructions;

(F)   develop game software;

(G)   write computer game code, resolve game defects, and revise existing game code; and

(H)   test a finished game product by implementing sound testing techniques.

(5)   Digital citizenship. The student explores and understands safety, legal, cultural, and societal issues relating to the use of technology and information. The student is expected to:

(A)   explore intellectual property, privacy, sharing of information, copyright laws, and software licensing agreements;

(B)   model ethical acquisition and use of digital information;

(C)   demonstrate proper digital etiquette when using networks, responsible use of software, and knowledge of acceptable use policies;

(D)   model respect of intellectual property, including manipulating graphics, morphing graphics, editing graphics, and editing sound;

(E)   discuss and evaluate the social issues surrounding gaming; and

(F)   evaluate the cultural aspects of game design fundamentals, including rationale for games and types of games.

(6)   Technology operations and concepts. The student understands technology concepts, systems, and operations as they apply to game programming. The student is expected to:

(A)   identify basic game components, including the game engine, game play subsystems, data structures, models, and interfaces;

(B)   generate random numbers in a program;

(C)   create a program implementing conditional statements;

(D)   develop an appropriate data model;

(E)   demonstrate an understanding of and apply object-oriented game programming;

(F)   demonstrate an understanding of game programming essentials, including event-driven programming, communicating with messages, and device management;

(G)   demonstrate an understanding of the role of game events, the animation loop, and game timing;

(H)   demonstrate an understanding of the role of game engines;

(I)   demonstrate an understanding of video display flicker and double buffering;

(J)   apply basic game screen design and layout, including visual controls, user interfaces, menus, and options;

(K)   use game control design to understand, access, and control input devices, including keyboard, mouse, and joystick;

(L)   demonstrate an understanding of and apply game animation, including the principles of animation and frame-based animation;

(M)   demonstrate an understanding of decision making and types of decisions;

(N)   demonstrate an understanding of game events, including listeners, triggers, and timed events;

(O)   demonstrate an understanding of and implement collision detection, including bounding boxes and sprite collisions;

(P)   implement a tile-based game, including loading tile maps, drawing tile maps, rendering a tile map, and layering sprites;

(Q)	demonstrate an understanding of artificial intelligence and develop and implement artificial intelligence;

(R)	demonstrate an understanding of game balance and tuning; and

(S)	demonstrate an understanding of player progression, including leveling, linear progression, and maintaining high score data.

§130.427. Mobile Application Development (One Credit).

(a)	General requirements. Students shall be awarded one credit for successful completion of this course. Prerequisite: Algebra I. This course is recommended for students in Grades 9-12.

(b)	Introduction.

(1)	Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

(2)	The Science, Technology, Engineering, and Mathematics (STEM) Career Cluster focuses on planning, managing, and providing scientific research and professional and technical services, including laboratory and testing services, and research and development services.

(3)	Mobile Application Development will foster students' creativity and innovation by presenting opportunities to design, implement, and deliver meaningful projects using mobile computing devices. Students will collaborate with one another, their instructor, and various electronic communities to solve problems presented throughout the course. Through data analysis, students will identify task requirements, plan search strategies, and use software development concepts to access, analyze, and evaluate information needed to program mobile devices. By using software design knowledge and skills that support the work of individuals and groups in solving problems, students will select the technology appropriate for the task, synthesize knowledge, create solutions, and evaluate the results. Students will learn digital citizenship by researching current laws and regulations and by practicing integrity and respect. Students will gain an understanding of the principles of mobile application development through the study of development platforms, programming languages, and software design standards. The six strands include creativity and innovation; communication and collaboration; research and information fluency; critical thinking; problem solving, and decision making; digital citizenship; and technology operations and concepts.

(4)	Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

(5)	Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)	Knowledge and skills.

(1)	Creativity and innovation. The student develops products and generates new understanding by extending existing knowledge. The student is expected to:

(A)	create effective user interfaces appropriate for a specified mobile device that is best suited for an identified purpose;

(B)	create effective user interfaces for browser-based, native, and hybrid mobile applications;

(C)	create mobile application components appropriate for identified needs;

(D)	create browser-based applications for mobile devices;

(E)	create native applications that can reside on specified mobile devices; and

(F)	create mobile applications that combine native and hybrid components.

(2)   Communication and collaboration. The student communicates and collaborates with peers to contribute to his or her own learning and the learning of others. The student is expected to:

      (A)   demonstrate an understanding of and discuss how teams function;

      (B)   use teamwork to solve problems;

      (C)   describe the development workflow of mobile applications;

      (D)   use time-management techniques to develop and maintain work schedules, meet deadlines, and establish mobile application project criteria;

      (E)   describe a problem solution; and

      (F)   document and share problem solutions through various media.

(3)   Research and information fluency. The student locates, analyzes, processes, and organizes data. The student is expected to:

      (A)   analyze, identify, and describe mobile application project stakeholders and their perspectives;

      (B)   collect and analyze available data to identify mobile application project requirements;

      (C)   analyze, identify, and describe input, output, and processing requirements; and

      (D)   analyze, identify, and define hardware and software specifications.

(4)   Critical thinking, problem solving, and decision making. The student uses appropriate strategies to analyze problems and design algorithms. The student is expected to:

      (A)   compare and contrast design decisions based on the hardware considerations of a mobile device;

      (B)   compare and contrast available mobile technologies, including platforms and their operating systems;

      (C)   compare and contrast available development approaches, including application to specific technologies and platforms;

      (D)   determine the most appropriate solution for the development of a given mobile application, including browser-based, native, and hybrid approaches;

      (E)   compare and contrast available programming languages and how their use might be applied to specific technologies and platforms;

      (F)   identify and justify the selection of an appropriate programming language, including available resources and required interfaces;

      (G)   select an appropriate program development environment;

      (H)   identify and use available libraries;

      (I)   evaluate and justify the selection of appropriate options and components;

      (J)   compare and contrast available networks and their implications for mobile application development; and

      (K)   compare and contrast design strategies related to mobile network and device security.

(5)   Digital citizenship. The student explores and understands safety, legal, cultural, and societal issues relating to the use of technology and information. The student is expected to:

      (A)   discuss copyright laws and issues;

      (B)   model ethical acquisition and use of digital information;

      (C)   cite sources using established methods;

(D)   demonstrate proper digital etiquette and knowledge of acceptable use policies;

(E)   investigate mobile device security measures such as passwords, virus detection, and virus prevention;

(F)   describe potential risks and benefits associated with the use of a mobile application;

(G)   identify current and emerging technologies related to mobile applications; and

(H)   evaluate technologies and assess their applicability to current mobile applications.

(6)   Technology operations and concepts. The student understands technology concepts, systems, and operations as they apply to computer science. The student is expected to:

(A)   demonstrate an understanding of the difference between desktop and mobile applications;

(B)   demonstrate an understanding of hardware and software structures and requirements in the design of mobile applications;

(C)   recognize multiple platforms and demonstrate an understanding of their associated requirements;

(D)   recognize various program development environments;

(E)   demonstrate an understanding of event-based programming and its appropriate use;

(F)   describe how memory management affects mobile application design;

(G)   demonstrate an understanding of how low bandwidth and the mobility of a device affect the design of mobile applications;

(H)   identify applications that are best suited for mobile devices;

(I)   demonstrate an understanding of the use of libraries when designing mobile applications;

(J)   use a simulation tool to emulate a mobile device's functionality; and

(K)   use actual mobile devices to test mobile applications.

§130.428. Foundations of Cybersecurity (One Credit).

(a)   General requirements. Students shall be awarded one credit for successful completion of this course. This course is recommended for students in Grades 9-12.

(b)   Introduction.

(1)   Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

(2)   The Science, Technology, Engineering, and Mathematics (STEM) Career Cluster focuses on planning, managing, and providing scientific research and professional and technical services, including laboratory and testing services, and research and development services.

(3)   Cybersecurity is an evolving discipline concerned with safeguarding computers, networks, programs, and data from unauthorized access. As a field, it has gained prominence with the emergence of a globally-connected society. As computing has become more sophisticated, so too have the abilities of malicious agents looking to penetrate networks and seize private information. By evaluating prior incidents, cybersecurity professionals have the ability to craft appropriate responses to minimize disruptions to corporations, governments, and individuals.

(4)   In the Foundations of Cybersecurity course, students will develop the knowledge and skills needed to explore fundamental concepts related to the ethics, laws, and operations of cybersecurity. Students will examine trends and operations of cyberattacks, threats, and vulnerabilities. Students will review and explore security policies designed to mitigate risks. The skills obtained in this course prepare students for additional study in cybersecurity. A variety of courses are available to

students interested in this field. Foundations of Cybersecurity may serve as an introductory course in this field of study.

(5)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

(6)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)   Knowledge and skills.

(1)   Employability skills. The student demonstrates necessary skills for career development and successful completion of course outcomes. The student is expected to:

(A)   identify and demonstrate employable work behaviors such as regular attendance, punctuality, maintenance of a professional work environment, and effective written and verbal communication;

(B)   identify and demonstrate positive personal qualities such as authenticity, resilience, initiative, and a willingness to learn new knowledge and skills;

(C)   solve problems and think critically;

(D)   demonstrate leadership skills and function effectively as a team member; and

(E)   demonstrate an understanding of ethical and legal responsibilities in relation to the field of cybersecurity.

(2)   Employability skills. The student identifies various employment opportunities and requirements in the cybersecurity field. The student is expected to:

(A)   identify job and internship opportunities as well as accompanying duties and tasks;

(B)   research careers in cybersecurity and information assurance along with the education and job skills required for obtaining a job in both the public and private sectors;

(C)   identify and discuss certifications for cybersecurity-related careers; and

(D)   research and develop resumes, digital portfolios, or professional profiles in the cybersecurity field.

(3)   Ethics and laws. The student understands ethical and current legal standards, rights and restrictions governing technology, technology systems, digital media, and the use of social media. The student is expected to:

(A)   demonstrate and advocate for ethical and legal behaviors both online and offline among peers, family, community, and employers;

(B)   research local, state, national, and international cyber law such as the PATRIOT Act of 2001, General Data Protection Regulation, and Digital Millennium Copyright Act;

(C)   research historic cases or events regarding cyber;

(D)   demonstrate an understanding of ethical and legal behavior when presented with various scenarios related to cyber activities;

(E)   define and identify techniques such as hacking, phishing, social engineering, online piracy, spoofing, and data vandalism; and

(F)   identify and use appropriate methods for citing sources.

(4)   Ethics and laws. The student identifies the consequences of ethical versus malicious hacking. The student is expected to:

(A)   identify motivations for hacking;

(B)   identify and describe the impact of cyberattacks on the global community, society, and individuals;

(C)   distinguish between a cyber attacker and a cyber defender;

(D)   differentiate types of hackers such as black hats, white hats, and gray hats;

(E)   determine possible outcomes and legal ramifications of ethical versus malicious hacking practices; and

(F)   debate the varying perspectives of ethical versus malicious hacking.

(5)   Ethics and laws. The student identifies and defines cyberterrorism and counterterrorism. The student is expected to:

(A)   define cyberterrorism, state-sponsored cyberterrorism, and hacktivism;

(B)   compare and contrast physical terrorism and cyberterrorism, including domestic and foreign actors;

(C)   define and explain intelligence gathering and counterterrorism;

(D)   identify the role of cyber defenders in protecting national interests and corporations;

(E)   identify the role of cyber defense in society and the global economy; and

(F)   explain the importance of protecting public infrastructures such as electrical power grids, water systems, pipelines, transportation, and nuclear plants.

(6)   Digital citizenship. The student understands and demonstrates the social responsibility of end users regarding significant issues related to digital technology, digital hygiene, and cyberbullying. The student is expected to:

(A)   identify and understand the nature and value of privacy;

(B)   analyze the positive and negative implications of a digital footprint and the maintenance and monitoring of an online presence;

(C)   discuss the role and impact of technology on privacy;

(D)   identify the signs, emotional effects, and legal consequences of cyberbullying and cyberstalking; and

(E)   identify and discuss effective ways to prevent, deter, and report cyberbullying.

(7)   Cybersecurity skills. The student understands basic cybersecurity concepts and definitions. The student is expected to:

(A)   define information security and cyber defense;

(B)   identify basic risk management and risk assessment principles related to cybersecurity threats and vulnerabilities;

(C)   explain the fundamental concepts of confidentiality, integrity, availability, authentication, and authorization;

(D)   describe the inverse relationship between privacy and security;

(E)   identify and analyze cybersecurity breaches and incident responses;

(F)   identify and analyze security concerns in areas such as physical, network, cloud, and web;

(G)   define and discuss challenges faced by cybersecurity professionals;

(H)   identify common risks, alerts, and warning signs of compromised computer and network systems;

(I)   understand and explore the vulnerability of network-connected devices; and

(J)   use appropriate cybersecurity terminology.

(8)   Cybersecurity skills. The student understands and explains various types of malicious software (malware). The student is expected to:

     (A)   define malware, including spyware, ransomware, viruses, and rootkits;

     (B)   identify the transmission and function of malware such as Trojans, worms, and viruses;

     (C)   discuss the impact malware has had on the cybersecurity landscape;

     (D)   explain the role of reverse engineering for detecting malware and viruses;

     (E)   compare free and commercial antivirus software alternatives; and

     (F)   compare free and commercial anti-malware software alternatives.

(9)   Cybersecurity skills. The student understands and demonstrates knowledge of techniques and strategies to prevent a system from being compromised. The student is expected to:

     (A)   define system hardening;

     (B)   demonstrate basic use of system administration privileges;

     (C)   explain the importance of patching operating systems;

     (D)   explain the importance of software updates;

     (E)   describe standard practices to configure system services;

     (F)   explain the importance of backup files; and

     (G)   research and understand standard practices for securing computers, networks, and operating systems.

(10)   Cybersecurity skills. The student understands basic network operations. The student is expected to:

     (A)   identify basic network addressing and devices, including switches and routers;

     (B)   analyze incoming and outgoing rules for traffic passing through a firewall;

     (C)   identify well known ports by number and service provided, including port 22 (ssh), port 80 (http), and port 443 (https);

     (D)   identify commonly exploited ports and services, including ports 20 and 21 (ftp) and port 23 (telnet); and

     (E)   identify common tools for monitoring ports and network traffic.

(11)   Cybersecurity skills. The student identifies standard practices of system administration. The student is expected to:

     (A)   define what constitutes a secure password;

     (B)   create a secure password policy, including length, complexity, account lockout, and rotation;

     (C)   identify methods of password cracking such as brute force and dictionary attacks; and

     (D)   examine and configure security options to allow and restrict access based on user roles.

(12)   Cybersecurity skills. The student demonstrates necessary steps to maintain user access on the computer system. The student is expected to:

     (A)   identify the different types of user accounts and groups on an operating system;

     (B)   explain the fundamental concepts and standard practices related to access control, including authentication, authorization, and accounting;

   (C) compare methods for single- and dual-factor authentication such as passwords, biometrics, personal identification numbers (PINs), and security tokens;

   (D) define and explain the purpose of an air-gapped computer; and

   (E) explain how hashes and checksums may be used to validate the integrity of transferred data.

 (13) Cybersecurity skills. The student explores the field of digital forensics. The student is expected to:

   (A) explain the importance of digital forensics to law enforcement, government agencies, and corporations;

   (B) identify the role of chain of custody in digital forensics;

   (C) explain the four steps of the forensics process, including collection, examination, analysis, and reporting;

   (D) identify when a digital forensics investigation is necessary;

   (E) identify information that can be recovered from digital forensics investigations such as metadata and event logs; and

   (F) analyze the purpose of event logs and identify suspicious activity.

 (14) Cybersecurity skills. The student explores the operations of cryptography. The student is expected to:

   (A) explain the purpose of cryptography and encrypting data;

   (B) research historical uses of cryptography; and

   (C) review simple cryptography methods such as shift cipher and substitution cipher.

 (15) Risk assessment. The student understands information security vulnerabilities, threats, and computer attacks. The student is expected to:

   (A) define and describe vulnerability, payload, exploit, port scanning, and packet sniffing as they relate to hacking;

   (B) define and describe cyberattacks, including man-in-the-middle, distributed denial of service, and spoofing;

   (C) explain how computer vulnerabilities leave systems open to cyberattacks;

   (D) identify threats to systems such as back-door attacks and insider threats;

   (E) differentiate types of social engineering attacks such as phishing, shoulder surfing, hoaxes, and dumpster diving;

   (F) explain how users are the most common vehicle for compromising a system at the application level; and

   (G) identify various types of application-specific attacks.

 (16) Risk assessment. The student understands, identifies, and explains the strategies and techniques of both ethical and malicious hackers. The student is expected to:

   (A) identify internal and external threats to computer systems;

   (B) identify the capabilities of vulnerability assessment tools, including open source tools; and

   (C) explain the concept of penetration testing, tools, and techniques.

 (17) Risk assessment. The student evaluates the risks of wireless networks. The student is expected to:

   (A) compare risks associated with connecting devices to public and private wireless networks;

      (B)   explain device vulnerabilities and security solutions on a wireless network;

      (C)   compare wireless encryption protocols;

      (D)   debate the broadcasting or hiding of a wireless service set identifier (SSID); and

      (E)   research and discuss wireless threats such as MAC spoofing and war driving.

(18)   Risk assessment. The student analyzes threats to computer applications. The student is expected to:

      (A)   define application security;

      (B)   identify methods of application security such as secure development practices;

      (C)   discuss methods of online spoofing such as web links in email, instant messaging, social media, and other online communication with malicious links;

      (D)   explain the purpose and function of vulnerability scanners;

      (E)   explain how coding errors may create system vulnerabilities; and

      (F)   analyze the risks of distributing insecure programs.

(19)   Risk assessment. The student understands the implications of sharing information and access with others. The student is expected to:

      (A)   describe the impact of granting applications unnecessary permissions;

      (B)   describe the risks of granting third parties access to personal and proprietary data on social media and systems; and

      (C)   describe the risks involved with accepting Terms of Service (ToS) or End User License Agreements (EULA) without a basic understanding of the terms or agreements.

§130.429. Cybersecurity Capstone (One Credit).

(a)   General requirements. Students shall be awarded one credit for successful completion of this course. This course is recommended for students in Grades 11 and 12. Recommended prerequisite: Foundations of Cybersecurity.

(b)   Introduction.

(1)   Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging foundations.

(2)   The Science, Technology, Engineering, and Mathematics (STEM) Career Cluster focuses on planning, managing, and providing scientific research and professional and technical services, including laboratory and testing services, and research and development services.

(3)   Cybersecurity is an evolving discipline concerned with safeguarding computers, networks, programs, and data from unauthorized access. As a field, it has gained prominence with the emergence of a globally-connected society. As computing has become more sophisticated, so too have the abilities of malicious agents looking to penetrate networks and seize private information. By evaluating prior incidents, cybersecurity professionals have the ability to craft appropriate responses to minimize disruptions to corporations, governments, and individuals.

(4)   In the Cybersecurity Capstone course, students will develop the knowledge and skills needed to explore advanced concepts related to the ethics, laws, and operations of cybersecurity. Students will examine trends and operations of cyberattacks, threats, and vulnerabilities. Students will develop security policies to mitigate risks. The skills obtained in this course prepare students for additional study toward industry certification. A variety of courses are available to students interested in the cybersecurity field. Cybersecurity Capstone may serve as a culminating course in this field of study.

(5)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

(6)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)   Knowledge and skills.

    (1)   Employability skills. The student demonstrates necessary skills for career development and successful completion of course outcomes. The student is expected to:

        (A)   identify and demonstrate employable work behaviors such as regular attendance, punctuality, maintenance of a professional work environment, and effective written and verbal communication;

        (B)   identify and demonstrate positive personal qualities such as authenticity, resilience, initiative, and a willingness to learn new knowledge and skills;

        (C)   solve problems and think critically;

        (D)   demonstrate leadership skills and function effectively as a team member; and

        (E)   demonstrate an understanding of ethical and legal responsibilities in relation to the field of cybersecurity.

    (2)   Employability skills. The student identifies various employment opportunities in the cybersecurity field. The student is expected to:

        (A)   develop a personal career plan along with the education, job skills, and experience necessary to achieve career goals;

        (B)   develop a resume or a portfolio appropriate to a chosen career plan; and

        (C)   illustrate interview skills for successful job placement.

    (3)   Ethics and laws. The student evaluates ethical and current legal standards, rights and restrictions governing technology, technology systems, digital media and information technology, and the use of social media in the context of today's society. The student is expected to:

        (A)   analyze and apply to a scenario local, state, national, and international cyber law such as David's Law and Digital Millennium Copyright Act;

        (B)   evaluate historic cases or events regarding cyber; and

        (C)   explore compliance requirements such as Section 508 of the Rehabilitation Act of 1973, Family Educational Rights and Privacy Act of 1974 (FERPA), Health Insurance Portability and Accountability Act of 1996 (HIPAA), and Gramm-Leach-Bliley Act (GLBA).

    (4)   Digital citizenship. The student understands and demonstrates the social responsibility of end users regarding significant issues relating to digital technology, safety, digital hygiene, and cyberbullying. The student is expected to:

        (A)   debate the relationship between privacy and security; and

        (B)   identify ethical or unethical behavior when presented with various scenarios related to cyber activities.

    (5)   Cybersecurity skills. The student explains the importance and process of penetration testing. The student is expected to:

        (A)   define the phases of penetration testing, including plan, discover, attack, and report;

        (B)   develop a plan to gain authorization for penetration testing;

        (C)   identify commonly used vulnerability scanning tools such as port scanning, packet sniffing, and password crackers;

  (D) develop a list of exploits based on results of scanning tool reports; and

  (E) prioritize a list of mitigations based on results of scanning tool reports.

(6) Cybersecurity skills. The student understands common cryptographic methods. The student is expected to:

  (A) evaluate symmetric and asymmetric algorithms such as substitution cipher, Advanced Encryption Standard (AES), Diffie-Hellman, and Rivest-Shamir-Adleman (RSA);

  (B) explain the purpose of hashing algorithms, including blockchain;

  (C) explain the function of password salting;

  (D) explain and create a digital signature; and

  (E) explain steganography.

(7) Cybersecurity skills. The student understands the concept of cyber defense. The student is expected to:

  (A) explain the purpose of establishing system baselines;

  (B) evaluate the role of physical security;

  (C) evaluate the functions of network security devices such as firewalls, intrusion detection systems (IDS), intrusion prevention systems (IPS), and intrusion detection prevention systems (IDPS);

  (D) analyze log files for anomalies; and

  (E) develop a plan demonstrating the concept of defense in depth.

(8) Cybersecurity skills. The student demonstrates an understanding of secure network design. The student is expected to:

  (A) explain the benefits of network segmentation, including sandboxes, air gaps, and virtual local area networks (VLAN);

  (B) investigate the role of software-managed networks, including virtualization;

  (C) discuss the role of honeypots and honeynets in networks; and

  (D) create an incoming and outgoing network policy for a firewall.

(9) Cybersecurity skills. The student integrates principles of digital forensics. The student is expected to:

  (A) identify cyberattacks by their signatures;

  (B) explain proper data acquisition;

  (C) examine evidence from devices for suspicious activities; and

  (D) research current cybercrime cases involving digital forensics.

(10) Cybersecurity skills. The student explores emerging technology. The student is expected to:

  (A) describe the integration of artificial intelligence and machine learning in cybersecurity;

  (B) investigate impacts made by predictive analytics on cybersecurity; and

  (C) research other emerging trends such as augmented reality and quantum computing.

(11) Cybersecurity skills. The student uses various operating system environments. The student is expected to:

  (A) issue commands via the command line interface (CLI) such as ls, cd, pwd, cp, mv, chmod, ps, sudo, and passwd;

   (B) describe the file system structure for multiple operating systems;

   (C) manipulate and edit files within the CLI; and

   (D) determine network status using the CLI with commands such as ping, ifconfig/ipconfig, traceroute/tracert, and netstat.

  (12) Cybersecurity skills. The student clearly and effectively communicates technical information. The student is expected to:

   (A) collaborate with others to create a technical report;

   (B) create, review, and edit a report summarizing technical findings; and

   (C) present technical information to a non-technical audience.

  (13) Risk assessment. The student analyzes various types of threats, attacks, and vulnerabilities. The student is expected to:

   (A) differentiate types of attacks, including operating systems, software, hardware, network, physical, social engineering, and cryptographic;

   (B) explain blended threats such as combinations of software, hardware, network, physical, social engineering, and cryptographic;

   (C) discuss risk response techniques, including accept, transfer, avoid, and mitigate;

   (D) develop a plan of preventative measures to address cyberattacks;

   (E) describe common web vulnerabilities such as cross-site scripting, buffer overflow, injection, spoofing, and denial of service;

   (F) describe common data destruction and media sanitation practices such as wiping, shredding, and degaussing; and

   (G) develop an incident response plan for a given scenario or recent attack.

  (14) Risk assessment. The student understands risk management processes and concepts. The student is expected to:

   (A) describe various access control methods such as mandatory access control (MAC), role-based access control (RBAC), and discretionary access control (DAC);

   (B) develop and defend a plan for multi-factor access control using components such as biometric verification systems, key cards, tokens, and passwords; and

   (C) review a disaster recovery plan (DRP) that includes backups, redundancies, system dependencies, and alternate sites.

  (15) Risk assessment. The student investigates the role and effectiveness of environmental controls. The student is expected to:

   (A) explain commonly used physical security controls, including lock types, fences, barricades, security doors, and mantraps; and

   (B) describe the role of embedded systems such as fire suppression; heating, ventilation, and air conditioning (HVAC) systems; security alarms; and video monitoring.

§130.430. Advanced Placement (AP) Computer Science A (Two Credits).

(a) General requirements. Students shall be awarded two credits for successful completion of this course. Recommended prerequisites: Algebra I or a student should be comfortable with functions and the concepts found in the uses of functional notation such as $f(x) = x + 2$ and $f(x) = g(h(x))$.

(b) Content requirements. Content requirements for Advanced Placement (AP) Computer Science A are prescribed in the College Board Publication Advanced Placement Course Description: Computer Science A, published by The College Board.

§130.431. Advanced Placement (AP) Computer Science Principles (One Credit).

(a)   General requirements. Students shall be awarded one credit for successful completion of this course. Recommended prerequisite: Algebra I.

(b)   Content requirements. Content requirements for Advanced Placement (AP) Computer Science Principles are prescribed in the College Board Publication Advanced Placement® Curriculum Framework: AP Computer Science Principles, published by The College Board.

§130.432. International Baccalaureate (IB) Computer Science Standard Level (Two Credits)

(a)   General requirements. Students shall be awarded two credits for successful completion of this course. Recommended prerequisites: Computer Science I, Algebra II.

(b)   Content requirements. Content requirements for IB Computer Science Standard Level are prescribed by the International Baccalaureate Organization. Subject guides may be obtained from International Baccalaureate of North America.

§130.433. International Baccalaureate (IB) Computer Science Higher Level (Two Credits).

(a)   General requirements. Students shall be awarded two credits for successful completion of this course. Recommended prerequisites: Computer Science I, Algebra II.

(b)   Content requirements. Content requirements for IB Computer Science Higher Level are prescribed by the International Baccalaureate Organization. Subject guides may be obtained from International Baccalaureate of North America.

§130.434. International Baccalaureate (IB) Information Technology in a Global Society Standard Level (Two Credits).

(a)   General requirements. Students shall be awarded two credits for successful completion of this course. Recommended prerequisites: Computer Science I, Algebra II.

(b)   Content requirements. Content requirements for IB Information Technology in a Global Society Standard Level are prescribed by the International Baccalaureate Organization. Subject guides may be obtained from International Baccalaureate of North America.

§130.435. International Baccalaureate (IB) Information Technology in a Global Society Higher Level (Two Credits).

(a)   General requirements. Students shall be awarded two credits for successful completion of this course. Recommended prerequisites: Computer Science I, Algebra II.

(b)   Content requirements. Content requirements for IB Information Technology in a Global Society Higher Level are prescribed by the International Baccalaureate Organization. Subject guides may be obtained from International Baccalaureate of North America.

Subchapter Q. Energy

§130.485. Oil and Gas Production I (One Credit).

(a) General requirements. This course is recommended for students in Grades 9-12. Students shall be awarded one credit for successful completion of this course.

(b) Introduction.

 (1) Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

 (2) The Energy Career Cluster focuses on Texas's diverse economic landscape, geography and natural resources, including renewable energy potential, transportation system, labor force, and leadership in environmental research.

 (3) In Oil and Gas Production I, students will identify specific career opportunities and skills, abilities, tools, certification, and safety measures associated with each career. Students will also understand components, systems, equipment, and production and safety regulations associated with oil and gas wells. To prepare for careers in oil and gas production, students must attain academic skills and knowledge, acquire technical knowledge and skills related to oil and gas production and the workplace, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer their knowledge and skills and technologies in a variety of settings.

 (4) Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

 (5) Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c) Knowledge and skills.

 (1) The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:

  (A) identify career development, education, and entrepreneurship opportunities in the oil and gas production field;

  (B) apply competencies related to resources, information, interpersonal skills, problem solving, critical thinking, and systems of operation;

  (C) demonstrate knowledge of personal and occupational safety, environmental regulations, and first-aid policy in the workplace;

  (D) analyze employers' expectations such as appropriate work habits, ethical conduct, legal responsibilities, and good citizenship skills; and

  (E) demonstrate leadership skills to accomplish organizational goals and objectives.

 (2) The student understands the history of and process for drilling a well. The student is expected to:

  (A) describe the history of drilling for petroleum in the United States and abroad;

  (B) describe and appraise routine drilling operations, offshore drilling, and new drilling technologies;

  (C) describe the tools and techniques for directional drilling;

  (D) examine the differences between fishing, retrieving, and repairing pipe;

  (E) describe the methods for completing a well in order for production to begin;

  (F) assess fluid pressure;

(G) determine how the flow is initiated in a new well;

(H) differentiate between major components of a well and discuss the purpose, design, and operation of each component;

(I) describe activities associated with completing a well;

(J) describe the well completion processes and equipment;

(K) summarize the instruments and techniques used when logging and testing during the drilling and completion of a well;

(L) list the factors that are analyzed when studying a poorly producing well; and

(M) identify the responsibilities, characteristics, abilities, and work behaviors of personnel that are involved in well service.

(3) The student discusses and identifies components, systems, equipment, production, and safety regulations associated with oil and gas wells. The student is expected to:

(A) identify the major systems and equipment used in the production of oil and gas;

(B) identify and describe the wellhead equipment that controls fluid flow;

(C) trace the process flow through the oil and gas production systems and equipment;

(D) discuss the purpose of the wellhead and identify the major components;

(E) describe the purpose, design, and operation of each wellhead component;

(F) compare and contrast the major differences in wellhead construction;

(G) compare and contrast onshore and offshore facilities;

(H) compare and contrast oil and gas regions within the United States;

(I) describe the safety, health, and environmental concerns associated with working around a wellhead;

(J) explain how the wellhead system affects other production systems tied to the wellhead;

(K) describe the activities associated with monitoring and regulating well flow;

(L) describe the wellhead maintenance activities performed by the production technician;

(M) operate and troubleshoot a wellhead using a computer simulator, pilot plant, or tabletop unit; and

(N) identify the operating conditions that would warrant a manual or automatic shut-in of a well and steps involved in a manual shut-in of a well.

(4) The student discusses safety issues related to the oil and gas industry. The student is expected to:

(A) describe the safety, health, and environmental concerns associated with drilling, production, and maintenance; and

(B) research safety standards in the petroleum industry such as the Bureau of Safety and Environmental Enforcement (BSEE), United States Coast Guard (USCG), American Petroleum Institute (API), Department of Transportation (DOT), Occupational Safety and Health Administration (OSHA), Environmental Protection Agency (EPA), American Society for Testing and Materials (ASTM), American National Standards Institute (ANSI), and others.

§130.486. Oil and Gas Production II (One Credit).

(a) General requirements. This course is recommended for students in Grades 10-12. Prerequisite: Oil and Gas Production I. Students shall be awarded one credit for successful completion of this course.

(b) Introduction.

    (1) Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

    (2) The Energy Career Cluster focuses on Texas's diverse economic landscape, geography and natural resources, including renewable energy potential, transportation system, labor force, and leadership in environmental research.

    (3) In Oil and Gas Production II, students will gain knowledge of the specific requirements for entry into post-secondary education and employment in the petroleum industry; research and discuss petroleum economics; research and discuss the modes of transportation in the petroleum industry; research and discuss environmental, health, and safety concerns; research and discuss different energy sources; and prepare for industry certification. To prepare for careers in oil and gas production, students must attain academic skills and knowledge, acquire technical knowledge and skills related to oil and gas production and the workplace, and develop knowledge and skills regarding career opportunities, entry requirements, and industry expectations. To prepare for success, students need opportunities to learn, reinforce, apply, and transfer their knowledge and skills and technologies in a variety of settings.

    (4) Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

    (5) Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c) Knowledge and skills.

    (1) The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:

        (A) identify career development, education, and entrepreneurship opportunities in the oil and gas production field;

        (B) identify careers in oil and gas production with required aptitudes in science, technology, engineering, mathematics, language arts, and/or social studies;

        (C) apply technology skills to create an electronic portfolio of skills and abilities;

        (D) apply competencies related to resources, information, interpersonal skills, problem solving, critical thinking, and systems of operation;

        (E) demonstrate knowledge of personal and occupational safety, health, environmental regulations, and first-aid policy in the workplace; and

        (F) analyze employers' expectations, including appropriate work habits, ethical conduct, legal responsibilities, and good citizenship skills.

    (2) The student researches and discusses the modes of transportation and environmental, health, and safety concerns. The student is expected to:

        (A) describe evolution of transportation in the petroleum industry;

        (B) research and access the various ground methods of transportation;

        (C) survey health and safety policies, procedures, regulations, and practices as they relate to transportation in the petroleum industry;

        (D) research and discuss petroleum economics;

        (E) compare marketing, sales, and distribution of petroleum products;

        (F) identify supply chain businesses that create new supplies of oil and gas;

        (G) identify supply creation companies and how they operate;

(H)   discuss the factors in investment decision making; and

(I)   calculate rates of return to evaluate prospects.

(3)   The student researches the different methods of disposing of oil and gas waste and methods of cleanup. The student is expected to:

(A)   discuss the disposal methods of exploration and production wastes;

(B)   identify cleanup methods for blowouts and spills; and

(C)   identify refining processes that minimize environmental impact.

(4)   The student researches and identifies the different energy sources and priorities for the oil and gas industry. The student is expected to:

(A)   research the petroleum industry to identify renewable energy sources;

(B)   present the challenges and priorities of the petroleum industry;

(C)   research the critical technologies needed in the future; and

(D)   research the nontechnical solutions to energy needs.

§130.487. Oil and Gas Production III (One Credit).

(a)   General requirements. This course is recommended for students in Grades 11 and 12. Prerequisite: Oil and Gas Production II. Students shall be awarded one credit for successful completion of this course.

(b)   Introduction.

(1)   Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

(2)   The Energy Career Cluster focuses on Texas's diverse economic landscape, geography and natural resources, including renewable energy potential, transportation system, labor force, and leadership in environmental research.

(3)   In Oil and Gas Production III, students will gain knowledge of hydraulic and pneumatic systems and skill requirements to work in oil and gas and related industries. Students complete an advance core curriculum that includes hydraulic and pneumatic systems involved in oil and gas production. This program is designed to train students in all areas of down and mid-stream operation skills.

(4)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

(5)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)   Knowledge and skills.

(1)   The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:

(A)   identify career development, education, and entrepreneurship opportunities in the oil and gas production field;

(B)   identify careers in oil and gas production with required aptitudes in science, technology, engineering, mathematics, language arts, and/or social studies;

(C)   apply technology skills to create an electronic portfolio of skills and abilities;

(D)   apply competencies related to resources, information, interpersonal skills, problem solving, critical thinking, and systems of operation;

(E)   demonstrate knowledge of personal and occupational safety, health, environmental regulations, and first-aid policy in the workplace; and

(F)   analyze employers' expectations, including appropriate work habits, ethical conduct, legal responsibilities, and good citizenship skills.

(2)   The student identifies the importance of oil field hydraulics and its contributions to the oil and gas industry. The student is expected to:

(A)   identify companies that contributed to oil field hydraulics and fracturing and discuss those contributions;

(B)   explain the history of hydraulic fracturing and its importance to the oil field industry and the process of producing wells in North America;

(C)   describe the impact of hydraulics on energy in North America; and

(D)   explain the impact on new oil and natural gas production in North America as it relates to technology.

(3)   The student demonstrates an understanding of pneumatics and hydraulics and their significance and application in the petroleum engineering industry. The student is expected to:

(A)   describe and define the basic functional components of the pneumatic system and the function of a pneumatic schematic;

(B)   explain pneumatic pressure and identify its unit of measure during application procedures;

(C)   explain the importance of a hydraulic system and identify the hydraulic system's five basic components (hydraulic pump, control valves, actuators, reservoir, and accumulators), including the hydraulic system's significance in the petroleum engineering industry; and

(D)   define hydraulics and identify its unit of measure during application procedures.

(4)   The student explains and demonstrates the six pneumatic safety rules and the importance of the rules in the petroleum industry. The student is expected to:

(A)   explain the six pneumatic safety rules, including wearing safety glasses when building and operating pneumatics, keeping fingers clear of piston rods, never blowing compressed air at anyone, not turning the main air supply on until a circuit is connected, turning the air off if air is leaking from a joint, and turning the air off before altering a circuit;

(B)   demonstrate safety precaution measures in pneumatics and discuss the importance of safety equipment during this process; and

(C)   demonstrate and explain the importance of a pressure regulator in pneumatics, including the historical significance.

(5)   The student demonstrates an understanding of basic cylinder circuits and pneumatic cylinder circuits and their significance and applications in the petroleum engineering industry. The student is expected to:

(A)   explain the functions of the operation of a double acting pneumatic cylinder and each of its functions;

(B)   describe the operation of five-way three-position directional control valves (DCV);

(C)   describe the function of a pneumatic quick-connect fitting; and

(D)   demonstrate how to safely connect the pneumatic circuit with a quick-connect fitting.

(6)   The student understands the impact of a hydraulic schematic in oil field applications. The student is expected to:

(A)   describe ISO symbols and appropriately use them to draw a hydraulic schematic; and

(B)   create a hydraulic schematic.

(7)   The student identifies the principles of hydraulic pressure and flow and discusses the basic hydraulic cylinder circuits and their application. The student is expected to:

(A)   calculate the force output of an extending cylinder and the retraction force of a cylinder;

(B)   explain the relevance of Pascal's Law to hydraulics;

(C)   identify and discuss hydraulic motors and pumps; and

(D)   identify hydraulic cylinders and their impact on single and double acting circuits.

§130.488. Oil and Gas Production IV (One Credit).

(a)   General requirements. This course is recommended for students in Grades 11 and 12. Prerequisite: Oil and Gas Production III. Students shall be awarded one credit for successful completion of this course.

(b)   Introduction.

(1)   Career and technical education instruction provides content alignment with challenging academic standards and relevant knowledge and skills for students to further their education and succeed in current or emerging professions.

(2)   The Energy Career Cluster focuses on Texas's diverse economic landscape, geography and natural resources, including renewable energy potential, transportation system, labor force, and leadership in environmental research.

(3)   Oil and Gas Production IV is designed to extend training for future petroleum engineering technicians in all areas of down and mid-stream operations. Students complete an intense core curriculum in areas that include hydrocarbon safety, drilling, petroleum geology, oil and gas exploration and production, reservoir operations, well head completions, petroleum data management operations and analysis, natural gas production, and economics. In conjunction with this course, students employ the latest computer software in engineering and petroleum, operations, data mining, and geological mapping.

(4)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

(5)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)   Knowledge and skills.

(1)   The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:

(A)   identify career development, education, and entrepreneurship opportunities in the oil and gas production field;

(B)   identify careers in oil and gas production with required aptitudes in science, technology, engineering, mathematics, language arts, and/or social studies;

(C)   apply technology skills to create an electronic portfolio of skills and abilities;

(D)   apply competencies related to resources, information, interpersonal skills, problem solving, critical thinking, and systems of operation;

(E)   demonstrate knowledge of personal and occupational safety, health, environmental regulations, and first-aid policy in the workplace; and

(F)   analyze employers' expectations, including appropriate work habits, ethical conduct, legal responsibilities, and good citizenship skills.

(2) The student explains the phases of well construction. The student is expected to:

  (A) describe the function of the well completion phase and the different hole tests used in well completions;

  (B) design the completion of the reservoir using technology such as computer designing software;

  (C) describe the open hole completion and sand control completion processes; and

  (D) describe conventional completions and their components and how they relate to production tubing.

(3) The student explains the concepts of safety in well completions and indicates tools and procedures for completing a drilled wellbore. The student is expected to:

  (A) research health and safety standards for the workplace and environment such as Standards and Wireline Operations and Procedures and Occupational Safety and Health Administration (OSHA) and standards provided by professional organizations in the oil and gas industry such as the American Chemical Society, American Institute of Chemical Engineers, Center for the Advancement of Process Technology, Gulf Coast Process Technology Alliance, and American Petroleum Institute (API);

  (B) identify well completion tools and equipment and their use during each well completion phase; and

  (C) analyze the cost of safety during well completions.

(4) The student explains the concepts of hydraulic fracturing and its role during the well completion phase. The student is expected to:

  (A) describe how the generic well design and drilling mud systems impact drilling;

  (B) interpret ways in which generic platform wells, cuttings disposal routes, and drilling fluid design impact the generic well design; and

  (C) evaluate the significance of reservoir formations.

(5) The student discusses the potential hazards and possible solutions of well and equipment testing. The student is expected to:

  (A) evaluate potential hazards and formulate a safety plan that covers safety guidelines and equipment, including first-aid and safety uniforms;

  (B) describe and accurately measure the flow of oil, gas, and water in real time;

  (C) ensure precautions and measures are considered during the surface well testing; and

  (D) discuss the importance of knowing the surrounding environment when well testing.

(6) The student researches the different types of coring and core analysis used in well completions and how they play an important role in well completion. The student is expected to:

  (A) describe the role of coring and core analysis in well completions;

  (B) identify the relationship between the factors such as core analysis and well logging that play an active role in well completions;

  (C) explain well logging and its importance in formation evaluation;

  (D) research different methods of formation testing by acquiring core samples;

  (E) research drill stem testing;

  (F) explain drill stem tests and their importance in measuring the flow of oil and gas in well completions; and

  (G) evaluate the cost of completion operations for well completion.

§130.489. Introduction to Process Technology (One Credit).

(a)　　General requirements. This course is recommended for students in Grades 11 and 12. Students shall be awarded one credit for successful completion of this course.

(b)　　Introduction.

　　(1)　　Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

　　(2)　　The Energy Career Cluster focuses on Texas's diverse economic landscape, geography and natural resources, including renewable energy potential, transportation system, labor force, and leadership in environmental research.

　　(3)　　In Introduction to Process Technology, students will learn the social significance and workforce impact of process technology in industry and the opportunities available at various levels of education and training in industries using process technology.

　　(4)　　Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

　　(5)　　Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)　　Knowledge and skills.

　　(1)　　The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:

　　　　(A)　　demonstrate skills related to health and safety in the workplace as specified by appropriate government regulations;

　　　　(B)　　demonstrate the standards required in the workplace such as interviewing skills, flexibility, willingness to learn new skills and acquire knowledge, self-discipline, self-worth, positive attitude, and integrity in a work situation;

　　　　(C)　　collaborate with others to solve problems;

　　　　(D)　　identify employers' work expectations; and

　　　　(E)　　research, evaluate, and apply various time-management techniques to develop work schedules.

　　(2)　　The student understands common definitions, terminology, and the basic foundations related to process technology. The student is expected to:

　　　　(A)　　describe the types of industry utilizing process technology and identify fields related to process technology;

　　　　(B)　　identify and describe the career opportunities in process technology, pathways to career development, and certification requirements of industries utilizing process technology, including job responsibilities, typical work schedules, and career opportunities;

　　　　(C)　　demonstrate the use of content such as technical concepts and vocabulary when analyzing information and following directions;

　　　　(D)　　identify currently emerging issues in process technology; and

　　　　(E)　　identify principles of instruments and instrument technology used in industrial process technology.

　　(3)　　The student identifies and discusses types of industrial piping, valves, and basic process equipment. The student is expected to:

　　　　(A)　　discuss the basics of piping, valves, and equipment used in industry; and

   (B) demonstrate the ability to read and interpret the various types of industrial drawings, diagrams, and data sheets related to industrial piping, valves, and equipment.

(4) The student identifies and discusses the types of industrial electrical equipment and instrumentation used in process technology. The student is expected to:

   (A) demonstrate the ability to read and interpret the various types of industrial drawings, diagrams, charts, and data sheets related to industrial electrical equipment;

   (B) interpret industry standard circuit schematics;

   (C) identify areas where quality, reliability, and safety can be integrated into a product; and

   (D) describe the principles of electricity as applied in industrial process technology.

(5) The student discusses safety issues related to industrial process technology. The student is expected to:

   (A) describe the safety, health, and environmental concerns and requirements for industries using process technology along with the history that led to modern standards;

   (B) analyze and execute safety guidelines as described in various manuals, instructions, and regulations;

   (C) describe the implications of negligent or improper maintenance;

   (D) discuss and demonstrate how precision measuring instruments are used in industrial process technology; and

   (E) research agencies that govern safety in industrial process technology, including their authority and requirements.

(6) The student demonstrates understanding of basic industrial mathematics. The student is expected to:

   (A) perform common computations required in industrial process technology using mastered calculator skills;

   (B) determine when to convert between fractions, decimals, whole numbers, and percentages mentally, on paper, or with a calculator when required in industrial process technology;

   (C) identify and quantify causes and effects of uncertainties in measured data;

   (D) demonstrate how exponents, symbols, and the order of operations are used to solve real world word problems commonly seen in process technology;

   (E) determine appropriate formulas to compute cross sections, surface areas, and volumes of geometric figures such as circles, squares, and cylinders;

   (F) estimate measurements and solve application problems involving industry drawings and data sheets using consistent units for all measurements and computation;

   (G) describe and discuss how to use scientific notation and International System (SI) units to gather and record data with accuracy and precision;

   (H) organize and evaluate data and make inferences from data, including the use of tables, charts, and graphs;

   (I) determine a dimension of an object given a scaled drawing having no dimensions; and

   (J) represent and solve problems involving proportional relationships, including conversions between measurement systems using multiplication by a given constant factor such as unit rate.

(7) The student applies concepts of critical thinking and problem solving. The student is expected to:

   (A) analyze elements of a problem to develop innovative solutions;

(B)   critically analyze information to determine value to the problem-solving task;

(C)   analyze a variety of problem-solving strategies and critical-thinking skills; and

(D)   conduct technical research to gather information necessary for decision making.

(8)   The student applies comprehensive knowledge in a simulation environment to demonstrate the mastery of the concepts covered in this course. The student is expected to:

(A)   represent or simulate a portion of a process system by generating an appropriate drawing, diagram, or data sheet;

(B)   demonstrate how to achieve a specific goal with the use of a simple mockup of a process system;

(C)   execute a simple mockup of a process system to achieve a specified goal;

(D)   demonstrate appropriate safety equipment selection for use in a variety of assigned tasks;

(E)   identify and apply mathematical operations to complete calculations and specified computations, including unit conversions for a simulated process system;

(F)   explain how visual depictions, data readouts, and trends in a computer-based process simulator relate to actual valves, piping, equipment, electrical gear, and instrumentation in a process system; and

(G)   develop critical-thinking skills using simulations to identify and solve problems associated with process technology.

(9)   The student presents conclusions, research findings, and designs using a variety of media throughout the course. The student is expected to:

(A)   discuss and critique the validity of conclusions supported by the data through various methods such as lab reports, labeled drawings, graphic organizers, journals, summaries, oral reports, and technology-based reports; and

(B)   record, express, and manipulate relationships among data using graphs, charts, and equations.

§130.490. Foundations of Energy (One Credit).

(a)   General requirements This course is recommended for students in Grades 9-12. Students shall be awarded one credit for successful completion of the course.

(b)   Introduction.

(1)   Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and success in current or emerging energy professions.

(2)   The Energy Career Cluster focuses on Texas's diverse economic landscape, geography and natural resources, including renewable energy potential, transportation system, labor force, and leadership in environmental research.

(3)   In Foundations of Energy, students will conduct laboratory and field investigations, use scientific practices during investigations, and make informed decisions using critical thinking and scientific problem solving. Various systems will be described in terms of energy. Students will study a variety of topics that include energy transformation, the law of conservation of energy, energy efficiency, interrelationships among energy resources and society, and sources and flow of energy through the production, transmission, processing, and use of energy. Students will apply these concepts and perform investigations and experiments at least 40% of the time using safe practices.

(4)   Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

(5)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)   Knowledge and skills.

    (1)   The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:

        (A)   evaluate the importance of dressing appropriately, speaking politely, and conducting oneself in a manner appropriate for the profession;

        (B)   cooperate, contribute, and collaborate as a member of a group in an effort to achieve a positive collective outcome;

        (C)   present written and oral communication in a clear, concise, and effective manner;

        (D)   demonstrate time-management skills by prioritizing tasks, following schedules, and performing goal-relevant activities in a way that produces efficient results;

        (E)   demonstrate punctuality, dependability, reliability, and responsibility in performing assigned tasks as directed;

        (F)   discuss and exhibit teamwork and leadership skills necessary for the workplace;

        (G)   define and demonstrate effective problem-solving skills; and

        (H)   apply computer-based skills and other technologies relevant to the energy industry.

    (2)   The student analyzes current and future career opportunities in the energy sector, including oil and gas exploration and production, refining and chemical processing, and renewable energy. The student is expected to:

        (A)   evaluate energy systems and identify careers within those systems;

        (B)   examine past market and employment trends in the energy sector;

        (C)   discuss current issues in energy production and predict future needs and employment opportunities in this field;

        (D)   identify career development, education, credentialing, and entrepreneurship opportunities in the energy sector; and

        (E)   apply competencies related to resources, information, and systems of operation in the energy sector.

    (3)   The student conducts laboratory and field investigations using safe, environmentally appropriate, and ethical practices. The student is expected to:

        (A)   demonstrate safe practices during laboratory and field investigations;

        (B)   use a wide variety of additional course apparatuses, equipment, techniques, and procedures as appropriate such as satellite imagery and other remote sensing data, Geographic Information Systems (GIS), Global Positioning System (GPS), scientific probes, microscopes, telescopes, modern video and image libraries, weather stations, fossil and rock kits, tectonic plate models, and planetary globes;

        (C)   engage in meaningful hands-on, minds-on conceptual activities in the areas of energy; and

        (D)   demonstrate an understanding of the use and conservation of resources and proper disposal or recycling of materials.

    (4)   The student uses critical thinking and problem solving to make informed decisions within and outside the classroom. The student is expected to:

(A)   communicate and present valid conclusions from energy information extracted from various sources such as current events, news reports, published journal articles, and marketing materials;

(B)   explain the impacts of energy discoveries by a variety of historical and contemporary scientists and entrepreneurs on current societal attitudes;

(C)   compare advantages and disadvantages in the use of the various energy sources; and

(D)   distinguish between scientific decision making (scientific methods) and ethical and social decisions that involve science (the application of scientific information).

(5)   The student presents conclusions, research findings, and designs using a variety of media throughout the course. The student is expected to:

(A)   develop written and oral presentation skills related to energy issues and solutions by researching and describing the history of energy production in Texas and contributions of scientists and entrepreneurs; and

(B)   develop data retrieval and analysis skills related to energy production and use by researching information about energy sources, including renewable and non-renewable sources, and energy efficiency and how each source is used to produce electrical energy.

(6)   The student examines and explains concepts and procedures related to energy. The student is expected to:

(A)   identify general purposes for energy, including transportation, light, cooking, heating or cooling, entertainment, and cleaning;

(B)   explain and demonstrate transformations among various energy forms, including potential, kinetic, chemical, mechanical, electrical, and light energy;

(C)   analyze the role of gravity in transforming energy;

(D)   investigate and calculate the relationship between work, potential energy, and kinetic energy;

(E)   examine various types of energy transfer mechanisms, determine the original form of energy and what form that energy is being transformed into, and use examples to analyze and calculate the relationships among work, kinetic energy, and potential energy;

(F)   describe and apply the law of conservation of energy; and

(G)   use basic calorimetry to determine the amount of energy stored in substances such as coal.

(7)   The student understands the basics of fluid mechanics related to energy discovery, production, and transportation. The student is expected to:

(A)   identify fluids used as fuels, including liquids and gases;

(B)   identify fluids used in the discovery, production, and transportation of energy sources;

(C)   explain capillary action and relate it to energy production; and

(D)   explain, using formulas, how pressure and temperature affect the behavior of fluids.

(8)   The student understands how and where energy is produced and identifies Texas energy resources. The student is expected to:

(A)   research the location of energy resources and power production plants in Texas;

(B)   compile information on the history of energy production in Texas and describe its past and current importance to the U.S. economy;

(C)   investigate the role of technology in the future development of energy usage;

(D)   identify ways to conserve energy;

(E)   map the major sources of energy used in Texas;

(F)   assess the impact of the various energy sources on the economy in Texas;

(G)   analyze how supply and demand impacts Texas's economy in relation to energy; and

(H)   compare and contrast the impact of energy sources and supply and demand in Texas with national and global data.

(9)   The student investigates how energy resources such as water, oil, and natural gas are stored underground in rock formations. The student is expected to:

(A)   assess the properties and geological histories of rocks and rock formations that enable energy storage;

(B)   determine the physical properties of permeability and porosity of rock formations and relate these properties to the amount of water, oil, and natural gas held in these formations;

(C)   explain how aquifers function and locate major aquifers in Texas; and

(D)   investigate how innovations such as hydraulic fracturing and high-power transmission lines have made massive energy resources such as oil, gas, wind, and electricity available in Texas.

(10)   The student knows differences between renewable and non-renewable resources. The student is expected to:

(A)   identify and describe various renewable and non-renewable resources;

(B)   describe and compare the energy efficiency of renewable and non-renewable energy derived from natural and alternative sources such as oil, natural gas, coal, nuclear, solar, geothermal, hydroelectric, and wind;

(C)   examine the benefits and hazards of using renewable and non-renewable energy sources;

(D)   research methods by which benefits can be increased and hazards reduced in the use of renewable and non-renewable energy sources;

(E)   examine different viewpoints of an energy source regarding availability, cost, potential pollution, impact to plant and animal habitat, and sustainability;

(F)   analyze an energy source's relative availability and renewability and discuss how these factors inform decision making regarding a source's use; and

(G)   analyze changing social perspectives and how they can influence scientific practices.

(11)   The student knows how energy impacts the student's life and the role energy plays in international relations, the environment, standards of living, and the economy. The student is expected to:

(A)   analyze the impact energy has on the environment;

(B)   research and discuss the ethical and social issues surrounding Earth's energy resources;

(C)   analyze the advantages and disadvantages of an energy source's long-term use;

(D)   explain the relationship between energy and quality of life;

(E)   research and describe the connection between energy production, transmission, processing, and marketing; and

(F)   analyze the impact and effectiveness of the measures taken by the United States and other countries to use energy to reduce greenhouse gases, improve water and air quality, and extend life expectancy.

(12) The student investigates extended learning experiences such as career and technical student organizations and area energy museums and displays. The student is expected to:

    (A) identify a minimum of three energy professionals for potential speaking invitations either in person or via the Internet;

    (B) research and describe an energy-related organization such as a museum or local business; and

    (C) compare educational requirements for different energy industry jobs in Texas.

§130.491. Petrochemical Safety, Health, and Environment (One Credit).

(a) General requirements. The course is recommended for students in Grades 11 and 12. Students shall be awarded one credit for successful completion of this course.

(b) Introduction.

    (1) Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

    (2) The Energy Career Cluster focuses on Texas's diverse economic landscape, geography and natural resources, including renewable energy potential, transportation system, labor force, and leadership in environmental research.

    (3) Petrochemical Safety, Health, and Environment addresses the shortage of process technology operators/technicians by educating students on the safety rules, regulations, and operations of the petrochemical process technology operator. Students enrolled in this course will learn about the knowledge and skills required in occupational safety, health, and environment as well as the governing regulatory authorities and the legal aspects of the industry in order to maintain a safe work environment.

    (4) Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

    (5) Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c) Knowledge and skills.

    (1) The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:

        (A) research the three major roles of safety, health, and environment as it pertains to process technology operators/technicians;

        (B) describe the role of process technicians in relation to safety, health, and environmental issues;

        (C) identify the importance of safety, health, and environment as they relate to the performance of all job tasks and regulatory compliance issues within the industries, including, but not limited to, petrochemical plants, refineries, oil and gas production, and power generation; and

        (D) explain the importance of interpreting the safety, health, and environmental procedures standards, requirements, and regulations as a process technology operator/technician.

    (2) The student examines compliance standards to ensure safe work practices as they relate to safety, health, and environmental regulations. The student is expected to:

        (A) identify the legal governing agencies and describe regulatory requirements as they apply to the petrochemical industry, its employees, and the community;

(B)   identify specific state and federal regulations and the related specific tasks performed by process technology operators/technicians;

(C)   identify safety programs used in the gulf coast area;

(D)   determine types of administrative controls and permitting systems to ensure safe work practices, especially as the controls relate to confined spaces and log-out and tag-out (LOTO);

(E)   demonstrate the proper usage of typical safety equipment and systems used in local plants;

(F)   describe how engineering controls are designed to allow process technology operators/technicians to operate equipment with system safeguards;

(G)   describe the different types of personal protective equipment (PPE), including fire resistant clothing (FRC), hard hats, safety shoes, hearing protection, safety glasses, and acid suits;

(H)   evaluate the types of monitors that measure exposure ratings for noise, heat, and radiation;

(I)   describe the different types of respiratory protection according to their levels of protection, including air purifying, air supply, escape packs, and self-contained breathing apparatus (SCBA); and

(J)   identify the types of monitoring instruments that process operators/technicians use to monitor the atmosphere, oxygen content, explosive atmosphere, and toxicity.

(3)   The student summarizes the environmental requirements that are designed to safeguard society. The student is expected to:

(A)   describe the types of spills and releases and the environmental factors that can impact them;

(B)   identify specific systems that are in place to mitigate or prevent hazards to the environment and to individuals, including safe disposal of hazardous materials;

(C)   identify the regulatory governmental agencies, including Occupational Safety and Health Administration (OSHA), Mining Safety and Health Administration (MSHA), Texas Commission on Environmental Quality (TCEQ), and the Environmental Protection Agency (EPA), that protect our safety, health, and environment;

(D)   identify the Hazard Communication (HAZCOM) program and its components, including written Emergency Response Plans (ERPs), labeling containers that contain hazardous chemicals, and Safety Data Sheets (SDS) for hazardous chemicals produced or imported;

(E)   describe the different types of hazards, including fire and explosions, ergonomic, biological, and blood borne pathogens; and

(F)   describe the Maritime Security Act (MARSEC), which protects against terroristic threats.

(4)   The student describes equipment and energy and work surface hazards. The student is expected to:

(A)   define the types of equipment and energy and work surface hazards, including electrical, rotating equipment, thermal, elevation/heights/fall protection, chemical, slip and trips, and machine guarding;

(B)   identify hazards as they pertain to construction, vehicles, weather, and security, and describe how to protect the point of access and the site, including contractors who might have limited safety knowledge, new equipment installation, traffic control, and training on heavy machinery; and

       (C)   determine how weather conditions can adversely impact safety at a petrochemical plant or other process industry, including heat stress, hurricanes, freeze precautions, adverse weather conditions, lightning, and wind.

(5)   The student identifies environmental pollutants as well as regulations to protect the environment. The student is expected to:

       (A)   describe environmental pollutants, including toxic chemicals;

       (B)   identify the Material Safety Data Sheet (MSDS) manual list of the hazardous and toxic chemicals for process control sites;

       (C)   summarize the EPA petition process for approval of chemicals created by a plant;

       (D)   determine the permissions that must be acquired before site production begins, including a toxicology report such as a Chemical Inventory Management System (CIMS) for a local plant; and

       (E)   describe the types of environmental controls that are in place to protect the environment such as monitoring and air and water permits.

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ATTACHMENT
Text of Proposed Revisions to 19 TAC

Chapter 113. Texas Essential Knowledge and Skills for Social Studies

Subchapter C. High School

§113.30. Implementation of Texas Essential Knowledge and Skills for Social Studies, High School [, Adopted 2018] .

(a)   Implementation of the provisions of this subchapter begins with the effective date of the provision unless otherwise noted.

(b) [(a)] Implementation of the [The] provisions of [§113.31 and §§113.41-113.44 of] this subchapter adopted in 2018 begins [shall be implemented by school districts beginning] with the 2019-2020 school year.

[(b)   The provisions of §§113.45-113.48 of this subchapter shall be implemented by school districts beginning with the 2011-2012 school year.]

§113.51. Ethnic Studies: African American Studies (One Credit).

(a)   General requirements. Students shall be awarded one credit for successful completion of this course. This course is recommended for students in Grades 10-12.

(b)   Introduction.

  (1)   In Ethnic Studies: African American Studies, an elective course, students learn about the history and cultural contributions of African Americans. This course is designed to assist students in understanding issues and events from multiple perspectives. This course develops an understanding of the historical roots of African American culture, especially as it pertains to social, economic, and political interactions within the broader context of United States history. It requires an analysis of important ideas, social and cultural values, beliefs, and traditions. Knowledge of past achievements provides citizens of the 21st century with a broader context within which to address the many issues facing the United States.

  (2)   To support the teaching of the essential knowledge and skills, the use of a variety of rich primary and secondary source material such as biographies, autobiographies, landmark cases of the U.S. Supreme Court, novels, speeches, letters, diaries, poetry, songs, and artwork is encouraged. Resources are available from museums, historical sites, presidential libraries, and local and state preservation societies.

  (3)   The eight strands of the essential knowledge and skills for social studies are intended to be integrated for instructional purposes. Skills listed in the social studies skills strand in subsection (c) of this section should be incorporated into the teaching of all essential knowledge and skills for social studies. A greater depth of understanding of complex content material can be attained when integrated social studies content from the various disciplines and critical-thinking skills are taught together.

  (4)   Students identify the role of the U.S. free enterprise system within the parameters of this course and understand that this system may also be referenced as capitalism or the free market system.

  (5)   Throughout social studies in Kindergarten-Grade 12, students build a foundation in history; geography; economics; government; citizenship; culture; science, technology, and society; and social studies skills. The content, as appropriate for the grade level or course, enables students to understand the importance of patriotism, function in a free enterprise society, and appreciate the basic democratic values of our state and nation as referenced in the Texas Education Code (TEC), §28.002(h).

  (6)   Students understand that a constitutional republic is a representative form of government whose representatives derive their authority from the consent of the governed, serve for an established tenure, and are sworn to uphold the constitution.

(7)   State and federal laws mandate a variety of celebrations and observances, including Celebrate Freedom Week.

    (A)   Each social studies class shall include, during Celebrate Freedom Week as provided under the TEC, §29.907, or during another full school week as determined by the board of trustees of a school district, appropriate instruction concerning the intent, meaning, and importance of the Declaration of Independence and the U.S. Constitution, including the Bill of Rights, in their historical contexts. The study of the Declaration of Independence must include the study of the relationship of the ideas expressed in that document to subsequent American history, including the relationship of its ideas to the rich diversity of our people as a nation of immigrants, the American Revolution, the formulation of the U.S. Constitution, and the abolitionist movement, which led to the Emancipation Proclamation and the women's suffrage movement.

    (B)   Each school district shall require that, during Celebrate Freedom Week or other week of instruction prescribed under subparagraph (A) of this paragraph, students in Grades 3-12 study and recite the following text: "We hold these Truths to be self-evident, that all Men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the Pursuit of Happiness--That to secure these Rights, Governments are instituted among Men, deriving their just Powers from the Consent of the Governed."

(8)   Students identify and discuss how the actions of U.S. citizens and the local, state, and federal governments have either met or failed to meet the ideals espoused in the founding documents.

(9)   Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c)   Knowledge and skills.

(1)   History. The student understands the influential historical points of reference in African history prior to 1619. The student is expected to:

    (A)   identify the major eras, civilizations, and contributions of African history that are foundational to humanity and predate American slavery;

    (B)   describe and compare the various pre-colonial, indigenous, and ancestral roots of African Americans such as educational systems, social and political developments, family structures, global trade, and exchange; and

    (C)   analyze the effects of dehumanization through the capture, trade, and enslavement of Africans, within a regional and global context, including the Atlantic Slave Trade.

(2)   History. The student understands the economic, political, and social development of slavery during the American colonial period, 1619 to 1775. The student is expected to:

    (A)   analyze the economic, political, and social reasons for the African diaspora, including the role of Africans and Europeans;

    (B)   compare and contrast the colonization of North, Central, and South America and the West Indies and neighboring islands and analyze the interactions among enslaved Africans and Native Americans;

    (C)   describe and explain the impact of the Middle Passage on African American culture; and

    (D)   explain the causes for the growth and development of slavery, primarily in the Southern colonies.

(3)   History. The student understands the rationalization and ramifications for the continuation and growth of slavery and the anti-slavery movement in the United States from independence (1776) through the Emancipation Proclamation (1863). The student is expected to:

(A)   analyze and evaluate the economic, social, religious, and legal rationalization used by Americans to continue and expand slavery after declaring independence from Great Britain;

(B)   describe the impact of the Three-Fifths Compromise and the Fugitive Slave Act;

(C)   analyze the role that slavery played in the development of nationalism and sectionalism during the early 19th century;

(D)   analyze and evaluate various forms of individual and group resistance against the enslavement of African Americans;

(E)   analyze the influence of significant individuals and groups prior to and during the abolitionist movement to determine their impact on ending slavery, including the work of David Walker, Elijah P. Lovejoy, John Brown, Sojourner Truth, Frederick Douglass, the American Anti-Slavery Society, and the Underground Railroad; and

(F)   analyze national and international abolition efforts, including the U.S. ban on the slave trade (1808) and the abolition of slavery in Mexico (1829) and Great Britain (1833) and the significance of the Guerrero Decree in the Texas Revolution.

(4)   History. The student understands African American life from the Civil War through World War I. The student is expected to:

(A)   summarize the roles and experiences of African American soldiers and spies in both the North and South during the Civil War;

(B)   describe and analyze the successes and failures of Reconstruction;

(C)   compare the opportunities and challenges faced by African Americans from post-Reconstruction to the early 20th century and viewpoints and actions of African Americans, including Ida B. Wells, W.E.B. Du Bois, Booker T. Washington, Marcus Garvey, the National Association for the Advancement of Colored People (NAACP), Freedmen's Towns, and the Exodusters;

(D)   explain the circumstances surrounding increased violence and extremism such as the Ku Klux Klan (KKK), the Colfax Massacre, lynchings, race riots, and the Camp Logan Mutiny (The Houston Riot of 1917);

(E)   analyze how the rise of Jim Crow laws affected the life experiences of African Americans in the late 19th and early 20th centuries;

(F)   describe the impact of the U.S. Supreme Court decision Plessy v. Ferguson (1896);

(G)   analyze the social, economic, and political actions of African Americans in response to the Jim Crow era during the early 20th century such as the Great Migration, civil rights organizations, social organizations, political organizations, and organized labor unions;

(H)   examine the experiences of African American soldiers during and after World War I; and

(I)   evaluate the impact of African American military service from Reconstruction through World War I, including the role of the Buffalo Soldiers.

(5)   History. The student understands change and continuity in the African American cultural identity during the Great Depression, World War II, and the Civil Rights Movement. The student is expected to:

(A)   compare the positive and negative effects of the Great Depression and New Deal on the social and economic status of African Americans in various geographic regions;

(B)   describe the continued struggle for civil rights in America during this time in history, including the notable works of the NAACP, National Urban League, Jackie Robinson, Martin Luther King Jr., Daisy Bates and the Little Rock Nine, and local leaders;

(C)   describe the interactions of the people of the diaspora relative to the struggle for civil rights;

(D)   describe the impact of racism during World War II;

(E)   explain the contributions of significant African American individuals and groups during World War II, including Doris "Dorie" Miller, the Tuskegee Airmen, and the 761st Tank Battalion;

(F)   analyze how the effects of World War II laid the groundwork for the Civil Rights Movement, including Harry S. Truman's Executive Order 9981 and the contributions of A. Phillip Randolph, Mary McLeod Bethune, and Thurgood Marshall;

(G)   analyze the successes and failures of the Civil Rights Movement, including methods such as sit-ins, boycotts, marches, speeches, music, and organizations; and

(H)   evaluate the extent to which the Civil Rights Movement transformed American politics and society.

(6)   History. The student understands the progress made and challenges faced by African Americans from the post-Civil Rights Era to contemporary times. The student is expected to:

(A)   identify and explain the issues confronting African Americans in the continuing quest for equality;

(B)   describe the major contributions of contemporary African Americans and how their contributions have shaped the American experience such as John H. Johnson, Muhammad Ali, Shirley Chisholm, Earl G. Graves, Barbara Jordan, Colin Powell, Condoleezza Rice, and Barack Obama; and

(C)   analyze the progress and challenges for African American men and women socially, economically, and politically from 1970 to the present such as the evolving role of education in the African American community.

(7)   Geography. The student understands the impact of geographic factors on major events related to African Americans over time. The student is expected to:

(A)   explain the causes and effects of forced and voluntary migration on individuals, groups, and societies throughout African American history;

(B)   compare and contrast the physical and human geographic factors in the North and South related to the Atlantic Slave Trade, the plantation system, the expansion of slavery, and the Industrial Revolution;

(C)   explain the westward movement and the Great Migration and summarize their impact on African Americans; and

(D)   analyze how environmental changes impacted African American communities such as land use, settlement patterns, and urban development.

(8)   Economics. The student understands ways in which African Americans have addressed opportunities, challenges, and strategies concerning economic well-being over time. The student is expected to:

(A)   describe the development of the plantation system and slave labor in the American colonies;

(B)   identify the groups that participated in the transatlantic triangular trade system and explain how the system worked;

(C)   analyze the effects of the Industrial Revolution and the cotton gin on the economies of the United States and the world;

(D)   explain how economic policies such as sharecropping, Jim Crow economics, and redlining impacted the standard of living of African Americans;

(E)   explain how unsatisfactory economic opportunities in the South and increased economic opportunities in cities of the North and West caused the Great Migration;

(F)   evaluate the economic impact of the American labor movement and unionism on African Americans from the late nineteenth century to today;

(G)   analyze how various geographic, cultural, social, political, and financial factors influenced the economic mobility of African Americans such as skin color, wealth, and educational background;

(H)   evaluate the effectiveness of various approaches African Americans have used to solve economic issues;

(I)   trace the rise and development African American businesses and entrepreneurship from the late 19th century to today; and

(J)   examine the contributions of African American and Black American Business entrepreneurship such as Black Wall Street, black inventors, and the black experience in business and the economic contributions of individuals such as Madame C. J. Walker and Fannie Lou Hamer.

(9)   Government. The student understands the significant impact of political decisions on African Americans throughout history. The student is expected to:

     (A)   compare the effects of revolutionary ideologies such as life, liberty, and the pursuit of happiness on political perspectives of African Americans;

     (B)   explain the regional perspectives toward political rights of African American men and women from the early years of the republic through 1877;

     (C)   analyze the construction, interpretation, and implementation of the 13th, 14th, and 15th Amendments to the U.S. Constitution and the effects on African American men and women between 1877 and 1920;

     (D)   analyze how government policies, court actions, and legislation impacted African Americans from the 1920s through the 1950s;

     (E)   analyze the causes and effects of government actions and legislation addressing racial and social injustices from 1960 to the present day such as the issues of voting rights, civil rights, fair housing, education, employment, affirmative action, and health and nutrition; and

     (F)   analyze how the changing political environment has impacted civil rights from the late 20th century to the present.

(10)   Government. The student understands the impact of political interactions on the African American struggle for human rights over time. The student is expected to:

     (A)   analyze examples of conflict and cooperation between African Americans and other groups in the pursuit of individual freedoms and civil rights such as the Freedom Riders and the Memphis Sanitation Workers Strike;

     (B)   explain how various philosophies and ideologies influenced the African American experience for social, political, and legal equality such as fair housing, equal opportunity, affirmative action, and voting rights; and

     (C)   identify and analyze the contributions of African American leadership roles at local, state, and national levels of government, including U.S. Supreme Court cases.

(11)   Citizenship. The student understands the importance of multiple and changing points of view regarding citizenship of African Americans. The student is expected to:

(A)   trace how perceptions of the rights and civic responsibilities of African Americans have changed over time, including the idea of being considered property with no rights under slavery;

(B)   analyze how regional differences influenced political perspectives of African American communities;

(C)   analyze the significance and associations of identity nomenclature relevant to African Americans such as Negro and Black; and

(D)   analyze selected contemporary African American issues that have led to diverse points of view in public discourse, including rights and activism.

(12)   Culture. The student understands the development of African American culture and society and the impact of shared identities and differing experiences. The student is expected to:

(A)   analyze the impact of assimilation, stereotypes, de facto practices, and oppression on the lives of African Americans;

(B)   analyze ways in which African Americans have retained cultural identity over time while adapting to and contributing to mainstream American culture; and

(C)   analyze the various cultural practices that have shaped the individual and collective identity of African Americans over time to understand shared and differing experiences.

(13)   Culture. The student understands the cultural traditions and contributions of African Americans from the colonial era through Reconstruction. The student is expected to:

(A)   identify and describe the influence of African oral traditions, visual art, literary art, theater, music, and dance on African American culture;

(B)   describe the influence of enslavement on African American culture;

(C)   identify the contributions of early African American literature, including the works of Jupiter Hammon and Phillis Wheatley;

(D)   explain the origins and characteristics of different musical genres and traditions of African Americans; and

(E)   describe the expanding influence of African American music through the work of performers such as the Fisk Jubilee Singers.

(14)   Culture. The student understands the influence of artistic expression on the African American experience and American culture from Reconstruction to the present. The student is expected to:

(A)   describe the development of blues, ragtime, and jazz music, including the achievements of composers such as Scott Joplin and James Reese Europe;

(B)   describe how various African American expressions of dance forms such as tap dance, step dance, hip hop, and modern dance and the contributions of African American dancers such as the Dance Theater of Harlem, Katherine Dunham, Bill "Bojangles" Robinson, Alvin Ailey, and Misty Copeland have contributed to the shared identity of various groups;

(C)   explain the lasting impact of the Harlem Renaissance on American culture and society, including the achievements of individuals such as Louis Armstrong, Josephine Baker, Duke Ellington, Langston Hughes, Sargent Johnson, Jules Bledsoe, Paul Robeson, Augusta Savage, and James VanDerZee;

(D)   describe the reactions to and the influence of selected works by African American authors such as The Souls of Black Folk by W.E.B. Du Bois, Native Son by Richard Wright, Their Eyes Were Watching God by Zora Neale Hurston, and Eyes on the Prize by Henry Hampton;

(E)   describe storytelling, literary, filmmaking, and visual arts contributions related to self-identity made by African Americans such as Oscar Micheaux, John T. Biggers, Lorraine Hansberry, Amiri Baraka, Sidney Poitier, Maya Angelou, Faith Ringgold, August Wilson, bell hooks, Spike Lee, John Singleton, and Oprah Winfrey;

(F)   describe how characteristics of African American history and culture have been reflected in various genres of art, music, film, theatre, visual arts, and dance; and

(G)   analyze the impact of popular culture on African Americans during significant eras.

(15)   Science, technology, and society. The student understands how African American achievements in science and technology have contributed to economic and social development in the United States. The student is expected to:

    (A)   identify examples of how advances made by African civilizations in areas such as astronomy, mathematics, architecture, and engineering have contributed to science and technology in the United States;

    (B)   identify examples of how industrialization was influenced by African Americans over time; and

    (C)   describe the contributions of significant African American individuals to science, philosophy, mathematics, and technology, including Benjamin Banneker, George Washington Carver, Granville Woods, Mary Jackson, Katherine Johnson, Henrietta Lacks, Dorothy Vaughan, Mae Jemison, and Neil deGrasse Tyson.

(16)   Social studies skills. The student understands how historians use historiography to interpret the past and applies critical-thinking skills to organize and use information acquired from a variety of valid sources, including technology. The student is expected to:

    (A)   analyze primary and secondary sources such as maps, graphs, speeches, political cartoons, and artifacts to acquire information to answer historical questions;

    (B)   analyze information by applying absolute and relative chronology through sequencing, categorizing, identifying cause-and-effect relationships, comparing and contrasting, finding the main idea, summarizing, making generalizations, making predictions, drawing inferences, and drawing conclusions;

    (C)   apply the process of historical inquiry to research, interpret, and use multiple types of sources of evidence;

    (D)   evaluate the validity of a source based on corroboration with other sources and information about the author, including points of view, frames of reference, and historical context; and

    (E)   identify bias and support with historical evidence a point of view on a social studies issue or event.

(17)   Social studies skills. The student communicates in written, oral, and visual forms. The student is expected to:

    (A)   create written, oral, and visual presentations of social studies information using effective communication skills, including proper citations and avoiding plagiarism; and

    (B)   use social studies terminology correctly.

(18)   Social studies skills. The student uses geographic tools to collect, analyze, and interpret data. The student is expected to:

    (A)   create a visual representation of historical information such as thematic maps, graphs, and charts; and

    (B)   pose and answer questions about geographic distributions and patterns shown on maps, graphs, charts, and available databases.

(19)   Social studies skills. The student uses problem-solving and decision-making skills, working independently and with others. The student is expected to use problem-solving and decision-making processes to identify a problem, gather information, list and consider options, consider advantages and disadvantages, choose and implement a solution, and evaluate the effectiveness of the solution.

§113.60. Social Studies Advanced Studies (One-Half Credit).

(a)   General requirements. Students shall be awarded one-half unit of credit for successful completion of this course. Students may take this course with different course content for a maximum of two credits.

(b)   Introduction. In Social Studies Advanced Studies, an elective course, students conduct in-depth research, prepare a product of professional quality, and present their findings to appropriate audiences. Students, working independently or in collaboration with a mentor, investigate a problem, issue, or concern; research the topic using a variety of technologies; and present a product of professional quality to an appropriate audience.

(c)   Knowledge and skills.

(1)   The student will investigate, independently or collaboratively, a problem, issue, or concern within a selected profession or discipline. The student is expected to:

(A)   analyze the relationship between his or her interests and career/discipline;

(B)   review literature from varied sources from the selected career or discipline;

(C)   identify a problem, issue, or concern;

(D)   survey and/or interview professionals to determine the appropriateness of a project; and

(E)   develop a proposal that includes well-defined questions, goals and objectives, rationale, and procedures for the project.

(2)   The student will demonstrate understanding of the research methods and/or technologies used in a selected profession or discipline. The student is expected to:

(A)   develop an understanding of the requirements and practices of the profession in the selected career or discipline through observation;

(B)   simulate the methods and/or technologies used in the research process particular to the selected field or discipline; and

(C)   review and revise the original proposal to reflect changes needed based upon preliminary research and practices.

(3)   The student will develop products that meet standards recognized by the selected profession or discipline. The student is expected to:

(A)   collaborate with the appropriate professionals to define the product;

(B)   develop a plan for product completion;

(C)   develop assessment criteria for successful completion of the project;

(D)   establish the appropriateness of the product for the intended audience;

(E)   implement the plan for product completion; and

(F)   maintain a journal to document all phases of the implementation of the plan and reflections on learning experiences and processes.

(4)   The student will demonstrate an understanding of the selected problem, issue, or concern by explaining or justifying findings to an appropriate audience for public comment or professional response. The student is expected to:

(A)   review and revise the plan to present the findings;

(B)   make arrangements for the presentation of findings to an appropriate audience;

(C)   present findings, simulating the skills used by professionals;

(D)   consider feedback received from the audience;

(E)   reflect on the study and its potential for impact on the field; and

(F)   reflect on personal learning experiences of the study.

§113.61. Economics Advanced Studies (One-Half Credit).

(a)   General requirements. Students may take this course with different course content for a maximum of one credit. Students who are pursuing the Distinguished Achievement Program may take Economics Advanced Studies to earn state credit for developing, researching, and presenting their mentorship or independent study advanced measure.

(b)   Introduction. In Economics Advanced Studies, an elective course, students conduct in-depth research, prepare a product of professional quality, and present their findings to appropriate audiences. Students, working independently or in collaboration with a mentor, investigate a problem, issue, or concern; research the topic using a variety of technologies; and present a product of professional quality to an appropriate audience.

(c)   Knowledge and skills.

(1)   The student will investigate, independently or collaboratively, a problem, issue, or concern within a selected profession or discipline. The student is expected to:

(A)   analyze the relationship between his or her interests and career/discipline;

(B)   review literature from varied sources from the selected career or discipline;

(C)   identify a problem, issue, or concern;

(D)   survey and/or interview professionals to determine the appropriateness of a project; and

(E)   develop a proposal that includes well-defined questions, goals and objectives, rationale, and procedures for the project.

(2)   The student will demonstrate understanding of the research methods and/or technologies used in a selected profession or discipline. The student is expected to:

(A)   develop an understanding of the requirements and practices of the profession in the selected career or discipline through observation;

(B)   simulate the methods and/or technologies used in the research process particular to the selected field or discipline; and

(C)   review and revise the original proposal to reflect changes needed based upon preliminary research and practices.

(3)   The student will develop products that meet standards recognized by the selected profession or discipline. The student is expected to:

(A)   collaborate with the appropriate professionals to define the product;

(B)   develop a plan for product completion;

(C)   develop assessment criteria for successful completion of the project;

(D)   establish the appropriateness of the product for the intended audience;

(E)   implement the plan for product completion; and

(F)   maintain a journal to document all phases of the implementation of the plan and reflections on learning experiences and processes.

(4)   The student will demonstrate an understanding of the selected problem, issue, or concern by explaining or justifying findings to an appropriate audience for public comment or professional response. The student is expected to:

(A)   review and revise the plan to present the findings;

(B)   make arrangements for the presentation of findings to an appropriate audience;

(C)   present findings, simulating the skills used by professionals;

(D)   consider feedback received from the audience;

(E)   reflect on the study and its potential for impact on the field; and

(F)   reflect on personal learning experiences of the study.

Subchapter D. Other Social Studies Courses

§113.101. Implementation of Texas Essential Knowledge and Skills for Social Studies, Other Social Studies Courses.

Implementation of the provisions of this subchapter begins with the effective date of the provision unless otherwise noted.

§113.102. Advanced Placement (AP) United States History (One Credit).

(a)   General requirements. Students shall be awarded one credit for successful completion of this course. This course may be used to meet either the course requirement for U.S. History for state graduation or elective course requirements.

(b)   Content requirements. Content requirements for Advanced Placement (AP) United States History are prescribed in the College Board Publication *Advanced Placement Course in United States History*, published by The College Board and in §113.41 of this title (relating to United States History Studies Since 1877 (One Credit), Adopted 2018).

§113.103. Advanced Placement (AP) European History (One Credit).

(a)   General requirements. Students shall be awarded one credit for successful completion of this course. This course may not be used as a substitute for World History Studies.

(b)   Content requirements. Content requirements for Advanced Placement (AP) European History are prescribed in the College Board Publication *Advanced Placement Course in European History*, published by The College Board.

§113.104. Advanced Placement (AP) World History (One Credit).

(a)   General requirements. Students shall be awarded one credit for successful completion of this course. This course may be used as a substitute for World History Studies.

(b)   Content requirements. Content requirements for Advanced Placement (AP) World History are prescribed in the College Board Publication *Advanced Placement Course Description in World History*, published by The College Board and in §113.42 of this title (relating to World History Studies (One Credit), Adopted 2018).

§113.105. Advanced Placement (AP) Human Geography (One-Half to One Credit).

(a)   General requirements. Students shall be awarded either one-half credit or one credit for successful completion of this course. When completed for one credit, this course may be used as a substitute for World Geography Studies. When completed for one-half credit, this course may be used to meet only elective course requirements.

(b)   Content requirements. Content requirements for Advanced Placement (AP) Human Geography are prescribed in the College Board Publication *Advanced Placement Course Description in Human Geography*, published by The College Board and in §113.43 of this title (relating to World Geography Studies (One Credit), Adopted 2018) when taught as a one credit course. Content requirements for AP Human Geography are prescribed in the College Board Publication *Advanced Placement Course Description in Human Geography*, published by The College Board when taught as a one-half credit course.

§113.106. Advanced Placement (AP) U.S. Government and Politics (One-Half Credit).

(a)   General requirements. Students shall be awarded one-half credit for successful completion of this course. This course may be used to meet the course requirement in Government for state graduation.

(b)   Content requirements. Content requirements for Advanced Placement (AP) U.S. Government and Politics are prescribed in the College Board Publication *Advanced Placement Course in U.S. Government and*

Politics, published by The College Board and in §113.44 of this title (relating to United States Government (One-Half Credit), Adopted 2018).

§113.107. Advanced Placement (AP) Comparative Government and Politics (One-Half Credit).

(a)   General requirements. Students shall be awarded one-half credit for successful completion of this course. This course may be used to meet only elective course requirements for state graduation.

(b)   Content requirements. Content requirements for Advanced Placement (AP) Comparative Government and Politics are prescribed in the College Board Publication *Advanced Placement Course in Comparative Government and Politics*, published by The College Board.

§113.108. Advanced Placement (AP) Psychology (One-Half Credit).

(a)   General requirements. Students shall be awarded one-half credit for successful completion of this course. This course may be used to meet only elective course requirements for state graduation.

(b)   Content requirements. Content requirements for Advanced Placement (AP) Psychology are prescribed in the College Board Publication *Advanced Placement Course in Psychology*, published by The College Board.

§113.109. International Baccalaureate (IB) History Standard Level (SL) (Two Credits).

(a)   General requirements. Students shall be awarded two credits for successful completion of this course. This course may be used to meet only elective course requirements for state graduation.

(b)   Content requirements. Content requirements for IB History SL are prescribed by the International Baccalaureate Organization. Subject guides may be obtained from International Baccalaureate of North America.

§113.110. International Baccalaureate (IB) History of Africa and the Middle East Higher Level (HL) (Two Credits).

(a)   General requirements. Students shall be awarded two credits for successful completion of this course. This course may be used to meet only elective course requirements for state graduation.

(b)   Content requirements. Content requirements for IB History of Africa and the Middle East HL are prescribed by the International Baccalaureate Organization. Subject guides may be obtained from International Baccalaureate of North America.

§113.111. International Baccalaureate (IB) History of the Americas Higher Level (HL) (Two Credits).

(a)   General requirements. Students shall be awarded two credits for successful completion of this course. One credit may be used to meet the course requirement in United States history for state graduation; the other credit may be used to meet only elective course requirements for state graduation.

(b)   Content requirements. Content requirements for IB History of the Americas HL are prescribed by the International Baccalaureate Organization. Subject guides may be obtained from International Baccalaureate of North America and in §113.41 of this title (relating to United States History Studies Since 1877 (One Credit), Adopted 2018).

§113.112. International Baccalaureate (IB) History of Asia and Oceania Higher Level (HL) (Two Credits).

(a)   General requirements. Students shall be awarded two credits for successful completion of this course. This course may be used to meet only elective course requirements for state graduation.

(b)   Content requirements. Content requirements for IB History of Asia and Oceania HL are prescribed by the International Baccalaureate Organization. Subject guides may be obtained from International Baccalaureate of North America.

§113.113. International Baccalaureate (IB) History of Europe Higher Level (HL) (Two Credits).

(a)   General requirements. Students shall be awarded two credits for successful completion of this course. This course may be used to meet only elective course requirements for state graduation.

(b)   Content requirements. Content requirements for IB History of Europe HL are prescribed by the International Baccalaureate Organization. Subject guides may be obtained from International Baccalaureate of North America.

§113.114. International Baccalaureate (IB) Geography Standard Level (SL) (Two Credits).

(a)   General requirements. Students shall be awarded two credits for successful completion of this course. This course may be used to meet required course requirements for state graduation.

(b)   Content requirements. Content requirements for IB Geography SL are prescribed by the International Baccalaureate Organization. Subject guides may be obtained from International Baccalaureate of North America and in §113.43 of this title (relating to World Geography Studies (One Credit), Adopted 2018).

§113.115. International Baccalaureate (IB) Geography Higher Level (HL) (Two Credits).

(a)   General requirements. Students shall be awarded two credits for successful completion of this course. One credit may be used to meet the course requirement in World Geography Studies for state graduation; the other credit may be used to meet only elective course requirements for state graduation.

(b)   Content requirements. Content requirements for IB Geography HL are prescribed by the International Baccalaureate Organization. Subject guides may be obtained from International Baccalaureate of North America and in §113.43 of this title (relating to World Geography Studies (One Credit), Adopted 2018).

§113.116. International Baccalaureate (IB) Psychology Standard Level (SL) (Two Credits).

(a)   General requirements. Students shall be awarded two credits for successful completion of this course. This course may be used to meet only elective course requirements for state graduation.

(b)   Content requirements. Content requirements for IB Psychology SL are prescribed by the International Baccalaureate Organization. Subject guides may be obtained from International Baccalaureate of North America.

§113.117. International Baccalaureate (IB) Psychology Higher Level (HL) (Two Credits).

(a)   General requirements. Students shall be awarded two credits for successful completion of this course. This course may be used to meet only elective course requirements for state graduation.

(b)   Content requirements. Content requirements for IB Psychology HL are prescribed by the International Baccalaureate Organization. Subject guides may be obtained from International Baccalaureate of North America.

§113.118. International Baccalaureate (IB) Social and Cultural Anthropology Standard Level (SL) (Two Credits).

(a)   General Requirements. Students shall be awarded two credits for successful completion of this course. This course may be used to meet only elective course requirements for state graduation.

(b)   Content requirements. Content requirements for IB Social and Cultural Anthropology SL are prescribed by the International Baccalaureate Organization. Subject guides may be obtained from the International Baccalaureate of North America.

§113.119. International Baccalaureate (IB) Social and Cultural Anthropology Higher Level (HL) (Two Credits).

(a)   General Requirements. Students shall be awarded two credits for successful completion of this course. This course may be used to meet only elective course requirements for state graduation.

(b)   Content requirements. Content requirements for IB Social and Cultural Anthropology HL are prescribed by the International Baccalaureate Organization. Subject guides may be obtained from the International Baccalaureate of North America.

§113.120. International Baccalaureate (IB) World Religions Standard Level (SL) (Two Credits).

(a)   General Requirements. Students shall be awarded two credits for successful completion of this course. This course may be used to meet only elective course requirements for state graduation.

(b)   Content requirements. Content requirements for IB World Religions SL are prescribed by the International Baccalaureate Organization. Subject guides may be obtained from the International Baccalaureate of North America.

§113.121. International Baccalaureate (IB) Global Politics Standard Level (SL) (Two Credits).

(a)   General Requirements. Students shall be awarded two credits for successful completion of this course. This course may be used to meet only elective course requirements for state graduation.

(b)   Content requirements. Content requirements for IB Global Politics SL are prescribed by the International Baccalaureate Organization. Subject guides may be obtained from the International Baccalaureate of North America.

§113.122. International Baccalaureate (IB) Global Politics Higher Level (HL) (Two Credits).

(a)   General Requirements. Students shall be awarded two credits for successful completion of this course. This course may be used to meet only elective course requirements for state graduation.

(b)   Content requirements. Content requirements for IB Global Politics HL are prescribed by the International Baccalaureate Organization. Subject guides may be obtained from the International Baccalaureate of North America.

§113.123. Advanced Placement (AP) Microeconomics (One-Half Credit).

(a)   General requirements. This course may be used to meet required course requirements for state graduation. If Microeconomics is used to meet the required course requirement for state graduation, Macroeconomics may be used as a state-approved elective.

(b)   Content requirements. Content requirements for Advanced Placement (AP) Microeconomics are prescribed in the College Board Publication *Advanced Placement Course in Microeconomics* published by The College Board.

§113.124. Advanced Placement (AP) Macroeconomics (One-Half Credit).

(a)   General requirements. This course may be used to meet required course requirements for state graduation. If Macroeconomics is used to meet the required course requirement for state graduation, Microeconomics may be used as a state-approved elective.

(b)   Content requirements. Content requirements for Advanced Placement (AP) Macroeconomics are prescribed in the College Board Publication *Advanced Placement Course in Macroeconomics* published by The College Board.

§113.125. International Baccalaureate (IB) Economics Standard Level (SL) (Two Credits).

(a)   General requirements. One-half credit may be used to meet the course requirement in Economics for state graduation and one and one-half credits may be used to meet only elective course requirements for state graduation.

(b)   Content requirements. Content requirements for IB Economics SL are prescribed by the International Baccalaureate Organization. Subject guides may be obtained from International Baccalaureate of North America.

§113.126. International Baccalaureate (IB) Economics Higher Level (HL) (Two Credits).

(a)   General requirements. One-half credit may be used to meet the course requirement in Economics for state graduation and one and one-half credits may be used to meet only elective course requirements for state graduation.

(b)   Content requirements. Content requirements for IB Economics HL are prescribed by the International Baccalaureate Organization. Subject guides may be obtained from International Baccalaureate of North America.

[§113.51. Implementation of Texas Essential Knowledge and Skills for Social Studies, Other Social Studies Courses.]

[(a)   The provisions of §§113.52-113.75 of this subchapter shall be implemented by school districts beginning September 1, 1998.

(b)   The provisions of §§113.76-113.80 of this subchapter shall be implemented by school districts beginning with the 2019-2020 school year.]

[§113.52. Social Studies Advanced Studies (One-Half Credit).]

[(a)   General requirements. Students shall be awarded one-half unit of credit for successful completion of this course. Students may take this course with different course content for a maximum of two credits.

(b)   Introduction. In Social Studies Advanced Studies, an elective course, students conduct in-depth research, prepare a product of professional quality, and present their findings to appropriate audiences. Students, working independently or in collaboration with a mentor, investigate a problem, issue, or concern; research the topic using a variety of technologies; and present a product of professional quality to an appropriate audience.

(c)   Knowledge and skills.

  (1)   The student will investigate, independently or collaboratively, a problem, issue, or concern within a selected profession or discipline. The student is expected to:

    (A)   analyze the relationship between his or her interests and career/discipline;

    (B)   review literature from varied sources from the selected career or discipline;

    (C)   identify a problem, issue, or concern;

    (D)   survey and/or interview professionals to determine the appropriateness of a project; and

    (E)   develop a proposal that includes well-defined questions, goals and objectives, rationale, and procedures for the project.

  (2)   The student will demonstrate understanding of the research methods and/or technologies used in a selected profession or discipline. The student is expected to:

    (A)   develop an understanding of the requirements and practices of the profession in the selected career or discipline through observation;

    (B)   simulate the methods and/or technologies used in the research process particular to the selected field or discipline; and

    (C)   review and revise the original proposal to reflect changes needed based upon preliminary research and practices.

  (3)   The student will develop products that meet standards recognized by the selected profession or discipline. The student is expected to:

    (A)   collaborate with the appropriate professionals to define the product;

    (B)   develop a plan for product completion;

    (C)   develop assessment criteria for successful completion of the project;

(D)   establish the appropriateness of the product for the intended audience;

(E)   implement the plan for product completion; and

(F)   maintain a journal to document all phases of the implementation of the plan and reflections on learning experiences and processes.

(4)   The student will demonstrate an understanding of the selected problem, issue, or concern by explaining or justifying findings to an appropriate audience for public comment or professional response. The student is expected to:

(A)   review and revise the plan to present the findings;

(B)   make arrangements for the presentation of findings to an appropriate audience;

(C)   present findings, simulating the skills used by professionals;

(D)   consider feedback received from the audience;

(E)   reflect on the study and its potential for impact on the field; and

(F)   reflect on personal learning experiences of the study.]

[§113.53. Advanced Placement (AP) United States History (One Credit).]

[(a)   General requirements. Students shall be awarded one credit for successful completion of this course. This course may be used to meet either the course requirement for U.S. History for state graduation or elective course requirements.

(b)   Content requirements. Content requirements for Advanced Placement (AP) United States History are prescribed in the College Board Publication *Advanced Placement Course in United States History*, published by The College Board and in §113.41 of this title (relating to United States History Studies Since 1877 (One Credit), Beginning with School Year 2011-2012).]

[§113.54. Advanced Placement (AP) European History (One Credit).]

[(a)   General requirements. Students shall be awarded one credit for successful completion of this course. This course may not be used as a substitute for World History Studies.

(b)   Content requirements. Content requirements for Advanced Placement (AP) European History are prescribed in the College Board Publication *Advanced Placement Course in European History*, published by The College Board.]

[§113.55. Advanced Placement (AP) World History (One Credit).]

[(a)   General requirements. Students shall be awarded one credit for successful completion of this course. This course may be used as a substitute for World History Studies.

(b)   Content requirements. Content requirements for Advanced Placement (AP) World History are prescribed in the College Board Publication *Advanced Placement Course Description in World History*, published by The College Board and in §113.42 of this title (relating to World History Studies (One Credit), Beginning with School Year 2011-2012).]

[§113.56. Advanced Placement (AP) Human Geography (One-Half to One Credit).]

[(a)   General requirements. Students shall be awarded either one-half credit or one credit for successful completion of this course. When completed for one credit, this course may be used as a substitute for World Geography Studies. When completed for one-half credit, this course may be used to meet only elective course requirements.

(b)   Content requirements. Content requirements for Advanced Placement (AP) Human Geography are prescribed in the College Board Publication *Advanced Placement Course Description in Human Geography*, published by The College Board and in §113.43 of this title (relating to World Geography Studies (One Credit), Beginning with School Year 2011-2012) when taught as a one credit course. Content

requirements for AP Human Geography are prescribed in the College Board Publication *Advanced Placement Course Description in Human Geography*, published by The College Board when taught as a one-half credit course.]

[§113.57. Advanced Placement (AP) U.S. Government and Politics (One-Half Credit).]

[(a)   General requirements. Students shall be awarded one-half credit for successful completion of this course. This course may be used to meet the course requirement in Government for state graduation.

(b)   Content requirements. Content requirements for Advanced Placement (AP) U.S. Government and Politics are prescribed in the College Board Publication *Advanced Placement Course in U.S. Government and Politics*, published by The College Board and in §113.44 of this title (relating to United States Government (One-Half Credit), Beginning with School Year 2011-2012).]

[§113.58. Advanced Placement (AP) Comparative Government and Politics (One-Half Credit).]

[(a)   General requirements. Students shall be awarded one-half credit for successful completion of this course. This course may be used to meet only elective course requirements for state graduation.

(b)   Content requirements. Content requirements for Advanced Placement (AP) Comparative Government and Politics are prescribed in the College Board Publication *Advanced Placement Course in Comparative Government and Politics*, published by The College Board.]

[§113.59. Advanced Placement (AP) Psychology (One-Half Credit).]

[(a)   General requirements. Students shall be awarded one-half credit for successful completion of this course. This course may be used to meet only elective course requirements for state graduation.

(b)   Content requirements. Content requirements for Advanced Placement (AP) Psychology are prescribed in the College Board Publication *Advanced Placement Course in Psychology*, published by The College Board.]

[§113.60. International Baccalaureate (IB) History Standard Level (SL) (Two Credits).]

[(a)   General requirements. Students shall be awarded two credits for successful completion of this course. This course may be used to meet only elective course requirements for state graduation.

(b)   Content requirements. Content requirements for IB History SL are prescribed by the International Baccalaureate Organization. Subject guides may be obtained from International Baccalaureate of North America.]

[§113.61. International Baccalaureate (IB) History of Africa and the Middle East Higher Level (HL) (Two Credits).]

[(a)   General requirements. Students shall be awarded two credits for successful completion of this course. This course may be used to meet only elective course requirements for state graduation.

(b)   Content requirements. Content requirements for IB History of Africa and the Middle East HL are prescribed by the International Baccalaureate Organization. Subject guides may be obtained from International Baccalaureate of North America.]

[§113.62. International Baccalaureate (IB) History of the Americas Higher Level (HL) (Two Credits).]

[(a)   General requirements. Students shall be awarded two credits for successful completion of this course. One credit may be used to meet the course requirement in United States history for state graduation; the other credit may be used to meet only elective course requirements for state graduation.

(b)   Content requirements. Content requirements for IB History of the Americas HL are prescribed by the International Baccalaureate Organization. Subject guides may be obtained from International Baccalaureate of North America and in §113.41 of this title (relating to United States History Studies Since 1877 (One Credit), Beginning with School Year 2011-2012).]

[§113.63. International Baccalaureate (IB) History of Asia and Oceania Higher Level (HL) (Two Credits).]

[(a) General requirements. Students shall be awarded two credits for successful completion of this course. This course may be used to meet only elective course requirements for state graduation.

(b) Content requirements. Content requirements for IB History of Asia and Oceania HL are prescribed by the International Baccalaureate Organization. Subject guides may be obtained from International Baccalaureate of North America.]

[§113.64. International Baccalaureate (IB) History of Europe Higher Level (HL) (Two Credits).]

[(a) General requirements. Students shall be awarded two credits for successful completion of this course. This course may be used to meet only elective course requirements for state graduation.

(b) Content requirements. Content requirements for IB History of Europe HL are prescribed by the International Baccalaureate Organization. Subject guides may be obtained from International Baccalaureate of North America.]

[§113.65. International Baccalaureate (IB) Geography Standard Level (SL) (Two Credits).]

[(a) General requirements. Students shall be awarded two credits for successful completion of this course. This course may be used to meet required course requirements for state graduation.

(b) Content requirements. Content requirements for IB Geography SL are prescribed by the International Baccalaureate Organization. Subject guides may be obtained from International Baccalaureate of North America and in §113.43 of this title (relating to World Geography Studies (One Credit), Beginning with School Year 2011-2012).]

[§113.66. International Baccalaureate (IB) Geography Higher Level (HL) (Two Credits).]

[(a) General requirements. Students shall be awarded two credits for successful completion of this course. One credit may be used to meet the course requirement in World Geography Studies for state graduation; the other credit may be used to meet only elective course requirements for state graduation.

(b) Content requirements. Content requirements for IB Geography HL are prescribed by the International Baccalaureate Organization. Subject guides may be obtained from International Baccalaureate of North America and in §113.43 of this title (relating to World Geography Studies (One Credit), Beginning with School Year 2011-2012).]

[§113.67. International Baccalaureate (IB) Psychology Standard Level (SL) (Two Credits).]

[(a) General requirements. Students shall be awarded two credits for successful completion of this course. This course may be used to meet only elective course requirements for state graduation.

(b) Content requirements. Content requirements for IB Psychology SL are prescribed by the International Baccalaureate Organization. Subject guides may be obtained from International Baccalaureate of North America.]

[§113.68. International Baccalaureate (IB) Psychology Higher Level (HL) (Two Credits).]

[(a) General requirements. Students shall be awarded two credits for successful completion of this course. This course may be used to meet only elective course requirements for state graduation.

(b) Content requirements. Content requirements for IB Psychology HL are prescribed by the International Baccalaureate Organization. Subject guides may be obtained from International Baccalaureate of North America.]

[§113.71. International Baccalaureate (IB) Social and Cultural Anthropology Standard Level (SL) (Two Credits).]

[(a) General Requirements. Students shall be awarded two credits for successful completion of this course. This course may be used to meet only elective course requirements for state graduation.

(b)   Content requirements. Content requirements for IB Social and Cultural Anthropology SL are prescribed by the International Baccalaureate Organization. Subject guides may be obtained from the International Baccalaureate of North America.]

[§113.72. International Baccalaureate (IB) Social and Cultural Anthropology Higher Level (HL) (Two Credits).]

[(a)   General Requirements. Students shall be awarded two credits for successful completion of this course. This course may be used to meet only elective course requirements for state graduation.

(b)   Content requirements. Content requirements for IB Social and Cultural Anthropology HL are prescribed by the International Baccalaureate Organization. Subject guides may be obtained from the International Baccalaureate of North America.]

[§113.73. International Baccalaureate (IB) World Religions Standard Level (SL) (Two Credits).]

[(a)   General Requirements. Students shall be awarded two credits for successful completion of this course. This course may be used to meet only elective course requirements for state graduation.

(b)   Content requirements. Content requirements for IB World Religions SL are prescribed by the International Baccalaureate Organization. Subject guides may be obtained from the International Baccalaureate of North America.]

[§113.74. International Baccalaureate (IB) Global Politics Standard Level (SL) (Two Credits).]

[(a)   General Requirements. Students shall be awarded two credits for successful completion of this course. This course may be used to meet only elective course requirements for state graduation.

(b)   Content requirements. Content requirements for IB Global Politics SL are prescribed by the International Baccalaureate Organization. Subject guides may be obtained from the International Baccalaureate of North America.]

[§113.75. International Baccalaureate (IB) Global Politics Higher Level (HL) (Two Credits).]

[(a)   General Requirements. Students shall be awarded two credits for successful completion of this course. This course may be used to meet only elective course requirements for state graduation.

(b)   Content requirements. Content requirements for IB Global Politics HL are prescribed by the International Baccalaureate Organization. Subject guides may be obtained from the International Baccalaureate of North America.]

[§113.76. Economics Advanced Studies (One-Half Credit).]

[(a)   General requirements. Students may take this course with different course content for a maximum of one credit. Students who are pursuing the Distinguished Achievement Program may take Economics Advanced Studies to earn state credit for developing, researching, and presenting their mentorship or independent study advanced measure.

(b)   Introduction. In Economics Advanced Studies, an elective course, students conduct in-depth research, prepare a product of professional quality, and present their findings to appropriate audiences. Students, working independently or in collaboration with a mentor, investigate a problem, issue, or concern; research the topic using a variety of technologies; and present a product of professional quality to an appropriate audience.

(c)   Knowledge and skills.

(1)   The student will investigate, independently or collaboratively, a problem, issue, or concern within a selected profession or discipline. The student is expected to:

(A)   analyze the relationship between his or her interests and career/discipline;

(B)   review literature from varied sources from the selected career or discipline;

(C)   identify a problem, issue, or concern;

(D)   survey and/or interview professionals to determine the appropriateness of a project; and

(E)   develop a proposal that includes well-defined questions, goals and objectives, rationale, and procedures for the project.

(2)   The student will demonstrate understanding of the research methods and/or technologies used in a selected profession or discipline. The student is expected to:

(A)   develop an understanding of the requirements and practices of the profession in the selected career or discipline through observation;

(B)   simulate the methods and/or technologies used in the research process particular to the selected field or discipline; and

(C)   review and revise the original proposal to reflect changes needed based upon preliminary research and practices.

(3)   The student will develop products that meet standards recognized by the selected profession or discipline. The student is expected to:

(A)   collaborate with the appropriate professionals to define the product;

(B)   develop a plan for product completion;

(C)   develop assessment criteria for successful completion of the project;

(D)   establish the appropriateness of the product for the intended audience;

(E)   implement the plan for product completion; and

(F)   maintain a journal to document all phases of the implementation of the plan and reflections on learning experiences and processes.

(4)   The student will demonstrate an understanding of the selected problem, issue, or concern by explaining or justifying findings to an appropriate audience for public comment or professional response. The student is expected to:

(A)   review and revise the plan to present the findings;

(B)   make arrangements for the presentation of findings to an appropriate audience;

(C)   present findings, simulating the skills used by professionals;

(D)   consider feedback received from the audience;

(E)   reflect on the study and its potential for impact on the field; and

(F)   reflect on personal learning experiences of the study.]

[§113.77. Advanced Placement (AP) Microeconomics (One-Half Credit).]

[(a)   General requirements. This course may be used to meet required course requirements for state graduation. If Microeconomics is used to meet the required course requirement for state graduation, Macroeconomics may be used as a state-approved elective.

(b)   Content requirements. Content requirements for Advanced Placement (AP) Microeconomics are prescribed in the College Board Publication *Advanced Placement Course in Microeconomics* published by The College Board.]

[§113.78. Advanced Placement (AP) Macroeconomics (One-Half Credit).]

[(a)   General requirements. This course may be used to meet required course requirements for state graduation. If Macroeconomics is used to meet the required course requirement for state graduation, Microeconomics may be used as a state-approved elective.

(b)   Content requirements. Content requirements for Advanced Placement (AP) Macroeconomics are prescribed in the College Board Publication *Advanced Placement Course in Macroeconomics* published by The College Board.]

[§113.79. International Baccalaureate (IB) Economics Standard Level (SL) (Two Credits).]

[(a)   General requirements. One-half credit may be used to meet the course requirement in Economics for state graduation and one and one-half credits may be used to meet only elective course requirements for state graduation.

(b)   Content requirements. Content requirements for IB Economics SL are prescribed by the International Baccalaureate Organization. Subject guides may be obtained from International Baccalaureate of North America.]

[§113.80. International Baccalaureate (IB) Economics Higher Level (HL) (Two Credits).]

[(a)   General requirements. One-half credit may be used to meet the course requirement in Economics for state graduation and one and one-half credits may be used to meet only elective course requirements for state graduation.

(b)   Content requirements. Content requirements for IB Economics HL are prescribed by the International Baccalaureate Organization. Subject guides may be obtained from International Baccalaureate of North America.]

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ATTACHMENT
Text of Proposed Repeal of 19 TAC

Chapter 110. Texas Essential Knowledge and Skills for English Language Arts and Reading

Subchapter C. High School

[**§110.30. Implementation of Texas Essential Knowledge and Skills for English Language Arts and Reading, High School, Beginning with School Year 2009-2010.**]

[(a)   The provisions of §§110.31-110.34 of this subchapter shall be implemented by school districts beginning with the 2009-2010 school year.

(b)   Students must develop the ability to comprehend and process material from a wide range of texts. Student expectations for Reading/Comprehension Skills as provided in this subsection are described for the appropriate grade level.

Figure: 19 TAC §110.30(b)]

[**§110.31. English Language Arts and Reading, English I (One Credit), Beginning with School Year 2009-2010.**]

[(a)   Introduction.

(1)   The English Language Arts and Reading Texas Essential Knowledge and Skills (TEKS) are organized into the following strands: Reading, where students read and understand a wide variety of literary and informational texts; Writing, where students compose a variety of written texts with a clear controlling idea, coherent organization, and sufficient detail; Research, where students are expected to know how to locate a range of relevant sources and evaluate, synthesize, and present ideas and information; Listening and Speaking, where students listen and respond to the ideas of others while contributing their own ideas in conversations and in groups; and Oral and Written Conventions, where students learn how to use the oral and written conventions of the English language in speaking and writing. The standards are cumulative—students will continue to address earlier standards as needed while they attend to standards for their grade. In English I, students will engage in activities that build on their prior knowledge and skills in order to strengthen their reading, writing, and oral language skills. Students should read and write on a daily basis.

(2)   For students whose first language is not English, the students' native language serves as a foundation for English language acquisition.

(A)   English language learners (ELLs) are acquiring English, learning content in English, and learning to read simultaneously. For this reason, it is imperative that reading instruction should be comprehensive and that students receive instruction in phonemic awareness, phonics, decoding, and word attack skills while simultaneously being taught academic vocabulary and comprehension skills and strategies. Reading instruction that enhances ELL's ability to decode unfamiliar words and to make sense of those words in context will expedite their ability to make sense of what they read and learn from reading. Additionally, developing fluency, spelling, and grammatical conventions of academic language must be done in meaningful contexts and not in isolation.

(B)   For ELLs, comprehension of texts requires additional scaffolds to support comprehensible input. ELL students should use the knowledge of their first language (e.g., cognates) to further vocabulary development. Vocabulary needs to be taught in the context of connected discourse so that language is meaningful. ELLs must learn how rhetorical devices in English differ from those in their native language. At the same time English learners are learning in English, the focus is on academic English, concepts, and the language structures specific to the content.

(C)   During initial stages of English development, ELLs are expected to meet standards in a second language that many monolingual English speakers find difficult to meet in their native language. However, English language learners' abilities to meet these standards will be influenced by their proficiency in English. While English language learners can analyze, synthesize, and evaluate, their level of English proficiency may impede their ability to demonstrate this knowledge during the initial stages of English language acquisition. It is also critical to understand that ELLs with no previous or with interrupted schooling will require explicit and strategic support as they acquire English and learn to learn in English simultaneously.

(3)   To meet Public Education Goal 1 of the Texas Education Code, §4.002, which states, "The students in the public education system will demonstrate exemplary performance in the reading and writing of the English language," students will accomplish the essential knowledge, skills, and student expectations in English I as described in subsection (b) of this section.

(4)   To meet Texas Education Code, §28.002(h), which states, "... each school district shall foster the continuation of the tradition of teaching United States and Texas history and the free enterprise system in regular subject matter and in reading courses and in the adoption of textbooks," students will be provided oral and written narratives as well as other informational texts that can help them to become thoughtful, active citizens who appreciate the basic democratic values of our state and nation.

(b)   Knowledge and skills.

(1)   Reading/Vocabulary Development. Students understand new vocabulary and use it when reading and writing. Students are expected to:

(A)   determine the meaning of grade-level technical academic English words in multiple content areas (e.g., science, mathematics, social studies, the arts) derived from Latin, Greek, or other linguistic roots and affixes;

(B)   analyze textual context (within a sentence and in larger sections of text) to distinguish between the denotative and connotative meanings of words;

(C)   produce analogies that describe a function of an object or its description;

(D)   describe the origins and meanings of foreign words or phrases used frequently in written English (e.g., *caveat emptor, carte blanche, tete a tete, pas de deux, bon appetit, quid pro quo*); and

(E)   use a dictionary, a glossary, or a thesaurus (printed or electronic) to determine or confirm the meanings of words and phrases, including their connotations and denotations, and their etymology.

(2)   Reading/Comprehension of Literary Text/Theme and Genre. Students analyze, make inferences and draw conclusions about theme and genre in different cultural, historical, and contemporary contexts and provide evidence from the text to support their understanding. Students are expected to:

(A)   analyze how the genre of texts with similar themes shapes meaning;

(B)   analyze the influence of mythic, classical and traditional literature on 20th and 21st century literature; and

(C)   relate the figurative language of a literary work to its historical and cultural setting.

(3)   Reading/Comprehension of Literary Text/Poetry. Students understand, make inferences and draw conclusions about the structure and elements of poetry and provide evidence from text to support their understanding. Students are expected to analyze the effects of diction and imagery (e.g., controlling images, figurative language, understatement, overstatement, irony, paradox) in poetry.

(4)   Reading/Comprehension of Literary Text/Drama. Students understand, make inferences and draw conclusions about the structure and elements of drama and provide evidence from text to support

their understanding. Students are expected to explain how dramatic conventions (e.g., monologues, soliloquies, dramatic irony) enhance dramatic text.

(5)   Reading/Comprehension of Literary Text/Fiction. Students understand, make inferences and draw conclusions about the structure and elements of fiction and provide evidence from text to support their understanding. Students are expected to:

(A)   analyze non-linear plot development (e.g., flashbacks, foreshadowing, sub-plots, parallel plot structures) and compare it to linear plot development;

(B)   analyze how authors develop complex yet believable characters in works of fiction through a range of literary devices, including character foils;

(C)   analyze the way in which a work of fiction is shaped by the narrator's point of view; and

(D)   demonstrate familiarity with works by authors from non-English-speaking literary traditions with emphasis on classical literature.

(6)   Reading/Comprehension of Literary Text/Literary Nonfiction. Students understand, make inferences and draw conclusions about the varied structural patterns and features of literary nonfiction and provide evidence from text to support their understanding. Students are expected to analyze how literary essays interweave personal examples and ideas with factual information to explain, present a perspective, or describe a situation or event.

(7)   Reading/Comprehension of Literary Text/Sensory Language. Students understand, make inferences and draw conclusions about how an author's sensory language creates imagery in literary text and provide evidence from text to support their understanding. Students are expected to explain the role of irony, sarcasm, and paradox in literary works.

(8)   Reading/Comprehension of Informational Text/Culture and History. Students analyze, make inferences and draw conclusions about the author's purpose in cultural, historical, and contemporary contexts and provide evidence from the text to support their understanding. Students are expected to explain the controlling idea and specific purpose of an expository text and distinguish the most important from the less important details that support the author's purpose.

(9)   Reading/Comprehension of Informational Text/Expository Text. Students analyze, make inferences and draw conclusions about expository text and provide evidence from text to support their understanding. Students are expected to:

(A)   summarize text and distinguish between a summary that captures the main ideas and elements of a text and a critique that takes a position and expresses an opinion;

(B)   differentiate between opinions that are substantiated and unsubstantiated in the text;

(C)   make subtle inferences and draw complex conclusions about the ideas in text and their organizational patterns; and

(D)   synthesize and make logical connections between ideas and details in several texts selected to reflect a range of viewpoints on the same topic and support those findings with textual evidence.

(10)   Reading/Comprehension of Informational Text/Persuasive Text. Students analyze, make inferences and draw conclusions about persuasive text and provide evidence from text to support their analysis. Students are expected to:

(A)   analyze the relevance, quality, and credibility of evidence given to support or oppose an argument for a specific audience; and

(B)   analyze famous speeches for the rhetorical structures and devices used to convince the reader of the authors' propositions.

(11)   Reading/Comprehension of Informational Text/Procedural Texts. Students understand how to glean and use information in procedural texts and documents. Students are expected to:

(A) analyze the clarity of the objective(s) of procedural text (e.g., consider reading instructions for software, warranties, consumer publications); and

(B) analyze factual, quantitative, or technical data presented in multiple graphical sources.

(12) Reading/Media Literacy. Students use comprehension skills to analyze how words, images, graphics, and sounds work together in various forms to impact meaning. Students will continue to apply earlier standards with greater depth in increasingly more complex texts. Students are expected to:

(A) compare and contrast how events are presented and information is communicated by visual images (e.g., graphic art, illustrations, news photographs) versus non-visual texts;

(B) analyze how messages in media are conveyed through visual and sound techniques (e.g., editing, reaction shots, sequencing, background music);

(C) compare and contrast coverage of the same event in various media (e.g., newspapers, television, documentaries, blogs, Internet); and

(D) evaluate changes in formality and tone within the same medium for specific audiences and purposes.

(13) Writing/Writing Process. Students use elements of the writing process (planning, drafting, revising, editing, and publishing) to compose text. Students are expected to:

(A) plan a first draft by selecting the correct genre for conveying the intended meaning to multiple audiences, determining appropriate topics through a range of strategies (e.g., discussion, background reading, personal interests, interviews), and developing a thesis or controlling idea;

(B) structure ideas in a sustained and persuasive way (e.g., using outlines, note taking, graphic organizers, lists) and develop drafts in timed and open-ended situations that include transitions and the rhetorical devices used to convey meaning;

(C) revise drafts to improve style, word choice, figurative language, sentence variety, and subtlety of meaning after rethinking how well questions of purpose, audience, and genre have been addressed;

(D) edit drafts for grammar, mechanics, and spelling; and

(E) revise final draft in response to feedback from peers and teacher and publish written work for appropriate audiences.

(14) Writing/Literary Texts. Students write literary texts to express their ideas and feelings about real or imagined people, events, and ideas. Students are responsible for at least two forms of literary writing. Students are expected to:

(A) write an engaging story with a well-developed conflict and resolution, interesting and believable characters, and a range of literary strategies (e.g., dialogue, suspense) and devices to enhance the plot;

(B) write a poem using a variety of poetic techniques (e.g., structural elements, figurative language) and a variety of poetic forms (e.g., sonnets, ballads); and

(C) write a script with an explicit or implicit theme and details that contribute to a definite mood or tone.

(15) Writing/Expository and Procedural Texts. Students write expository and procedural or work-related texts to communicate ideas and information to specific audiences for specific purposes. Students are expected to:

(A) write an analytical essay of sufficient length that includes:

(i) effective introductory and concluding paragraphs and a variety of sentence structures;

   (ii) rhetorical devices, and transitions between paragraphs;

   (iii) a controlling idea or thesis;

   (iv) an organizing structure appropriate to purpose, audience, and context; and

   (v) relevant information and valid inferences;

  (B) write procedural or work-related documents (e.g., instructions, e-mails, correspondence, memos, project plans) that include:

   (i) organized and accurately conveyed information; and

   (ii) reader-friendly formatting techniques;

  (C) write an interpretative response to an expository or a literary text (e.g., essay or review) that:

   (i) extends beyond a summary and literal analysis;

   (ii) addresses the writing skills for an analytical essay and provides evidence from the text using embedded quotations; and

   (iii) analyzes the aesthetic effects of an author's use of stylistic or rhetorical devices; and

  (D) produce a multimedia presentation (e.g., documentary, class newspaper, docudrama, infomercial, visual or textual parodies, theatrical production) with graphics, images, and sound that conveys a distinctive point of view and appeals to a specific audience.

(16) Writing/Persuasive Texts. Students write persuasive texts to influence the attitudes or actions of a specific audience on specific issues. Students are expected to write an argumentative essay to the appropriate audience that includes:

  (A) a clear thesis or position based on logical reasons supported by precise and relevant evidence;

  (B) consideration of the whole range of information and views on the topic and accurate and honest representation of these views;

  (C) counter-arguments based on evidence to anticipate and address objections;

  (D) an organizing structure appropriate to the purpose, audience, and context; and

  (E) an analysis of the relative value of specific data, facts, and ideas.

(17) Oral and Written Conventions/Conventions. Students understand the function of and use the conventions of academic language when speaking and writing. Students will continue to apply earlier standards with greater complexity. Students are expected to:

  (A) use and understand the function of the following parts of speech in the context of reading, writing, and speaking:

   (i) more complex active and passive tenses and verbals (gerunds, infinitives, participles);

   (ii) restrictive and nonrestrictive relative clauses; and

   (iii) reciprocal pronouns (e.g., each other, one another);

  (B) identify and use the subjunctive mood to express doubts, wishes, and possibilities; and

  (C) use a variety of correctly structured sentences (e.g., compound, complex, compound-complex).

(18) Oral and Written Conventions/Handwriting, Capitalization, and Punctuation. Students write legibly and use appropriate capitalization and punctuation conventions in their compositions. Students are expected to:

(A) use conventions of capitalization; and

(B) use correct punctuation marks including:

(i) quotation marks to indicate sarcasm or irony;

(ii) comma placement in nonrestrictive phrases, clauses, and contrasting expressions; and

(iii) dashes to emphasize parenthetical information.

(19) Oral and Written Conventions/Spelling. Students spell correctly. Students are expected to spell correctly, including using various resources to determine and check correct spellings.

(20) Research/Research Plan. Students ask open-ended research questions and develop a plan for answering them. Students are expected to:

(A) brainstorm, consult with others, decide upon a topic, and formulate a major research question to address the major research topic; and

(B) formulate a plan for engaging in research on a complex, multi-faceted topic.

(21) Research/Gathering Sources. Students determine, locate, and explore the full range of relevant sources addressing a research question and systematically record the information they gather. Students are expected to:

(A) follow the research plan to compile data from authoritative sources in a manner that identifies the major issues and debates within the field of inquiry;

(B) organize information gathered from multiple sources to create a variety of graphics and forms (e.g., notes, learning logs); and

(C) paraphrase, summarize, quote, and accurately cite all researched information according to a standard format (e.g., author, title, page number).

(22) Research/Synthesizing Information. Students clarify research questions and evaluate and synthesize collected information. Students are expected to:

(A) modify the major research question as necessary to refocus the research plan;

(B) evaluate the relevance of information to the topic and determine the reliability, validity, and accuracy of sources (including Internet sources) by examining their authority and objectivity; and

(C) critique the research process at each step to implement changes as the need occurs and is identified.

(23) Research/Organizing and Presenting Ideas. Students organize and present their ideas and information according to the purpose of the research and their audience. Students are expected to synthesize the research into a written or an oral presentation that:

(A) marshals evidence in support of a clear thesis statement and related claims;

(B) provides an analysis for the audience that reflects a logical progression of ideas and a clearly stated point of view;

(C) uses graphics and illustrations to help explain concepts where appropriate;

(D) uses a variety of evaluative tools (e.g., self-made rubrics, peer reviews, teacher and expert evaluations) to examine the quality of the research; and

(E) uses a style manual (e.g., *Modern Language Association*, *Chicago Manual of Style*) to document sources and format written materials.

(24) Listening and Speaking/Listening. Students will use comprehension skills to listen attentively to others in formal and informal settings. Students will continue to apply earlier standards with greater complexity. Students are expected to:

[§110.32. English Language Arts and Reading, English II (One Credit), Beginning with School Year 2009-2010.]

[(a)   Introduction.

(1)   The English Language Arts and Reading Texas Essential Knowledge and Skills (TEKS) are organized into the following strands: Reading, where students read and understand a wide variety of literary and informational texts; Writing, where students compose a variety of written texts with a clear controlling idea, coherent organization, and sufficient detail; Research, where students are expected to know how to locate a range of relevant sources and evaluate, synthesize, and present ideas and information; Listening and Speaking, where students listen and respond to the ideas of others while contributing their own ideas in conversations and in groups; and Oral and Written Conventions, where students learn how to use the oral and written conventions of the English language in speaking and writing. The standards are cumulative--students will continue to address earlier standards as needed while they attend to standards for their grade. In English II, students will engage in activities that build on their prior knowledge and skills in order to strengthen their reading, writing, and oral language skills. Students should read and write on a daily basis.

(2)   For students whose first language is not English, the students' native language serves as a foundation for English language acquisition.

(A)   English language learners (ELLs) are acquiring English, learning content in English, and learning to read simultaneously. For this reason, it is imperative that reading instruction should be comprehensive and that students receive instruction in phonemic awareness, phonics, decoding, and word attack skills while simultaneously being taught academic vocabulary and comprehension skills and strategies. Reading instruction that enhances ELL's ability to decode unfamiliar words and to make sense of those words in context will expedite their ability to make sense of what they read and learn from reading. Additionally, developing fluency, spelling, and grammatical conventions of academic language must be done in meaningful contexts and not in isolation.

(B)   For ELLs, comprehension of texts requires additional scaffolds to support comprehensible input. ELL students should use the knowledge of their first language (e.g., cognates) to further vocabulary development. Vocabulary needs to be taught in the context of connected discourse so that language is meaningful. ELLs must learn how rhetorical devices in English differ from those in their native language. At the same time English learners are learning in English, the focus is on academic English, concepts, and the language structures specific to the content.

(3) To meet Public Education Goal 1 of the Texas Education Code, §4.002, which states, "The students in the public education system will demonstrate exemplary performance in the reading and writing of the English language," students will accomplish the essential knowledge, skills, and student expectations in English II as described in subsection (b) of this section.

(4) To meet Texas Education Code, §28.002(h), which states, "... each school district shall foster the continuation of the tradition of teaching United States and Texas history and the free enterprise system in regular subject matter and in reading courses and in the adoption of textbooks," students will be provided oral and written narratives as well as other informational texts that can help them to become thoughtful, active citizens who appreciate the basic democratic values of our state and nation.

(b) Knowledge and skills.

(1) Reading/Vocabulary Development. Students understand new vocabulary and use it when reading and writing. Students are expected to:

(A) determine the meaning of grade-level technical academic English words in multiple content areas (e.g., science, mathematics, social studies, the arts) derived from Latin, Greek, or other linguistic roots and affixes;

(B) analyze textual context (within a sentence and in larger sections of text) to distinguish between the denotative and connotative meanings of words;

(C) infer word meaning through the identification and analysis of analogies and other word relationships;

(D) show the relationship between the origins and meaning of foreign words or phrases used frequently in written English and historical events or developments (e.g., *glasnost, avant garde, coup d'état*); and

(E) use a dictionary, a glossary, or a thesaurus (printed or electronic) to determine or confirm the meanings of words and phrases, including their connotations and denotations, and their etymology.

(2) Reading/Comprehension of Literary Text/Theme and Genre. Students analyze, make inferences and draw conclusions about theme and genre in different cultural, historical, and contemporary contexts and provide evidence from the text to support their understanding. Students are expected to:

(A) compare and contrast differences in similar themes expressed in different time periods;

(B) analyze archetypes (e.g., journey of a hero, tragic flaw) in mythic, traditional and classical literature; and

(C) relate the figurative language of a literary work to its historical and cultural setting.

(3) Reading/Comprehension of Literary Text/Poetry. Students understand, make inferences and draw conclusions about the structure and elements of poetry and provide evidence from text to support their understanding. Students are expected to analyze the structure or prosody (e.g., meter, rhyme scheme) and graphic elements (e.g., line length, punctuation, word position) in poetry.

(4)   Reading/Comprehension of Literary Text/Drama. Students understand, make inferences and draw conclusions about the structure and elements of drama and provide evidence from text to support their understanding. Students are expected to analyze how archetypes and motifs in drama affect the plot of plays.

(5)   Reading/Comprehension of Literary Text/Fiction. Students understand, make inferences and draw conclusions about the structure and elements of fiction and provide evidence from text to support their understanding. Students are expected to:

    (A)   analyze isolated scenes and their contribution to the success of the plot as a whole in a variety of works of fiction;

    (B)   analyze differences in the characters' moral dilemmas in works of fiction across different countries or cultures;

    (C)   evaluate the connection between forms of narration (e.g., unreliable, omniscient) and tone in works of fiction; and

    (D)   demonstrate familiarity with works by authors from non-English-speaking literary traditions with emphasis on 20th century world literature.

(6)   Reading/Comprehension of Literary Text/Literary Nonfiction. Students understand, make inferences and draw conclusions about the varied structural patterns and features of literary nonfiction and provide evidence from text to support their understanding. Students are expected to evaluate the role of syntax and diction and the effect of voice, tone, and imagery on a speech, literary essay, or other forms of literary nonfiction.

(7)   Reading/Comprehension of Literary Text/Sensory Language. Students understand, make inferences and draw conclusions about how an author's sensory language creates imagery in literary text and provide evidence from text to support their understanding. Students are expected to explain the function of symbolism, allegory, and allusions in literary works.

(8)   Reading/Comprehension of Informational Text/Culture and History. Students analyze, make inferences and draw conclusions about the author's purpose in cultural, historical, and contemporary contexts and provide evidence from the text to support their understanding. Students are expected to analyze the controlling idea and specific purpose of a passage and the textual elements that support and elaborate it, including both the most important details and the less important details.

(9)   Reading/Comprehension of Informational Text/Expository Text. Students analyze, make inferences and draw conclusions about expository text and provide evidence from text to support their understanding. Students are expected to:

    (A)   summarize text and distinguish between a summary and a critique and identify non-essential information in a summary and unsubstantiated opinions in a critique;

    (B)   distinguish among different kinds of evidence (e.g., logical, empirical, anecdotal) used to support conclusions and arguments in texts;

    (C)   make and defend subtle inferences and complex conclusions about the ideas in text and their organizational patterns; and

    (D)   synthesize and make logical connections between ideas and details in several texts selected to reflect a range of viewpoints on the same topic and support those findings with textual evidence.

(10)   Reading/Comprehension of Informational Text/Persuasive Text. Students analyze, make inferences and draw conclusions about persuasive text and provide evidence from text to support their analysis. Students are expected to:

    (A)   explain shifts in perspective in arguments about the same topic and evaluate the accuracy of the evidence used to support the different viewpoints within those arguments; and

(B) analyze contemporary political debates for such rhetorical and logical fallacies as appeals to commonly held opinions, false dilemmas, appeals to pity, and personal attacks.

(11) Reading/Comprehension of Informational Text/Procedural Texts. Students understand how to glean and use information in procedural texts and documents. Students are expected to:

(A) evaluate text for the clarity of its graphics and its visual appeal; and

(B) synthesize information from multiple graphical sources to draw conclusions about the ideas presented (e.g., maps, charts, schematics).

(12) Reading/Media Literacy. Students use comprehension skills to analyze how words, images, graphics, and sounds work together in various forms to impact meaning. Students will continue to apply earlier standards with greater depth in increasingly more complex texts. Students are expected to:

(A) evaluate how messages presented in media reflect social and cultural views in ways different from traditional texts;

(B) analyze how messages in media are conveyed through visual and sound techniques (e.g., editing, reaction shots, sequencing, background music);

(C) examine how individual perception or bias in coverage of the same event influences the audience; and

(D) evaluate changes in formality and tone within the same medium for specific audiences and purposes.

(13) Writing/Writing Process. Students use elements of the writing process (planning, drafting, revising, editing, and publishing) to compose text. Students are expected to:

(A) plan a first draft by selecting the correct genre for conveying the intended meaning to multiple audiences, determining appropriate topics through a range of strategies (e.g., discussion, background reading, personal interests, interviews), and developing a thesis or controlling idea;

(B) structure ideas in a sustained and persuasive way (e.g., using outlines, note taking, graphic organizers, lists) and develop drafts in timed and open-ended situations that include transitions and rhetorical devices used to convey meaning;

(C) revise drafts to improve style, word choice, figurative language, sentence variety, and subtlety of meaning after rethinking how well questions of purpose, audience, and genre have been addressed;

(D) edit drafts for grammar, mechanics, and spelling; and

(E) revise final draft in response to feedback from peers and teacher and publish written work for appropriate audiences.

(14) Writing/Literary Texts. Students write literary texts to express their ideas and feelings about real or imagined people, events, and ideas. Students are responsible for at least two forms of literary writing. Students are expected to:

(A) write an engaging story with a well-developed conflict and resolution, interesting and believable characters, a range of literary strategies (e.g., dialogue, suspense) and devices to enhance the plot, and sensory details that define the mood or tone;

(B) write a poem using a variety of poetic techniques (e.g., structural elements, figurative language) and a variety of poetic forms (e.g., sonnets, ballads); and

(C) write a script with an explicit or implicit theme and details that contribute to a definite mood or tone.

(15)   Writing/Expository and Procedural Texts. Students write expository and procedural or work-related texts to communicate ideas and information to specific audiences for specific purposes. Students are expected to:

    (A)   write an analytical essay of sufficient length that includes:

        (i)   effective introductory and concluding paragraphs and a variety of sentence structures;

        (ii)   rhetorical devices, and transitions between paragraphs;

        (iii)   a thesis or controlling idea;

        (iv)   an organizing structure appropriate to purpose, audience, and context;

        (v)   relevant evidence and well-chosen details; and

        (vi)   distinctions about the relative value of specific data, facts, and ideas that support the thesis statement;

    (B)   write procedural or work-related documents (e.g., instructions, e-mails, correspondence, memos, project plans) that include:

        (i)   organized and accurately conveyed information;

        (ii)   reader-friendly formatting techniques; and

        (iii)   anticipation of readers' questions;

    (C)   write an interpretative response to an expository or a literary text (e.g., essay or review) that:

        (i)   extends beyond a summary and literal analysis;

        (ii)   addresses the writing skills for an analytical essay and provides evidence from the text using embedded quotations; and

        (iii)   analyzes the aesthetic effects of an author's use of stylistic and rhetorical devices; and

    (D)   produce a multimedia presentation (e.g., documentary, class newspaper, docudrama, infomercial, visual or textual parodies, theatrical production) with graphics, images, and sound that conveys a distinctive point of view and appeals to a specific audience.

(16)   Writing/Persuasive Texts. Students write persuasive texts to influence the attitudes or actions of a specific audience on specific issues. Students are expected to write an argumentative essay to the appropriate audience that includes:

    (A)   a clear thesis or position based on logical reasons supported by precise and relevant evidence;

    (B)   consideration of the whole range of information and views on the topic and accurate and honest representation of these views (i.e., in the author's own words and not out of context);

    (C)   counter-arguments based on evidence to anticipate and address objections;

    (D)   an organizing structure appropriate to the purpose, audience, and context;

    (E)   an analysis of the relative value of specific data, facts, and ideas; and

    (F)   a range of appropriate appeals (e.g., descriptions, anecdotes, case studies, analogies, illustrations).

(17)   Oral and Written Conventions/Conventions. Students understand the function of and use the conventions of academic language when speaking and writing. Students will continue to apply earlier standards with greater complexity. Students are expected to:

(23) Research/Organizing and Presenting Ideas. Students organize and present their ideas and information according to the purpose of the research and their audience. Students are expected to synthesize the research into a written or an oral presentation that:

(A) marshals evidence in support of a clear thesis statement and related claims;

(B) provides an analysis for the audience that reflects a logical progression of ideas and a clearly stated point of view;

(C) uses graphics and illustrations to help explain concepts where appropriate;

(D) uses a variety of evaluative tools (e.g., self-made rubrics, peer reviews, teacher and expert evaluations) to examine the quality of the research; and

(E) uses a style manual (e.g., *Modern Language Association*, *Chicago Manual of Style*) to document sources and format written materials.

(24) Listening and Speaking/Listening. Students will use comprehension skills to listen attentively to others in formal and informal settings. Students will continue to apply earlier standards with greater complexity. Students are expected to:

(A) listen responsively to a speaker by taking notes that summarize, synthesize, or highlight the speaker's ideas for critical reflection and by asking questions related to the content for clarification and elaboration;

(B) follow and give complex oral instructions to perform specific tasks, answer questions, solve problems, and complete processes; and

(C) evaluate how the style and structure of a speech support or undermine its purpose or meaning.

(25) Listening and Speaking/Speaking. Students speak clearly and to the point, using the conventions of language. Students will continue to apply earlier standards with greater complexity. Students are expected to advance a coherent argument that incorporates a clear thesis and a logical progression of valid evidence from reliable sources and that employs eye contact, speaking rate (e.g., pauses for effect), volume, enunciation, purposeful gestures, and conventions of language to communicate ideas effectively.

(26) Listening and Speaking/Teamwork. Students work productively with others in teams. Students will continue to apply earlier standards with greater complexity. Students are expected to participate productively in teams, building on the ideas of others, contributing relevant information, developing a plan for consensus-building, and setting ground rules for decision-making.]

[§110.33. English Language Arts and Reading, English III (One Credit), Beginning with School Year 2009-2010.]

[(a) Introduction.

(1) The English Language Arts and Reading Texas Essential Knowledge and Skills (TEKS) are organized into the following strands: Reading, where students read and understand a wide variety of literary and informational texts; Writing, where students compose a variety of written texts with a clear controlling idea, coherent organization, and sufficient detail; Research, where students are expected to know how to locate a range of relevant sources and evaluate, synthesize, and present ideas and information; Listening and Speaking, where students listen and respond to the ideas of others while contributing their own ideas in conversations and in groups; and Oral and Written Conventions, where students learn how to use the oral and written conventions of the English language in speaking and writing. The standards are cumulative—students will continue to address earlier standards as needed while they attend to standards for their grade. In English III, students will engage in activities that build on their prior knowledge and skills in order to strengthen their reading, writing, and oral language skills. Students should read and write on a daily basis.

(2)   For students whose first language is not English, the students' native language serves as a foundation for English language acquisition.

(A)   English language learners (ELLs) are acquiring English, learning content in English, and learning to read simultaneously. For this reason, it is imperative that reading instruction should be comprehensive and that students receive instruction in phonemic awareness, phonics, decoding, and word attack skills while simultaneously being taught academic vocabulary and comprehension skills and strategies. Reading instruction that enhances ELL's ability to decode unfamiliar words and to make sense of those words in context will expedite their ability to make sense of what they read and learn from reading. Additionally, developing fluency, spelling, and grammatical conventions of academic language must be done in meaningful contexts and not in isolation.

(B)   For ELLs, comprehension of texts requires additional scaffolds to support comprehensible input. ELL students should use the knowledge of their first language (e.g., cognates) to further vocabulary development. Vocabulary needs to be taught in the context of connected discourse so that language is meaningful. ELLs must learn how rhetorical devices in English differ from those in their native language. At the same time English learners are learning in English, the focus is on academic English, concepts, and the language structures specific to the content.

(C)   During initial stages of English development, ELLs are expected to meet standards in a second language that many monolingual English speakers find difficult to meet in their native language. However, English language learners' abilities to meet these standards will be influenced by their proficiency in English. While English language learners can analyze, synthesize, and evaluate, their level of English proficiency may impede their ability to demonstrate this knowledge during the initial stages of English language acquisition. It is also critical to understand that ELLs with no previous or with interrupted schooling will require explicit and strategic support as they acquire English and learn to learn in English simultaneously.

(3)   To meet Public Education Goal 1 of the Texas Education Code, §4.002, which states, "The students in the public education system will demonstrate exemplary performance in the reading and writing of the English language," students will accomplish the essential knowledge, skills, and student expectations in English III as described in subsection (b) of this section.

(4)   To meet Texas Education Code, §28.002(h), which states, "... each school district shall foster the continuation of the tradition of teaching United States and Texas history and the free enterprise system in regular subject matter and in reading courses and in the adoption of textbooks," students will be provided oral and written narratives as well as other informational texts that can help them to become thoughtful, active citizens who appreciate the basic democratic values of our state and nation.

(b)   Knowledge and skills.

(1)   Reading/Vocabulary Development. Students understand new vocabulary and use it when reading and writing. Students are expected to:

(A)   determine the meaning of grade-level technical academic English words in multiple content areas (e.g., science, mathematics, social studies, the arts) derived from Latin, Greek, or other linguistic roots and affixes;

(B)   analyze textual context (within a sentence and in larger sections of text) to draw conclusions about the nuance in word meanings;

(C)   infer word meaning through the identification and analysis of analogies and other word relationships;

(D)   recognize and use knowledge of cognates in different languages and of word origins to determine the meaning of words; and

(E)   use general and specialized dictionaries, thesauri, glossaries, histories of language, books of quotations, and other related references (printed or electronic) as needed.

(2)   Reading/Comprehension of Literary Text/Theme and Genre. Students analyze, make inferences and draw conclusions about theme and genre in different cultural, historical, and contemporary contexts and provide evidence from the text to support their understanding. Students are expected to:

(A)   analyze the way in which the theme or meaning of a selection represents a view or comment on the human condition;

(B)   relate the characters and text structures of mythic, traditional, and classical literature to 20th and 21st century American novels, plays, or films; and

(C)   relate the main ideas found in a literary work to primary source documents from its historical and cultural setting.

(3)   Reading/Comprehension of Literary Text/Poetry. Students understand, make inferences and draw conclusions about the structure and elements of poetry and provide evidence from text to support their understanding. Students are expected to analyze the effects of metrics, rhyme schemes (e.g., end, internal, slant, eye), and other conventions in American poetry.

(4)   Reading/Comprehension of Literary Text/Drama. Students understand, make inferences and draw conclusions about the structure and elements of drama and provide evidence from text to support their understanding. Students are expected to analyze the themes and characteristics in different periods of modern American drama.

(5)   Reading/Comprehension of Literary Text/Fiction. Students understand, make inferences and draw conclusions about the structure and elements of fiction and provide evidence from text to support their understanding. Students are expected to:

(A)   evaluate how different literary elements (e.g., figurative language, point of view) shape the author's portrayal of the plot and setting in works of fiction;

(B)   analyze the internal and external development of characters through a range of literary devices;

(C)   analyze the impact of narration when the narrator's point of view shifts from one character to another; and

(D)   demonstrate familiarity with works by authors in American fiction from each major literary period.

(6)   Reading/Comprehension of Literary Text/Literary Nonfiction. Students understand, make inferences and draw conclusions about the varied structural patterns and features of literary nonfiction and provide evidence from text to support their understanding. Students are expected to analyze how rhetorical techniques (e.g., repetition, parallel structure, understatement, overstatement) in literary essays, true life adventures, and historically important speeches influence the reader, evoke emotions, and create meaning.

(7)   Reading/Comprehension of Literary Text/Sensory Language. Students understand, make inferences and draw conclusions about how an author's sensory language creates imagery in literary text and provide evidence from text to support their understanding. Students are expected to analyze the meaning of classical, mythological, and biblical allusions in words, phrases, passages, and literary works.

(8)   Reading/Comprehension of Informational Text/Culture and History. Students analyze, make inferences and draw conclusions about the author's purpose in cultural, historical, and contemporary contexts and provide evidence from the text to support their understanding. Students are expected to analyze how the style, tone, and diction of a text advance the author's purpose and perspective or stance.

(9) Reading/Comprehension of Informational Text/Expository Text. Students analyze, make inferences and draw conclusions about expository text and provide evidence from text to support their understanding. Students are expected to:

   (A) summarize a text in a manner that captures the author's viewpoint, its main ideas, and its elements without taking a position or expressing an opinion;

   (B) distinguish between inductive and deductive reasoning and analyze the elements of deductively and inductively reasoned texts and the different ways conclusions are supported;

   (C) make and defend subtle inferences and complex conclusions about the ideas in text and their organizational patterns; and

   (D) synthesize ideas and make logical connections (e.g., thematic links, author analyses) between and among multiple texts representing similar or different genres and technical sources and support those findings with textual evidence.

(10) Reading/Comprehension of Informational Text/Persuasive Text. Students analyze, make inferences and draw conclusions about persuasive text and provide evidence from text to support their analysis. Students are expected to:

   (A) evaluate how the author's purpose and stated or perceived audience affect the tone of persuasive texts; and

   (B) analyze historical and contemporary political debates for such logical fallacies as non sequiturs, circular logic, and hasty generalizations.

(11) Reading/Comprehension of Informational Text/Procedural Texts. Students understand how to glean and use information in procedural texts and documents. Students are expected to:

   (A) evaluate the logic of the sequence of information presented in text (e.g., product support material, contracts); and

   (B) translate (from text to graphic or from graphic to text) complex, factual, quantitative, or technical information presented in maps, charts, illustrations, graphs, timelines, tables, and diagrams.

(12) Reading/Media Literacy. Students use comprehension skills to analyze how words, images, graphics, and sounds work together in various forms to impact meaning. Students will continue to apply earlier standards with greater depth in increasingly more complex texts. Students are expected to:

   (A) evaluate how messages presented in media reflect social and cultural views in ways different from traditional texts;

   (B) evaluate the interactions of different techniques (e.g., layout, pictures, typeface in print media, images, text, sound in electronic journalism) used in multi-layered media;

   (C) evaluate the objectivity of coverage of the same event in various types of media; and

   (D) evaluate changes in formality and tone across various media for different audiences and purposes.

(13) Writing/Writing Process. Students use elements of the writing process (planning, drafting, revising, editing, and publishing) to compose text. Students are expected to:

   (A) plan a first draft by selecting the correct genre for conveying the intended meaning to multiple audiences, determining appropriate topics through a range of strategies (e.g., discussion, background reading, personal interests, interviews), and developing a thesis or controlling idea;

(B)   structure ideas in a sustained and persuasive way (e.g., using outlines, note taking, graphic organizers, lists) and develop drafts in timed and open-ended situations that include transitions and rhetorical devices to convey meaning;

(C)   revise drafts to clarify meaning and achieve specific rhetorical purposes, consistency of tone, and logical organization by rearranging the words, sentences, and paragraphs to employ tropes (e.g., metaphors, similes, analogies, hyperbole, understatement, rhetorical questions, irony), schemes (e.g., parallelism, antithesis, inverted word order, repetition, reversed structures), and by adding transitional words and phrases;

(D)   edit drafts for grammar, mechanics, and spelling; and

(E)   revise final draft in response to feedback from peers and teacher and publish written work for appropriate audiences.

(14)   Writing/Literary Texts. Students write literary texts to express their ideas and feelings about real or imagined people, events, and ideas. Students are responsible for at least two forms of literary writing. Students are expected to:

(A)   write an engaging story with a well-developed conflict and resolution, complex and non-stereotypical characters, a range of literary strategies (e.g., dialogue, suspense) and devices to enhance the plot, and sensory details that define the mood or tone;

(B)   write a poem that reflects an awareness of poetic conventions and traditions within different forms (e.g., sonnets, ballads, free verse); and

(C)   write a script with an explicit or implicit theme, using a variety of literary techniques.

(15)   Writing/Expository and Procedural Texts. Students write expository and procedural or work-related texts to communicate ideas and information to specific audiences for specific purposes. Students are expected to:

(A)   write an analytical essay of sufficient length that includes:

      (i)   effective introductory and concluding paragraphs and a variety of sentence structures;

      (ii)   rhetorical devices, and transitions between paragraphs;

      (iii)   a clear thesis statement or controlling idea;

      (iv)   a clear organizational schema for conveying ideas;

      (v)   relevant and substantial evidence and well-chosen details; and

      (vi)   information on multiple relevant perspectives and a consideration of the validity, reliability, and relevance of primary and secondary sources;

(B)   write procedural or work-related documents (e.g., résumés, proposals, college applications, operation manuals) that include:

      (i)   a clearly stated purpose combined with a well-supported viewpoint on the topic;

      (ii)   appropriate formatting structures (e.g., headings, graphics, white space);

      (iii)   relevant questions that engage readers and consider their needs;

      (iv)   accurate technical information in accessible language; and

      (v)   appropriate organizational structures supported by facts and details (documented if appropriate);

(C)   write an interpretation of an expository or a literary text that:

      (i)   advances a clear thesis statement;

        (ii) ~~addresses the writing skills for an analytical essay, including references to and commentary on quotations from the text;~~

        (iii) ~~analyzes the aesthetic effects of an author's use of stylistic or rhetorical devices;~~

        (iv) ~~identifies and analyzes the ambiguities, nuances, and complexities within the text; and~~

        (v) ~~anticipates and responds to readers' questions or contradictory information; and~~

    (D) ~~produce a multimedia presentation (e.g., documentary, class newspaper, docudrama, infomercial, visual or textual parodies, theatrical production) with graphics, images, and sound that appeals to a specific audience and synthesizes information from multiple points of view.~~

(16) ~~Writing/Persuasive Texts. Students write persuasive texts to influence the attitudes or actions of a specific audience on specific issues. Students are expected to write an argumentative essay (e.g., evaluative essays, proposals) to the appropriate audience that includes:~~

    (A) ~~a clear thesis or position based on logical reasons supported by precise and relevant evidence, including facts, expert opinions, quotations, and/or expressions of commonly accepted beliefs;~~

    (B) ~~accurate and honest representation of divergent views (i.e., in the author's own words and not out of context);~~

    (C) ~~an organizing structure appropriate to the purpose, audience, and context;~~

    (D) ~~information on the complete range of relevant perspectives;~~

    (E) ~~demonstrated consideration of the validity and reliability of all primary and secondary sources used; and~~

    (F) ~~language attentively crafted to move a disinterested or opposed audience, using specific rhetorical devices to back up assertions (e.g., appeals to logic, emotions, ethical beliefs).~~

(17) ~~Oral and Written Conventions/Conventions. Students understand the function of and use the conventions of academic language when speaking and writing. Students will continue to apply earlier standards with greater complexity. Students are expected to:~~

    (A) ~~use and understand the function of different types of clauses and phrases (e.g., adjectival, noun, adverbial clauses and phrases); and~~

    (B) ~~use a variety of correctly structured sentences (e.g., compound, complex, compound-complex).~~

(18) ~~Oral and Written Conventions/Handwriting, Capitalization, and Punctuation. Students write legibly and use appropriate capitalization and punctuation conventions in their compositions. Students are expected to correctly and consistently use conventions of punctuation and capitalization.~~

(19) ~~Oral and Written Conventions/Spelling. Students spell correctly. Students are expected to spell correctly, including using various resources to determine and check correct spellings.~~

(20) ~~Research/Research Plan. Students ask open-ended research questions and develop a plan for answering them. Students are expected to:~~

    (A) ~~brainstorm, consult with others, decide upon a topic, and formulate a major research question to address the major research topic; and~~

    (B) ~~formulate a plan for engaging in in-depth research on a complex, multi-faceted topic.~~

(21) ~~Research/Gathering Sources. Students determine, locate, and explore the full range of relevant sources addressing a research question and systematically record the information they gather. Students are expected to:~~

(A)   follow the research plan to gather evidence from experts on the topic and texts written for informed audiences in the field, distinguishing between reliable and unreliable sources and avoiding over-reliance on one source;

(B)   systematically organize relevant and accurate information to support central ideas, concepts, and themes, outline ideas into conceptual maps/timelines, and separate factual data from complex inferences; and

(C)   paraphrase, summarize, quote, and accurately cite all researched information according to a standard format (e.g., author, title, page number), differentiating among primary, secondary, and other sources.

(22)   Research/Synthesizing Information. Students clarify research questions and evaluate and synthesize collected information. Students are expected to:

(A)   modify the major research question as necessary to refocus the research plan;

(B)   differentiate between theories and the evidence that supports them and determine whether the evidence found is weak or strong and how that evidence helps create a cogent argument; and

(C)   critique the research process at each step to implement changes as the need occurs and is identified.

(23)   Research/Organizing and Presenting Ideas. Students organize and present their ideas and information according to the purpose of the research and their audience. Students are expected to synthesize the research into an extended written or oral presentation that:

(A)   provides an analysis that supports and develops personal opinions, as opposed to simply restating existing information;

(B)   uses a variety of formats and rhetorical strategies to argue for the thesis;

(C)   develops an argument that incorporates the complexities of and discrepancies in information from multiple sources and perspectives while anticipating and refuting counter-arguments;

(D)   uses a style manual (e.g., *Modern Language Association*, *Chicago Manual of Style*) to document sources and format written materials; and

(E)   is of sufficient length and complexity to address the topic.

(24)   Listening and Speaking/Listening. Students will use comprehension skills to listen attentively to others in formal and informal settings. Students will continue to apply earlier standards with greater complexity. Students are expected to:

(A)   listen responsively to a speaker by framing inquiries that reflect an understanding of the content and by identifying the positions taken and the evidence in support of those positions; and

(B)   evaluate the clarity and coherence of a speaker's message and critique the impact of a speaker's diction and syntax on an audience.

(25)   Listening and Speaking/Speaking. Students speak clearly and to the point, using the conventions of language. Students will continue to apply earlier standards with greater complexity. Students are expected to give a formal presentation that exhibits a logical structure, smooth transitions, accurate evidence, well-chosen details, and rhetorical devices, and that employs eye contact, speaking rate (e.g., pauses for effect), volume, enunciation, purposeful gestures, and conventions of language to communicate ideas effectively.

(26)   Listening and Speaking/Teamwork. Students work productively with others in teams. Students will continue to apply earlier standards with greater complexity. Students are expected to participate productively in teams, offering ideas or judgments that are purposeful in moving the team towards goals, asking relevant and insightful questions, tolerating a range of positions and

ambiguity in decision-making, and evaluating the work of the group based on agreed-upon criteria.]

[§110.34. English Language Arts and Reading, English IV (One Credit), Beginning with School Year 2009-2010.]

[(a)   Introduction.

    (1)   The English Language Arts and Reading Texas Essential Knowledge and Skills (TEKS) are organized into the following strands: Reading, where students read and understand a wide variety of literary and informational texts; Writing, where students compose a variety of written texts with a clear controlling idea, coherent organization, and sufficient detail; Research, where students are expected to know how to locate a range of relevant sources and evaluate, synthesize, and present ideas and information; Listening and Speaking, where students listen and respond to the ideas of others while contributing their own ideas in conversations and in groups; and Oral and Written Conventions, where students learn how to use the oral and written conventions of the English language in speaking and writing. The standards are cumulative—students will continue to address earlier standards as needed while they attend to standards for their grade. In English IV, students will engage in activities that build on their prior knowledge and skills in order to strengthen their reading, writing, and oral language skills. Students should read and write on a daily basis.

    (2)   For students whose first language is not English, the students' native language serves as a foundation for English language acquisition.

        (A)   English language learners (ELLs) are acquiring English, learning content in English, and learning to read simultaneously. For this reason, it is imperative that reading instruction should be comprehensive and that students receive instruction in phonemic awareness, phonics, decoding, and word attack skills while simultaneously being taught academic vocabulary and comprehension skills and strategies. Reading instruction that enhances ELL's ability to decode unfamiliar words and to make sense of those words in context will expedite their ability to make sense of what they read and learn from reading. Additionally, developing fluency, spelling, and grammatical conventions of academic language must be done in meaningful contexts and not in isolation.

        (B)   For ELLs, comprehension of texts requires additional scaffolds to support comprehensible input. ELL students should use the knowledge of their first language (e.g., cognates) to further vocabulary development. Vocabulary needs to be taught in the context of connected discourse so that language is meaningful. ELLs must learn how rhetorical devices in English differ from those in their native language. At the same time English learners are learning in English, the focus is on academic English, concepts, and the language structures specific to the content.

        (C)   During initial stages of English development, ELLs are expected to meet standards in a second language that many monolingual English speakers find difficult to meet in their native language. However, English language learners' abilities to meet these standards will be influenced by their proficiency in English. While English language learners can analyze, synthesize, and evaluate, their level of English proficiency may impede their ability to demonstrate this knowledge during the initial stages of English language acquisition. It is also critical to understand that ELLs with no previous or with interrupted schooling will require explicit and strategic support as they acquire English and learn to learn in English simultaneously.

    (3)   To meet Public Education Goal 1 of the Texas Education Code, §4.002, which states, "The students in the public education system will demonstrate exemplary performance in the reading and writing of the English language," students will accomplish the essential knowledge, skills, and student expectations in English IV as described in subsection (b) of this section.

    (4)   To meet Texas Education Code, §28.002(h), which states, "... each school district shall foster the continuation of the tradition of teaching United States and Texas history and the free enterprise system in regular subject matter and in reading courses and in the adoption of textbooks," students

~~will be provided oral and written narratives as well as other informational texts that can help them to become thoughtful, active citizens who appreciate the basic democratic values of our state and nation.~~

(b)   ~~Knowledge and skills.~~

(1)   ~~Reading/Vocabulary Development. Students understand new vocabulary and use it when reading and writing. Students are expected to:~~

(A)   ~~determine the meaning of technical academic English words in multiple content areas (e.g., science, mathematics, social studies, the arts) derived from Latin, Greek, or other linguistic roots and affixes;~~

(B)   ~~analyze textual context (within a sentence and in larger sections of text) to draw conclusions about the nuance in word meanings;~~

(C)   ~~use the relationship between words encountered in analogies to determine their meanings (e.g., synonyms/antonyms, connotation/denotation);~~

(D)   ~~analyze and explain how the English language has developed and been influenced by other languages; and~~

(E)   ~~use general and specialized dictionaries, thesauri, histories of language, books of quotations, and other related references (printed or electronic) as needed.~~

(2)   ~~Reading/Comprehension of Literary Text/Theme and Genre. Students analyze, make inferences and draw conclusions about theme and genre in different cultural, historical, and contemporary contexts and provide evidence from the text to support their understanding. Students are expected to:~~

(A)   ~~compare and contrast works of literature that express a universal theme;~~

(B)   ~~compare and contrast the similarities and differences in classical plays with their modern-day novel, play, or film versions; and~~

(C)   ~~relate the characters, setting, and theme of a literary work to the historical, social, and economic ideas of its time.~~

(3)   ~~Reading/Comprehension of Literary Text/Poetry. Students understand, make inferences and draw conclusions about the structure and elements of poetry and provide evidence from text to support their understanding. Students are expected to evaluate the changes in sound, form, figurative language, graphics, and dramatic structure in poetry across literary time periods.~~

(4)   ~~Reading/Comprehension of Literary Text/Drama. Students understand, make inferences and draw conclusions about the structure and elements of drama and provide evidence from text to support their understanding. Students are expected to evaluate how the structure and elements of drama change in the works of British dramatists across literary periods.~~

(5)   ~~Reading/Comprehension of Literary Text/Fiction. Students understand, make inferences and draw conclusions about the structure and elements of fiction and provide evidence from text to support their understanding. Students are expected to:~~

(A)   ~~analyze how complex plot structures (e.g., subplots) and devices (e.g., foreshadowing, flashbacks, suspense) function and advance the action in a work of fiction;~~

(B)   ~~analyze the moral dilemmas and quandaries presented in works of fiction as revealed by the underlying motivations and behaviors of the characters;~~

(C)   ~~compare and contrast the effects of different forms of narration across various genres of fiction; and~~

(D)   ~~demonstrate familiarity with works of fiction by British authors from each major literary period.~~

(6)   Reading/Comprehension of Literary Text/Literary Nonfiction. Students understand, make inferences and draw conclusions about the varied structural patterns and features of literary nonfiction and provide evidence from text to support their understanding. Students are expected to analyze the effect of ambiguity, contradiction, subtlety, paradox, irony, sarcasm, and overstatement in literary essays, speeches, and other forms of literary nonfiction.

(7)   Reading/Comprehension of Literary Text/Sensory Language. Students understand, make inferences and draw conclusions about how an author's sensory language creates imagery in literary text and provide evidence from text to support their understanding. Students are expected to analyze how the author's patterns of imagery, literary allusions, and conceits reveal theme, set tone, and create meaning in metaphors, passages, and literary works.

(8)   Reading/Comprehension of Informational Text/Culture and History. Students analyze, make inferences and draw conclusions about the author's purpose in cultural, historical, and contemporary contexts and provide evidence from the text to support their understanding. Students are expected to analyze the consistency and clarity of the expression of the controlling idea and the ways in which the organizational and rhetorical patterns of text support or confound the author's meaning or purpose.

(9)   Reading/Comprehension of Informational Text/Expository Text. Students analyze, make inferences and draw conclusions about expository text and provide evidence from text to support their understanding. Students are expected to:

    (A)   summarize a text in a manner that captures the author's viewpoint, its main ideas, and its elements without taking a position or expressing an opinion;

    (B)   explain how authors writing on the same issue reached different conclusions because of differences in assumptions, evidence, reasoning, and viewpoints;

    (C)   make and defend subtle inferences and complex conclusions about the ideas in text and their organizational patterns; and

    (D)   synthesize ideas and make logical connections (e.g., thematic links, author analysis) among multiple texts representing similar or different genres and technical sources and support those findings with textual evidence.

(10)   Reading/Comprehension of Informational Text/Persuasive Text. Students analyze, make inferences and draw conclusions about persuasive text and provide evidence from text to support their analysis. Students are expected to:

    (A)   evaluate the merits of an argument, action, or policy by analyzing the relationships (e.g., implication, necessity, sufficiency) among evidence, inferences, assumptions, and claims in text; and

    (B)   draw conclusions about the credibility of persuasive text by examining its implicit and stated assumptions about an issue as conveyed by the specific use of language.

(11)   Reading/Comprehension of Informational Text/Procedural Texts. Students understand how to glean and use information in procedural texts and documents. Students are expected to:

    (A)   draw conclusions about how the patterns of organization and hierarchic structures support the understandability of text; and

    (B)   evaluate the structures of text (e.g., format, headers) for their clarity and organizational coherence and for the effectiveness of their graphic representations.

(12)   Reading/Media Literacy. Students use comprehension skills to analyze how words, images, graphics, and sounds work together in various forms to impact meaning. Students will continue to apply earlier standards with greater depth in increasingly more complex texts. Students are expected to:

    (A)   evaluate how messages presented in media reflect social and cultural views in ways different from traditional texts;

        (vii) an analysis of views and information that contradict the thesis statement and the evidence presented for it;

    (B) write procedural and work-related documents (e.g., résumés, proposals, college applications, operation manuals) that include:

        (i) a clearly stated purpose combined with a well-supported viewpoint on the topic;

        (ii) appropriate formatting structures (e.g., headings, graphics, white space);

        (iii) relevant questions that engage readers and address their potential problems and misunderstandings;

        (iv) accurate technical information in accessible language; and

        (v) appropriate organizational structures supported by facts and details (documented if appropriate);

    (C) write an interpretation of an expository or a literary text that:

        (i) advances a clear thesis statement;

        (ii) addresses the writing skills for an analytical essay including references to and commentary on quotations from the text;

        (iii) analyzes the aesthetic effects of an author's use of stylistic or rhetorical devices;

        (iv) identifies and analyzes ambiguities, nuances, and complexities within the text; and

        (v) anticipates and responds to readers' questions and contradictory information; and

    (D) produce a multimedia presentation (e.g., documentary, class newspaper, docudrama, infomercial, visual or textual parodies, theatrical production) with graphics, images, and sound that appeals to a specific audience and synthesizes information from multiple points of view.

(16) Writing/Persuasive Texts. Students write persuasive texts to influence the attitudes or actions of a specific audience on specific issues. Students are expected to write an argumentative essay (e.g., evaluative essays, proposals) to the appropriate audience that includes:

    (A) a clear thesis or position based on logical reasons with various forms of support (e.g., hard evidence, reason, common sense, cultural assumptions);

    (B) accurate and honest representation of divergent views (i.e., in the author's own words and not out of context);

    (C) an organizing structure appropriate to the purpose, audience, and context;

    (D) information on the complete range of relevant perspectives;

    (E) demonstrated consideration of the validity and reliability of all primary and secondary sources used;

    (F) language attentively crafted to move a disinterested or opposed audience, using specific rhetorical devices to back up assertions (e.g., appeals to logic, emotions, ethical beliefs); and

    (G) an awareness and anticipation of audience response that is reflected in different levels of formality, style, and tone.

(17) Oral and Written Conventions/Conventions. Students understand the function of and use the conventions of academic language when speaking and writing. Students will continue to apply earlier standards with greater complexity. Students are expected to:

    (A) use and understand the function of different types of clauses and phrases (e.g., adjectival, noun, adverbial clauses and phrases); and

(B) use a variety of correctly structured sentences (e.g., compound, complex, compound complex).

(18) Oral and Written Conventions/Handwriting, Capitalization, and Punctuation. Students write legibly and use appropriate capitalization and punctuation conventions in their compositions. Students are expected to correctly and consistently use conventions of punctuation and capitalization.

(19) Oral and Written Conventions/Spelling. Students spell correctly. Students are expected to spell correctly, including using various resources to determine and check correct spellings.

(20) Research/Research Plan. Students ask open-ended research questions and develop a plan for answering them. Students are expected to:

(A) brainstorm, consult with others, decide upon a topic, and formulate a major research question to address the major research topic; and

(B) formulate a plan for engaging in in-depth research on a complex, multi-faceted topic.

(21) Research/Gathering Sources. Students determine, locate, and explore the full range of relevant sources addressing a research question and systematically record the information they gather. Students are expected to:

(A) follow the research plan to gather evidence from experts on the topic and texts written for informed audiences in the field, distinguishing between reliable and unreliable sources and avoiding over-reliance on one source;

(B) systematically organize relevant and accurate information to support central ideas, concepts, and themes, outline ideas into conceptual maps/timelines, and separate factual data from complex inferences; and

(C) paraphrase, summarize, quote, and accurately cite all researched information according to a standard format (e.g., author, title, page number), differentiating among primary, secondary, and other sources.

(22) Research/Synthesizing Information. Students clarify research questions and evaluate and synthesize collected information. Students are expected to:

(A) modify the major research question as necessary to refocus the research plan;

(B) differentiate between theories and the evidence that supports them and determine whether the evidence found is weak or strong and how that evidence helps create a cogent argument; and

(C) critique the research process at each step to implement changes as the need occurs and is identified.

(23) Research/Organizing and Presenting Ideas. Students organize and present their ideas and information according to the purpose of the research and their audience. Students are expected to synthesize the research into an extended written or oral presentation that:

(A) provides an analysis that supports and develops personal opinions, as opposed to simply restating existing information;

(B) uses a variety of formats and rhetorical strategies to argue for the thesis;

(C) develops an argument that incorporates the complexities of and discrepancies in information from multiple sources and perspectives while anticipating and refuting counter-arguments;

(D) uses a style manual (e.g., *Modern Language Association, Chicago Manual of Style*) to document sources and format written materials; and

(E) is of sufficient length and complexity to address the topic.

(24)   Listing and Speaking/Listening. Students will use comprehension skills to listen attentively to others in formal and informal settings. Students will continue to apply earlier standards with greater complexity. Students are expected to:

    (A)   listen responsively to a speaker by framing inquiries that reflect an understanding of the content and by identifying the positions taken and the evidence in support of those positions; and

    (B)   assess the persuasiveness of a presentation based on content, diction, rhetorical strategies, and delivery.

(25)   Listening and Speaking/Speaking. Students speak clearly and to the point, using the conventions of language. Students will continue to apply earlier standards with greater complexity. Students are expected to formulate sound arguments by using elements of classical speeches (e.g., introduction, first and second transitions, body, and conclusion), the art of persuasion, rhetorical devices, eye contact, speaking rate (e.g., pauses for effect), volume, enunciation, purposeful gestures, and conventions of language to communicate ideas effectively.

(26)   Listening and Speaking/Teamwork. Students work productively with others in teams. Students will continue to apply earlier standards with greater complexity. Students are expected to participate productively in teams, offering ideas or judgments that are purposeful in moving the team towards goals, asking relevant and insightful questions, tolerating a range of positions and ambiguity in decision-making, and evaluating the work of the group based on agreed-upon criteria.]

Subchapter D. Other High School English Language Arts and Reading Courses

[§110.85. Advanced Placement (AP) International English Language (One Credit).]

[(a)   General requirements. Students shall be awarded one credit for successful completion of this course. Recommended prerequisite: English III.

(b)   Content requirements. Content requirements for Advanced Placement (AP) International English Language are prescribed in the College Board Publication *Advanced Placement Course Description: English,* published by The College Board. This publication may be obtained from the College Board Advanced Placement Program.]

Chapter 128. Texas Essential Knowledge and Skills for Spanish Language Arts and Reading and English as a Second Language

Subchapter C. High School

[**§128.30. Implementation of Texas Essential Knowledge and Skills for English as a Second Language, High School, Beginning with School Year 2009-2010.**]

[(a)   The provisions of §128.31 and §128.32 of this subchapter shall be implemented by school districts beginning with the 2009-2010 school year.

(b)   Students must develop the ability to comprehend and process material from a wide range of texts. Student expectations for Reading/Comprehension Skills as provided in this subsection are described for the appropriate grade level.

Figure: 19 TAC §128.30(b)]

[**§128.31. English I for Speakers of Other Languages (One Credit), Beginning with School Year 2009-2010.**]

[(a)   Introduction.

(1)   The essential knowledge and skills as well as the student expectations for English I for Speakers of Other Languages (ESOL I) are described in §74.4 of this title (relating to English Language Proficiency Standards) as well as subsection (b) of this section and are identical to the knowledge and skills and student expectations in Chapter 110 of this title (relating to Texas Essential Knowledge and Skills for English Language Arts and Reading) with additional expectations for English language learners (ELLs).

(2)   ESOL I may be substituted for English I as provided by Chapter 74, Subchapter B, of this title (relating to Graduation Requirements). All expectations apply to ESOL I students; however, it is imperative to recognize critical processes and features of second language acquisition and to provide appropriate instruction to enable students to meet these standards.

(3)   ELLs are expected to meet standards in a second language that many monolingual English speakers find difficult to meet in their native language. In addition, ELLs are acquiring English at the same time they are learning content in English. ELLs' abilities to meet these standards will be influenced by their proficiency in English. While ELLs can analyze, synthesize, and evaluate, their level of English proficiency may impede their ability to demonstrate this knowledge during the initial stages of English language acquisition. For this reason, comprehension of text requires additional scaffolds that include adapted text (e.g., appropriate for student proficiency level; translations), pictures, realia, glossaries, bilingual dictionaries, thesaurus, and other modes of comprehensible input. ELLs can and should be encouraged to use their knowledge of their first language (e.g., cognates) to enhance their vocabulary development, and vocabulary needs to be in the context of connected discourse so that it is meaningful. Strategic use of the student's first language is important to ensure linguistic, affective, cognitive, and academic development in English.

(4)   Research consistently shows that a strong foundation in the native language of an ELL facilitates learning in English (Collier & Thomas, 1997; Cummins, 2001). Students can develop cognition, learn, and achieve best when they can understand the language of instruction (August, Calderon, & Carlo, 2003). Students can be expected to transfer those skills to English and progress rapidly in learning in English.

(5)   For newcomers in secondary schooling, the challenge then is not only learning English, but learning in English. ELLs are challenged in working with linguistic, cognitive, and academic development in all of their coursework and in a new language. Some newcomers exhibit additional first language and/or academic needs due to their previous educational experiences that may include interrupted and/or limited schooling. Strategic use of the student's first language is important to ensure linguistic, affective, cognitive, and academic development in English,

especially for students who are newcomers and at beginning levels of English language proficiency. Their academic success depends on their ability to use academic language.

(6) Second language acquisition is a complex process that even under optimal conditions takes a long time (Collier, 1997). It is important to understand that limited knowledge of English structure and vocabulary is neither related to the students' intellectual capabilities nor their ability to use higher-order thinking skills. The development of receptive (listening/reading) and expressive (speaking/writing) skills in second language learners may be at different stages. In some instances, second language learners undergo silent periods of varying durations when they first begin to learn a new language. Students often understand more than they can produce and may repeat words in sentences that they do not entirely understand. Second language learners may also draw upon the resources of their language and culture as they acquire a new language and culture.

(7) In order for ELLs to be successful, they must acquire both social and academic language proficiency in English. Social language proficiency in English consists of the English needed for daily social interactions. Academic language proficiency consists of the English needed to think critically, understand and learn new concepts, process complex academic material, and interact and communicate in English academic settings.

(8) Academic language is a major factor in academic success. Academic language and grammatical structures are used across all subject areas and is specific to the content area, such as language arts, mathematics, science, and social studies. Current research stresses the importance of effectively integrating second language acquisition with quality content area education in order to ensure that ELLs acquire social and academic language proficiency in English, learn the knowledge and skills, and reach their full academic potential. This must also be provided in a manner that is linguistically accommodated (contextualized, communicated, sequenced, and scaffolded) commensurate with the student's levels of English language proficiency to ensure that the student learns the knowledge and skills in the required curriculum.

(9) ELLs require focused, targeted, and systematic second language acquisition to provide them with the foundation of English language vocabulary, grammar, syntax, and English mechanics necessary to support content-based instruction and accelerated learning of English. Literacy development across the content areas is essential in building academic skills in a second language and can accelerate the learning of both English language skills and higher-order thinking skills.

(10) ELL students are at different stages of language acquisition. Proficiency levels are not grade specific: Beginning, Intermediate, Advanced, and Advanced High. The ELL student may exhibit different proficiency levels within the four language components: listening, speaking, reading, and writing. A student may exhibit oral skills at the advanced level, reading skills at the intermediate level, and writing skills at the beginning level. Understanding the level of English language proficiency of the student is critical in order for the student to have access to the curriculum. The proficiency level of the student determines the accommodations in language that must be made (e.g., adapted text appropriate for student proficiency level; translations) as well as, determines additional scaffolds (e.g., pictures, realia, glossaries, bilingual dictionaries, thesaurus) in order to learn the academic content. Any combination of the language components is possible and is affected by opportunities for interaction in and outside of school. For further guidance in second language acquisition, refer to the English language proficiency standards (ELPS) described in §74.4 of this title.

(A) Beginning: Students associate utterances with meaning as they make inferences based on actions, visuals, text, tone of voice, and inflections. Receptive language with some comprehension is acquired earlier than oral production. Beginning students produce spoken English with increasing accuracy and fluency to convey appropriate meaning. They read English using graphophonic cues, syntax, visuals, the context of the text, and their prior knowledge of language and structure of text.

(B) Intermediate: Students use the listening process to improve comprehension and oral skills in English. Through listening and speaking in meaningful interactions, they clarify, distinguish, and evaluate ideas and responses in a variety of situations. Intermediate

(B) analyze textual context (within a sentence and in larger sections of text) to distinguish between the denotative and connotative meanings of words;

(C) produce analogies that describe a function of an object or its description;

(D) describe the origins and meanings of foreign words or phrases used frequently in written English (e.g., *caveat emptor, carte blanche, tete a tete, pas de deux, bon appetit, quid pro quo*); and

(E) use a dictionary, a glossary, or a thesaurus (printed or electronic) to determine or confirm the meanings of words and phrases, including their connotations and denotations, and their etymology.

(2) Reading/Comprehension of Literary Text/Theme and Genre. Students analyze, make inferences and draw conclusions about theme and genre in different cultural, historical, and contemporary contexts and provide evidence from the text to support their understanding. Students are expected to:

(A) analyze how the genre of texts with similar themes shapes meaning;

(B) analyze the influence of mythic, classical and traditional literature on 20th and 21st century literature; and

(C) relate the figurative language of a literary work to its historical and cultural setting.

(3) Reading/Comprehension of Literary Text/Poetry. Students understand, make inferences and draw conclusions about the structure and elements of poetry and provide evidence from text to support their understanding. Students are expected to analyze the effects of diction and imagery (e.g., controlling images, figurative language, understatement, overstatement, irony, paradox) in poetry.

(4) Reading/Comprehension of Literary Text/Drama. Students understand, make inferences and draw conclusions about the structure and elements of drama and provide evidence from text to support their understanding. Students are expected to explain how dramatic conventions (e.g., monologues, soliloquies, dramatic irony) enhance dramatic text.

(5) Reading/Comprehension of Literary Text/Fiction. Students understand, make inferences and draw conclusions about the structure and elements of fiction and provide evidence from text to support their understanding. Students are expected to:

(A) analyze non-linear plot development (e.g., flashbacks, foreshadowing, sub-plots, parallel plot structures) and compare it to linear plot development;

(B) analyze how authors develop complex yet believable characters in works of fiction through a range of literary devices, including character foils;

(C) analyze the way in which a work of fiction is shaped by the narrator's point of view; and

(D) demonstrate familiarity with works by authors from non-English-speaking literary traditions with emphasis on classical literature.

(6) Reading/Comprehension of Literary Text/Literary Nonfiction. Students understand, make inferences and draw conclusions about the varied structural patterns and features of literary nonfiction and provide evidence from text to support their understanding. Students are expected to analyze how literary essays interweave personal examples and ideas with factual information to explain, present a perspective, or describe a situation or event.

(7) Reading/Comprehension of Literary Text/Sensory Language. Students understand, make inferences and draw conclusions about how an author's sensory language creates imagery in literary text and provide evidence from text to support their understanding. Students are expected to explain the role of irony, sarcasm, and paradox in literary works.

(8) Reading/Comprehension of Informational Text/Culture and History. Students analyze, make inferences and draw conclusions about the author's purpose in cultural, historical, and contemporary contexts and provide evidence from the text to support their understanding. Students

are expected to explain the controlling idea and specific purpose of an expository text and distinguish the most important from the less important details that support the author's purpose.

(9) Reading/Comprehension of Informational Text/Expository Text. Students analyze, make inferences and draw conclusions about expository text and provide evidence from text to support their understanding. Students are expected to:

    (A) summarize text and distinguish between a summary that captures the main ideas and elements of a text and a critique that takes a position and expresses an opinion;

    (B) differentiate between opinions that are substantiated and unsubstantiated in the text;

    (C) make subtle inferences and draw complex conclusions about the ideas in text and their organizational patterns; and

    (D) synthesize and make logical connections between ideas and details in several texts selected to reflect a range of viewpoints on the same topic and support those findings with textual evidence.

(10) Reading/Comprehension of Informational Text/Persuasive Text. Students analyze, make inferences and draw conclusions about persuasive text and provide evidence from text to support their analysis. Students are expected to:

    (A) analyze the relevance, quality, and credibility of evidence given to support or oppose an argument for a specific audience; and

    (B) analyze famous speeches for the rhetorical structures and devices used to convince the reader of the authors' propositions.

(11) Reading/Comprehension of Informational Text/Procedural Texts. Students understand how to glean and use information in procedural texts and documents. Students are expected to:

    (A) analyze the clarity of the objective(s) of procedural text (e.g., consider reading instructions for software, warranties, consumer publications); and

    (B) analyze factual, quantitative, or technical data presented in multiple graphical sources.

(12) Reading/Media Literacy. Students use comprehension skills to analyze how words, images, graphics, and sounds work together in various forms to impact meaning. Students will continue to apply earlier standards with greater depth in increasingly more complex texts. Students are expected to:

    (A) compare and contrast how events are presented and information is communicated by visual images (e.g., graphic art, illustrations, news photographs) versus non-visual texts;

    (B) analyze how messages in media are conveyed through visual and sound techniques (e.g., editing, reaction shots, sequencing, background music);

    (C) compare and contrast coverage of the same event in various media (e.g., newspapers, television, documentaries, blogs, Internet); and

    (D) evaluate changes in formality and tone within the same medium for specific audiences and purposes.

(13) Writing/Writing Process. Students use elements of the writing process (planning, drafting, revising, editing, and publishing) to compose text. Students are expected to:

    (A) plan a first draft by selecting the correct genre for conveying the intended meaning to multiple audiences, determining appropriate topics through a range of strategies (e.g., discussion, background reading, personal interests, interviews), and developing a thesis or controlling idea;

    (B) structure ideas in a sustained and persuasive way (e.g., using outlines, note taking, graphic organizers, lists) and develop drafts in timed and open-ended situations that include transitions and the rhetorical devices used to convey meaning;

(C)   revise drafts to improve style, word choice, figurative language, sentence variety, and subtlety of meaning after rethinking how well questions of purpose, audience, and genre have been addressed;

(D)   edit drafts for grammar, mechanics, and spelling; and

(E)   revise final draft in response to feedback from peers and teacher and publish written work for appropriate audiences.

(14)   Writing/Literary Texts. Students write literary texts to express their ideas and feelings about real or imagined people, events, and ideas. Students are responsible for at least two forms of literary writing. Students are expected to:

(A)   write an engaging story with a well-developed conflict and resolution, interesting and believable characters, and a range of literary strategies (e.g., dialogue, suspense) and devices to enhance the plot;

(B)   write a poem using a variety of poetic techniques (e.g., structural elements, figurative language) and a variety of poetic forms (e.g., sonnets, ballads); and

(C)   write a script with an explicit or implicit theme and details that contribute to a definite mood or tone.

(15)   Writing/Expository and Procedural Texts. Students write expository and procedural or work-related texts to communicate ideas and information to specific audiences for specific purposes. Students are expected to:

(A)   write an analytical essay of sufficient length that includes:

        (i)   effective introductory and concluding paragraphs and a variety of sentence structures;

        (ii)   rhetorical devices and transitions between paragraphs;

        (iii)   a controlling idea or thesis;

        (iv)   an organizing structure appropriate to purpose, audience, and context; and

        (v)   relevant information and valid inferences;

(B)   write procedural or work-related documents (e.g., instructions, e-mails, correspondence, memos, project plans) that include:

        (i)   organized and accurately conveyed information; and

        (ii)   reader-friendly formatting techniques;

(C)   write an interpretative response to an expository or a literary text (e.g., essay or review) that:

        (i)   extends beyond a summary and literal analysis;

        (ii)   addresses the writing skills for an analytical essay and provides evidence from the text using embedded quotations; and

        (iii)   analyzes the aesthetic effects of an author's use of stylistic or rhetorical devices; and

(D)   produce a multimedia presentation (e.g., documentary, class newspaper, docudrama, infomercial, visual or textual parodies, theatrical production) with graphics, images, and sound that conveys a distinctive point of view and appeals to a specific audience.

(16)   Writing/Persuasive Texts. Students write persuasive texts to influence the attitudes or actions of a specific audience on specific issues. Students are expected to write an argumentative essay to the appropriate audience that includes:

(C)   paraphrase, summarize, quote, and accurately cite all researched information according to a standard format (e.g., author, title, page number).

(22)   Research/Synthesizing Information. Students clarify research questions and evaluate and synthesize collected information. Students are expected to:

(A)   modify the major research question as necessary to refocus the research plan;

(B)   evaluate the relevance of information to the topic and determine the reliability, validity, and accuracy of sources (including Internet sources) by examining their authority and objectivity; and

(C)   critique the research process at each step to implement changes as the need occurs and is identified.

(23)   Research/Organizing and Presenting Ideas. Students organize and present their ideas and information according to the purpose of the research and their audience. Students are expected to synthesize the research into a written or an oral presentation that:

(A)   marshals evidence in support of a clear thesis statement and related claims;

(B)   provides an analysis for the audience that reflects a logical progression of ideas and a clearly stated point of view;

(C)   uses graphics and illustrations to help explain concepts where appropriate;

(D)   uses a variety of evaluative tools (e.g., self-made rubrics, peer reviews, teacher and expert evaluations) to examine the quality of the research; and

(E)   uses a style manual (e.g., *Modern Language Association*, *Chicago Manual of Style*) to document sources and format written materials.

(24)   Listening and Speaking/Listening. Students will use comprehension skills to listen attentively to others in formal and informal settings. Students will continue to apply earlier standards with greater complexity. Students are expected to:

(A)   listen responsively to a speaker by taking notes that summarize, synthesize, or highlight the speaker's ideas for critical reflection and by asking questions related to the content for clarification and elaboration;

(B)   follow and give complex oral instructions to perform specific tasks, answer questions, solve problems, and complete processes; and

(C)   evaluate the effectiveness of a speaker's main and supporting ideas.

(25)   Listening and Speaking/Speaking. Students speak clearly and to the point, using the conventions of language. Students will continue to apply earlier standards with greater complexity. Students are expected to give presentations using informal, formal, and technical language effectively to meet the needs of audience, purpose, and occasion, employing eye contact, speaking rate (e.g., pauses for effect), volume, enunciation, purposeful gestures, and conventions of language to communicate ideas effectively.

(26)   Listening and Speaking/Teamwork. Students work productively with others in teams. Students will continue to apply earlier standards with greater complexity. Students are expected to participate productively in teams, building on the ideas of others, contributing relevant information, developing a plan for consensus-building, and setting ground rules for decision-making.

(27)   Second language acquisition/learning strategies. The ESOL I student uses language learning strategies to develop an awareness of his/her own learning processes in language arts and all content areas. The following expectations apply to the second language learner at his/her level of proficiency in English. Students are expected to:

(A)   use prior knowledge and experiences to understand meanings in English;

(B)   monitor oral and written language production and employ self-corrective techniques or other resources;

(C)   use strategic learning techniques such as concept mapping, drawing, memorizing, comparing, contrasting, and reviewing to acquire basic and grade-level vocabulary;

(D)   speak using learning strategies such as requesting assistance, employing non-verbal cues, and using synonyms and circumlocution (conveying ideas by defining or describing when exact English words are not known);

(E)   internalize new basic and academic language by using and reusing it in meaningful ways in speaking and writing activities that build concept and language attainment;

(F)   use accessible language and learn new and essential language in the process;

(G)   demonstrate an increasing ability to distinguish between formal and informal English and an increasing knowledge of when to use each one commensurate with grade-level learning expectations;

(H)   develop and expand repertoire of learning strategies such as reasoning inductively or deductively, looking for patterns in language, and analyzing sayings and expressions commensurate with grade-level learning expectations; and

(I)   make connections across content areas and use and reuse language and concepts in different ways.

(28)   Second language acquisition/listening. The ESOL I student listens to a variety of speakers, including teachers, peers, and electronic media, to gain an increasing level of comprehension and appreciation for newly acquired language in language arts and all content areas. The following expectations apply to the second language learner at his/her level of proficiency in English. Students are expected to:

(A)   distinguish sounds and intonation patterns of English with increasing ease;

(B)   recognize elements of the English sound system in newly acquired vocabulary such as long and short vowels, silent letters, and consonant clusters;

(C)   learn new language structures, expressions, and basic and academic vocabulary heard during classroom instruction and interactions;

(D)   monitor understanding of spoken language during classroom instruction and interactions and seek clarification as needed;

(E)   use visual, contextual, and linguistic support to enhance and confirm understanding of increasingly complex and elaborated spoken language;

(F)   listen to and derive meaning from a variety of media such as audio tape, video, DVD, and CD-ROM to build and reinforce concept and language attainment;

(G)   understand the general meaning, main points, and important details of spoken language ranging from situations in which topics, language, and contexts are familiar to unfamiliar;

(H)   understand implicit ideas and information in increasingly complex spoken language commensurate with grade-level learning expectations;

(I)   demonstrate listening comprehension of increasingly complex spoken English by following directions, retelling or summarizing spoken messages, responding to questions and requests, collaborating with peers, and taking notes commensurate with content and grade-level needs;

(J)   understand basic structures, expressions, and vocabulary such as school environment, greetings, questions, and directions;

(K)   analyze and evaluate spoken discourse for appropriateness of purpose with a variety of audiences such as formal, consultative, casual, and intimate language registers; and

(L)　　　infer meaning by making associations of utterances with actions, visuals, and the context of the situation.

(29)　　Second language acquisition/speaking. The ESOL I student speaks in a variety of modes for a variety of purposes with an awareness of different language registers (formal/informal) using developmental vocabulary with increasing fluency and accuracy in language arts and all content areas. The following expectations apply to the second language learner at his/her level of proficiency in English. Students are expected to:

(A)　　　practice producing sounds of newly acquired vocabulary such as long and short vowels, silent letters, and consonant clusters to pronounce English words in a manner that is increasingly comprehensible;

(B)　　　expand and internalize initial English vocabulary by learning and using high-frequency English words necessary for identifying and describing people, places, objects, events, and basic concepts such as numbers, days of the week, food, occupations, and time by retelling simple stories and basic information represented or supported by pictures, and by learning and using routine language needed for classroom communication;

(C)　　　speak using a variety of grammatical structures, sentence lengths, sentence types, and connecting words with increasing accuracy and ease as more English is acquired;

(D)　　　speak using grade-level content area vocabulary in context to internalize new English words and build academic language proficiency;

(E)　　　share information in cooperative learning interactions;

(F)　　　ask and give information ranging from using a very limited bank of high-frequency, high-need, concrete vocabulary, including key words and expressions needed for basic communication in academic and social contexts such as directions and address as well as name, age, and nationality, to using abstract and content-based vocabulary during extended speaking assignments;

(G)　　　express opinions, ideas, and feelings ranging from communicating single words and short phrases to participating in extended discussions on a variety of social and grade-appropriate academic topics;

(H)　　　narrate, describe, and explain with increasing specificity and detail as more English is acquired;

(I)　　　adapt spoken language appropriately for formal and informal purposes;

(J)　　　respond orally to information presented in a wide variety of print, electronic, audio, and visual media to build and reinforce concept and language attainment;

(K)　　　share prior knowledge with peers and others to facilitate communication and to foster respect for others; and

(L)　　　describe the immediate surroundings such as classroom, school, and home.

(30)　　Second language acquisition/reading. The ESOL I student reads a variety of texts for a variety of purposes with an increasing level of comprehension in language arts and all content areas. The following expectations apply to the second language learner at his/her level of proficiency in English. Students are expected to:

(A)　　　learn relationships between sounds and letters of the English language and decode (sound out) words using a combination of skills such as recognizing sound-letter relationships and identifying cognates, affixes, roots, and base words;

(B)　　　recognize directionality of English reading such as left to right and top to bottom;

(C)　　　develop basic sight vocabulary, derive meaning of environmental print, and comprehend English vocabulary and language structures used routinely in written classroom materials;

(D)   use prereading supports such as graphic organizers, illustrations, and pre-taught topic-related vocabulary and other prereading activities to enhance comprehension of written text;

(E)   read linguistically accommodated content area material with a decreasing need for linguistic accommodations as more English is learned;

(F)   use visual and contextual support and support from peers and teachers to read grade-appropriate content area text, enhance and confirm understanding, and develop vocabulary, grasp of language structures, and background knowledge needed to comprehend increasingly challenging language;

(G)   demonstrate comprehension of increasingly complex English by participating in shared reading, retelling or summarizing material, responding to questions, and taking notes commensurate with content area and grade level needs;

(H)   read silently with increasing ease for longer periods;

(I)   demonstrate English comprehension and expand reading skills by employing basic reading skills such as demonstrating understanding of supporting ideas and details in text and graphic sources, summarizing text, and distinguishing main ideas from details commensurate with content area needs;

(J)   demonstrate English comprehension and expand reading skills by employing inferential skills such as predicting, making connections between ideas, drawing inferences and conclusions from text and graphic sources, and finding supporting text evidence commensurate with content area needs;

(K)   demonstrate English comprehension and expand reading skills by employing analytical skills such as evaluating written information and performing critical analyses commensurate with content area and grade-level needs;

(L)   read authentic literature and use kinesthetic visual support to develop vocabulary, structures, and build background knowledge needed to comprehend increasingly challenging language;

(M)   use verbal cueing strategies such as pauses and exaggerated intonation for key words and non-verbal cueing strategies such as facial expressions and gestures to enhance the reading experience; and

(N)   retell, role-play, and/or visually illustrate the order of events.

(31)   Second language acquisition/writing. The ESOL I student writes in a variety of forms with increasing accuracy to effectively address a specific purpose and audience in language arts and all content areas. The following expectations apply to the second language learner at his/her level of proficiency in English. Students are expected to:

(A)   learn relationships between sounds and letters of the English language to represent sounds when writing in English;

(B)   write using newly acquired basic vocabulary and content-based grade-level vocabulary;

(C)   spell familiar English words with increasing accuracy and employ English spelling patterns and rules with increasing accuracy as more English is acquired;

(D)   edit writing for standard grammar and usage, including subject-verb agreement, pronoun agreement, and appropriate verb tenses commensurate with grade-level expectations as more English is acquired;

(E)   employ increasingly complex grammatical structures in content area writing commensurate with grade-level expectations such as:

(i)   using correct verbs, tenses, auxiliaries, and pronouns/antecedents;

(5) For newcomers in secondary schooling, the challenge then is not only learning English, but learning in English. ELLs are challenged in working with linguistic, cognitive, and academic development in all of their coursework and in a new language. Some newcomers exhibit additional first language and/or academic needs due to their previous educational experiences that may include interrupted and/or limited schooling. Strategic use of the student's first language is important to ensure linguistic, affective, cognitive, and academic development in English, especially for students who are newcomers and at beginning levels of English language proficiency. Their academic success depends on their ability to use academic language.

(6) Second language acquisition is a complex process that even under optimal conditions takes a long time (Collier, 1997). It is important to understand that limited knowledge of English structure and vocabulary is neither related to the students' intellectual capabilities nor their ability to use higher-order thinking skills. The development of receptive (listening/reading) and expressive (speaking/writing) skills in second language learners may be at different stages. In some instances, second language learners undergo silent periods of varying durations when they first begin to learn a new language. Students often understand more than they can produce and may repeat words in sentences that they do not entirely understand. Second language learners may also draw upon the resources of their language and culture as they acquire a new language and culture.

(7) In order for ELLs to be successful, they must acquire both social and academic language proficiency in English. Social language proficiency in English consists of the English needed for daily social interactions. Academic language proficiency consists of the English needed to think critically, understand and learn new concepts, process complex academic material, and interact and communicate in English academic settings.

(8) Academic language is a major factor in academic success. Academic language and grammatical structures are used across all subject areas and is specific to the content area, such as language arts, mathematics, science, and social studies. Current research stresses the importance of effectively integrating second language acquisition with quality content area education in order to ensure that ELLs acquire social and academic language proficiency in English, learn the knowledge and skills, and reach their full academic potential. This must also be provided in a manner that is linguistically accommodated (contextualized, communicated, sequenced, and scaffolded) commensurate with the student's levels of English language proficiency to ensure that the student learns the knowledge and skills in the required curriculum.

(9) ELLs require focused, targeted, and systematic second language acquisition to provide them with the foundation of English language vocabulary, grammar, syntax, and English mechanics necessary to support content-based instruction and accelerated learning of English. Literacy development across the content areas is essential in building academic skills in a second language and can accelerate the learning of both English language skills and higher-order thinking skills.

(10) ELL students are at different stages of language acquisition. Proficiency levels are not grade-specific: Beginning, Intermediate, Advanced, and Advanced High. The ELL student may exhibit different proficiency levels within the four language components: listening, speaking, reading, and writing. A student may exhibit oral skills at the advanced level, reading skills at the intermediate level, and writing skills at the beginning level. Understanding the level of English language proficiency of the student is critical in order for the student to have access to the curriculum. The proficiency level of the student determines the accommodations in language that must be made (e.g., adapted text appropriate for student proficiency level; translations) as well as, determines additional scaffolds (e.g., pictures, realia, glossaries, bilingual dictionaries, thesaurus) in order to learn the academic content. Any combination of the language components is possible and is affected by opportunities for interaction in and outside of school. For further guidance in second language acquisition, refer to the English language proficiency standards (ELPS) described in §74.4 of this title.

(A) Beginning: Students associate utterances with meaning as they make inferences based on actions, visuals, text, tone of voice, and inflections. Receptive language with some comprehension is acquired earlier than oral production. Beginning students produce spoken English with increasing accuracy and fluency to convey appropriate meaning.

They read English using graphophonic cues, syntax, visuals, the context of the text, and their prior knowledge of language and structure of text.

    (B)   Intermediate: Students use the listening process to improve comprehension and oral skills in English. Through listening and speaking in meaningful interactions, they clarify, distinguish, and evaluate ideas and responses in a variety of situations. Intermediate students participate successfully in academic, social, and work contexts in English using the process of speaking to create, clarify, critique, and evaluate ideas and responses. Intermediate students read English using and applying developmental vocabulary to increase comprehension and produce written text to address a variety of audiences and purposes.

    (C)   Advanced: Students, through developmental listening skills, actively expand their vocabulary to evaluate and analyze spoken English for a variety of situations and purposes. These students participate in a variety of situations using spoken English to create, clarify, critique, and evaluate ideas and responses. Advanced students continually develop reading skills for increasing reading proficiency in content area texts for a variety of purposes and generate written text for different audiences in a variety of modes to convey appropriate meaning according to their level of proficiency.

    (D)   Advanced High: Students' reading, speaking, and writing abilities are comparable to those of their native English speaking peers. They understand grade appropriate English as it is used in academic and social settings. These students use language skills on their grade level in the academic subject areas with minimal interruptions and they use abstract and content based vocabulary effectively. Advanced High students continually use the English language to build additional foundational reading skills such as fluency and prosody as well as higher-order comprehension skills. These students have a strong command of English language structures necessary to address writing at appropriate grade levels.

    (11)   Students enrolled in ESOL II continue to increase and refine their communication skills. High school students are expected to plan, draft, and complete written compositions on a regular basis. Students edit their papers for clarity, engaging language, and the correct use of the conventions and mechanics of written English and, with increasing accuracy, produce final, error-free drafts. In English II, students practice all forms of writing. An emphasis is placed on organizing logical arguments with clearly expressed related definitions, thesis, and evidence. Students write to persuade and to report and describe. English II students read extensively in multiple genres from world literature such as reading selected stories, dramas, novels, and poetry originally written in English or translated to English from oriental, classical Greek, European, African, South American, and North American cultures. Students learn literary forms and terms associated with selections being read. Students interpret the possible influences of the historical context on a literary work.

    (12)   The knowledge and skills and/or student expectations that are applicable specifically to ELLs are indicated in §74.4 of this title as well as in subsection (b) of this section.

    (13)   To meet Public Education Goal 1 of the Texas Education Code, §4.002, which states, "The students in the public education system will demonstrate exemplary performance in the reading and writing of the English language," students will accomplish the essential knowledge and skills as well as the student expectations in English II as described in subsection (b) of this section.

    (14)   To meet Texas Education Code, §28.002(h), which states, "... each school district shall foster the continuation of the tradition of teaching United States and Texas history and the free enterprise system in regular subject matter and in reading courses and in the adoption of textbooks," students will be provided oral and written narratives as well as other informational texts that can help them to become thoughtful, active citizens who appreciate the basic democratic values of our state and nation.

(b)   Knowledge and skills.

(1)　　Reading/Vocabulary Development. Students understand new vocabulary and use it when reading and writing. Students are expected to:

(A)　　determine the meaning of grade-level technical academic English words in multiple content areas (e.g., science, mathematics, social studies, the arts) derived from Latin, Greek, or other linguistic roots and affixes;

(B)　　analyze textual context (within a sentence and in larger sections of text) to distinguish between the denotative and connotative meanings of words;

(C)　　infer word meaning through the identification and analysis of analogies and other word relationships;

(D)　　show the relationship between the origins and meaning of foreign words or phrases used frequently in written English and historical events or developments (e.g., *glasnost, avant-garde, coup d'état*); and

(E)　　use a dictionary, a glossary, or a thesaurus (printed or electronic) to determine or confirm the meanings of words and phrases, including their connotations and denotations, and their etymology.

(2)　　Reading/Comprehension of Literary Text/Theme and Genre. Students analyze, make inferences and draw conclusions about theme and genre in different cultural, historical, and contemporary contexts and provide evidence from the text to support their understanding. Students are expected to:

(A)　　compare and contrast differences in similar themes expressed in different time periods;

(B)　　analyze archetypes (e.g., journey of a hero, tragic flaw) in mythic, traditional and classical literature; and

(C)　　relate the figurative language of a literary work to its historical and cultural setting.

(3)　　Reading/Comprehension of Literary Text/Poetry. Students understand, make inferences and draw conclusions about the structure and elements of poetry and provide evidence from text to support their understanding. Students are expected to analyze the structure or prosody (e.g., meter, rhyme scheme) and graphic elements (e.g., line length, punctuation, word position) in poetry.

(4)　　Reading/Comprehension of Literary Text/Drama. Students understand, make inferences and draw conclusions about the structure and elements of drama and provide evidence from text to support their understanding. Students are expected to analyze how archetypes and motifs in drama affect the plot of plays.

(5)　　Reading/Comprehension of Literary Text/Fiction. Students understand, make inferences and draw conclusions about the structure and elements of fiction and provide evidence from text to support their understanding. Students are expected to:

(A)　　analyze isolated scenes and their contribution to the success of the plot as a whole in a variety of works of fiction;

(B)　　analyze differences in the characters' moral dilemmas in works of fiction across different countries or cultures;

(C)　　evaluate the connection between forms of narration (e.g., unreliable, omniscient) and tone in works of fiction; and

(D)　　demonstrate familiarity with works by authors from non-English-speaking literary traditions with emphasis on 20th century world literature.

(6)　　Reading/Comprehension of Literary Text/Literary Nonfiction. Students understand, make inferences and draw conclusions about the varied structural patterns and features of literary nonfiction and provide evidence from text to support their understanding. Students are expected to evaluate the role of syntax and diction and the effect of voice, tone, and imagery on a speech, literary essay, or other forms of literary nonfiction.

(7)   Reading/Comprehension of Literary Text/Sensory Language. Students understand, make inferences and draw conclusions about how an author's sensory language creates imagery in literary text and provide evidence from text to support their understanding. Students are expected to explain the function of symbolism, allegory, and allusions in literary works.

(8)   Reading/Comprehension of Informational Text/Culture and History. Students analyze, make inferences and draw conclusions about the author's purpose in cultural, historical, and contemporary contexts and provide evidence from the text to support their understanding. Students are expected to analyze the controlling idea and specific purpose of a passage and the textual elements that support and elaborate it, including both the most important details and the less important details.

(9)   Reading/Comprehension of Informational Text/Expository Text. Students analyze, make inferences and draw conclusions about expository text and provide evidence from text to support their understanding. Students are expected to:

    (A)   summarize text and distinguish between a summary and a critique and identify non-essential information in a summary and unsubstantiated opinions in a critique;

    (B)   distinguish among different kinds of evidence (e.g., logical, empirical, anecdotal) used to support conclusions and arguments in texts;

    (C)   make and defend subtle inferences and complex conclusions about the ideas in text and their organizational patterns; and

    (D)   synthesize and make logical connections between ideas and details in several texts selected to reflect a range of viewpoints on the same topic and support those findings with textual evidence.

(10)   Reading/Comprehension of Informational Text/Persuasive Text. Students analyze, make inferences and draw conclusions about persuasive text and provide evidence from text to support their analysis. Students are expected to:

    (A)   explain shifts in perspective in arguments about the same topic and evaluate the accuracy of the evidence used to support the different viewpoints within those arguments; and

    (B)   analyze contemporary political debates for such rhetorical and logical fallacies as appeals to commonly held opinions, false dilemmas, appeals to pity, and personal attacks.

(11)   Reading/Comprehension of Informational Text/Procedural Texts. Students understand how to glean and use information in procedural texts and documents. Students are expected to:

    (A)   evaluate text for the clarity of its graphics and its visual appeal; and

    (B)   synthesize information from multiple graphical sources to draw conclusions about the ideas presented (e.g., maps, charts, schematics).

(12)   Reading/Media Literacy. Students use comprehension skills to analyze how words, images, graphics, and sounds work together in various forms to impact meaning. Students will continue to apply earlier standards with greater depth in increasingly more complex texts. Students are expected to:

    (A)   evaluate how messages presented in media reflect social and cultural views in ways different from traditional texts;

    (B)   analyze how messages in media are conveyed through visual and sound techniques (e.g., editing, reaction shots, sequencing, background music);

    (C)   examine how individual perception or bias in coverage of the same event influences the audience; and

    (D)   evaluate changes in formality and tone within the same medium for specific audiences and purposes.

(13)   Writing/Writing Process. Students use elements of the writing process (planning, drafting, revising, editing, and publishing) to compose text. Students are expected to:

    (A)   plan a first draft by selecting the correct genre for conveying the intended meaning to multiple audiences, determining appropriate topics through a range of strategies (e.g., discussion, background reading, personal interests, interviews), and developing a thesis or controlling idea;

    (B)   structure ideas in a sustained and persuasive way (e.g., using outlines, note taking, graphic organizers, lists) and develop drafts in timed and open-ended situations that include transitions and rhetorical devices used to convey meaning;

    (C)   revise drafts to improve style, word choice, figurative language, sentence variety, and subtlety of meaning after rethinking how well questions of purpose, audience, and genre have been addressed;

    (D)   edit drafts for grammar, mechanics, and spelling; and

    (E)   revise final draft in response to feedback from peers and teacher and publish written work for appropriate audiences.

(14)   Writing/Literary Texts. Students write literary texts to express their ideas and feelings about real or imagined people, events, and ideas. Students are responsible for at least two forms of literary writing. Students are expected to:

    (A)   write an engaging story with a well-developed conflict and resolution, interesting and believable characters, a range of literary strategies (e.g., dialogue, suspense) and devices to enhance the plot, and sensory details that define the mood or tone;

    (B)   write a poem using a variety of poetic techniques (e.g., structural elements, figurative language) and a variety of poetic forms (e.g., sonnets, ballads); and

    (C)   write a script with an explicit or implicit theme and details that contribute to a definite mood or tone.

(15)   Writing/Expository and Procedural Texts. Students write expository and procedural or work-related texts to communicate ideas and information to specific audiences for specific purposes. Students are expected to:

    (A)   write an analytical essay of sufficient length that includes:

        (i)   effective introductory and concluding paragraphs and a variety of sentence structures;

        (ii)   rhetorical devices and transitions between paragraphs;

        (iii)   a thesis or controlling idea;

        (iv)   an organizing structure appropriate to purpose, audience, and context;

        (v)   relevant evidence and well-chosen details; and

        (vi)   distinctions about the relative value of specific data, facts, and ideas that support the thesis statement;

    (B)   write procedural or work-related documents (e.g., instructions, e-mails, correspondence, memos, project plans) that include:

        (i)   organized and accurately conveyed information;

        (ii)   reader-friendly formatting techniques; and

        (iii)   anticipation of readers' questions;

    (C)   write an interpretative response to an expository or a literary text (e.g., essay or review) that:

(19)   Oral and Written Conventions/Spelling. Students spell correctly. Students are expected to spell correctly, including using various resources to determine and check correct spellings.

(20)   Research/Research Plan. Students ask open-ended research questions and develop a plan for answering them. Students are expected to:

    (A)   brainstorm, consult with others, decide upon a topic, and formulate a major research question to address the major research topic; and

    (B)   formulate a plan for engaging in research on a complex, multi-faceted topic.

(21)   Research/Gathering Sources. Students determine, locate, and explore the full range of relevant sources addressing a research question and systematically record the information they gather. Students are expected to:

    (A)   follow the research plan to compile data from authoritative sources in a manner that identifies the major issues and debates within the field of inquiry;

    (B)   organize information gathered from multiple sources to create a variety of graphics and forms (e.g., notes, learning logs); and

    (C)   paraphrase, summarize, quote, and accurately cite all researched information according to a standard format (e.g., author, title, page number).

(22)   Research/Synthesizing Information. Students clarify research questions and evaluate and synthesize collected information. Students are expected to:

    (A)   modify the major research question as necessary to refocus the research plan;

    (B)   evaluate the relevance of information to the topic and determine the reliability, validity, and accuracy of sources (including Internet sources) by examining their authority and objectivity; and

    (C)   critique the research process at each step to implement changes as the need occurs and is identified.

(23)   Research/Organizing and Presenting Ideas. Students organize and present their ideas and information according to the purpose of the research and their audience. Students are expected to synthesize the research into a written or an oral presentation that:

    (A)   marshals evidence in support of a clear thesis statement and related claims;

    (B)   provides an analysis for the audience that reflects a logical progression of ideas and a clearly stated point of view;

    (C)   uses graphics and illustrations to help explain concepts where appropriate;

    (D)   uses a variety of evaluative tools (e.g., self-made rubrics, peer reviews, teacher and expert evaluations) to examine the quality of the research; and

    (E)   uses a style manual (e.g., *Modern Language Association*, *Chicago Manual of Style*) to document sources and format written materials.

(24)   Listening and Speaking/Listening. Students will use comprehension skills to listen attentively to others in formal and informal settings. Students will continue to apply earlier standards with greater complexity. Students are expected to:

    (A)   listen responsively to a speaker by taking notes that summarize, synthesize, or highlight the speaker's ideas for critical reflection and by asking questions related to the content for clarification and elaboration;

    (B)   follow and give complex oral instructions to perform specific tasks, answer questions, solve problems, and complete processes; and

    (C)   evaluate how the style and structure of a speech support or undermine its purpose or meaning.

(25) Listening and Speaking/Speaking. Students speak clearly and to the point, using the conventions of language. Students will continue to apply earlier standards with greater complexity. Students are expected to advance a coherent argument that incorporates a clear thesis and a logical progression of valid evidence from reliable sources and that employs eye contact, speaking rate (e.g., pauses for effect), volume, enunciation, purposeful gestures, and conventions of language to communicate ideas effectively.

(26) Listening and Speaking/Teamwork. Students work productively with others in teams. Students will continue to apply earlier standards with greater complexity. Students are expected to participate productively in teams, building on the ideas of others, contributing relevant information, developing a plan for consensus-building, and setting ground rules for decision-making.

(27) Second language acquisition/learning strategies. The ESOL II student uses language learning strategies to develop an awareness of his/her own learning processes in language arts and all content areas. The following expectations apply to the second language learner at his/her level of proficiency in English. Students are expected to:

(A) use prior knowledge and experiences to understand meanings in English;

(B) monitor oral and written language production and employ self-corrective techniques or other resources;

(C) use strategic learning techniques such as concept mapping, drawing, memorizing, comparing, contrasting, and reviewing to acquire basic and grade-level vocabulary;

(D) speak using learning strategies such as requesting assistance, employing non-verbal cues, and using synonyms and circumlocution (conveying ideas by defining or describing when exact English words are not known);

(E) internalize new basic and academic language by using and reusing it in meaningful ways in speaking and writing activities that build concept and language attainment;

(F) use accessible language and learn new and essential language in the process;

(G) demonstrate an increasing ability to distinguish between formal and informal English and an increasing knowledge of when to use each one commensurate with grade-level learning expectations;

(H) develop and expand repertoire of learning strategies such as reasoning inductively or deductively, looking for patterns in language, and analyzing sayings and expressions commensurate with grade-level learning expectations; and

(I) make connections across content areas and use and reuse language and concepts in different ways.

(28) Second language acquisition/listening. The ESOL II student listens to a variety of speakers, including teachers, peers, and electronic media, to gain an increasing level of comprehension and appreciation for newly acquired language in language arts and all content areas. The following expectations apply to the second language learner at his/her level of proficiency in English. Students are expected to:

(A) distinguish sounds and intonation patterns of English with increasing ease;

(B) recognize elements of the English sound system in newly acquired vocabulary such as long and short vowels, silent letters, and consonant clusters;

(C) learn new language structures, expressions, and basic and academic vocabulary heard during classroom instruction and interactions;

(D) monitor understanding of spoken language during classroom instruction and interactions and seek clarification as needed;

(E)   ~~use visual, contextual, and linguistic support to enhance and confirm understanding of increasingly complex and elaborated spoken language;~~

(F)   ~~listen to and derive meaning from a variety of media such as audio tape, video, DVD, and CD ROM to build and reinforce concept and language attainment;~~

(G)   ~~understand the general meaning, main points, and important details of spoken language ranging from situations in which topics, language, and contexts are familiar to unfamiliar;~~

(H)   ~~understand implicit ideas and information in increasingly complex spoken language commensurate with grade-level learning expectations;~~

(I)   ~~demonstrate listening comprehension of increasingly complex spoken English by following directions, retelling or summarizing spoken messages, responding to questions and requests, collaborating with peers, and taking notes commensurate with content and grade-level needs;~~

(J)   ~~understand basic structures, expressions, and vocabulary such as school environment, greetings, questions, and directions;~~

(K)   ~~analyze and evaluate spoken discourse for appropriateness of purpose with a variety of audiences such as formal, consultative, casual, and intimate language registers; and~~

(L)   ~~infer meaning by making associations of utterances with actions, visuals, and the context of the situation.~~

(29)   ~~Second language acquisition/speaking. The ESOL II student speaks in a variety of modes for a variety of purposes with an awareness of different language registers (formal/informal) using developmental vocabulary with increasing fluency and accuracy in language arts and all content areas. The following expectations apply to the second language learner at his/her level of proficiency in English. Students are expected to:~~

(A)   ~~practice producing sounds of newly acquired vocabulary such as long and short vowels, silent letters, and consonant clusters to pronounce English words in a manner that is increasingly comprehensible;~~

(B)   ~~expand and internalize initial English vocabulary by learning and using high-frequency English words necessary for identifying and describing people, places, objects, events, and basic concepts such as numbers, days of the week, food, occupations, and time by retelling simple stories and basic information represented or supported by pictures, and by learning and using routine language needed for classroom communication;~~

(C)   ~~speak using a variety of grammatical structures, sentence lengths, sentence types, and connecting words with increasing accuracy and ease as more English is acquired;~~

(D)   ~~speak using grade-level content area vocabulary in context to internalize new English words and build academic language proficiency;~~

(E)   ~~share information in cooperative learning interactions;~~

(F)   ~~ask and give information ranging from using a very limited bank of high-frequency, high-need, concrete vocabulary, including key words and expressions needed for basic communication in academic and social contexts such as directions and address as well as name, age, and nationality, to using abstract and content-based vocabulary during extended speaking assignments;~~

(G)   ~~express opinions, ideas, and feelings ranging from communicating single words and short phrases to participating in extended discussions on a variety of social and grade-appropriate academic topics;~~

(H)   ~~narrate, describe, and explain with increasing specificity and detail as more English is acquired;~~

(I)   ~~adapt spoken language appropriately for formal and informal purposes;~~

(J)   respond orally to information presented in a wide variety of print, electronic, audio, and visual media to build and reinforce concept and language attainment;

(K)   share prior knowledge with peers and others to facilitate communication and to foster respect for others; and

(L)   describe the immediate surroundings such as classroom, school, and home.

(30)   Second language acquisition/reading. The ESOL II student reads a variety of texts for a variety of purposes with an increasing level of comprehension in language arts and all content areas. The following expectations apply to the second language learner at his/her level of proficiency in English. Students are expected to:

(A)   learn relationships between sounds and letters of the English language and decode (sound out) words using a combination of skills such as recognizing sound-letter relationships and identifying cognates, affixes, roots, and base words;

(B)   recognize directionality of English reading such as left to right and top to bottom;

(C)   develop basic sight vocabulary, derive meaning of environmental print, and comprehend English vocabulary and language structures used routinely in written classroom materials;

(D)   use prereading supports such as graphic organizers, illustrations, and pre-taught topic-related vocabulary and other prereading activities to enhance comprehension of written text;

(E)   read linguistically accommodated content area material with a decreasing need for linguistic accommodations as more English is learned;

(F)   use visual and contextual support and support from peers and teachers to read grade-appropriate content area text, enhance and confirm understanding, and develop vocabulary, grasp of language structures, and background knowledge needed to comprehend increasingly challenging language;

(G)   demonstrate comprehension of increasingly complex English by participating in shared reading, retelling or summarizing material, responding to questions, and taking notes commensurate with content area and grade level needs;

(H)   read silently with increasing ease for longer periods;

(I)   demonstrate English comprehension and expand reading skills by employing basic reading skills such as demonstrating understanding of supporting ideas and details in text and graphic sources, summarizing text, and distinguishing main ideas from details commensurate with content area needs;

(J)   demonstrate English comprehension and expand reading skills by employing inferential skills such as predicting, making connections between ideas, drawing inferences and conclusions from text and graphic sources, and finding supporting text evidence commensurate with content area needs;

(K)   demonstrate English comprehension and expand reading skills by employing analytical skills such as evaluating written information and performing critical analyses commensurate with content area and grade level needs;

(L)   read authentic literature and use kinesthetic visual support to develop vocabulary, structures, and build background knowledge needed to comprehend increasingly challenging language;

(M)   use verbal cueing strategies such as pauses and exaggerated intonation for key words and non-verbal cueing strategies such as facial expressions and gestures to enhance the reading experience; and

(N)   retell, role-play, and/or visually illustrate the order of events.

(31) Second language acquisition/writing. The ESOL II student writes in a variety of forms with increasing accuracy to effectively address a specific purpose and audience in language arts and all content areas. The following expectations apply to the second language learner at his/her level of proficiency in English. Students are expected to:

(A) learn relationships between sounds and letters of the English language to represent sounds when writing in English;

(B) write using newly acquired basic vocabulary and content-based grade-level vocabulary;

(C) spell familiar English words with increasing accuracy and employ English spelling patterns and rules with increasing accuracy as more English is acquired;

(D) edit writing for standard grammar and usage, including subject-verb agreement, pronoun agreement, and appropriate verb tenses commensurate with grade-level expectations as more English is acquired;

(E) employ increasingly complex grammatical structures in content area writing commensurate with grade-level expectations such as:

(i) using correct verbs, tenses, auxiliaries, and pronouns/antecedents;

(ii) using nominative, objective, and possessive case (apostrophe *s*) correctly;

(iii) demonstrating knowledge of parts of speech; and

(iv) using negatives and contractions correctly;

(F) write using a variety of grade-appropriate sentence lengths, patterns, and connecting words to combine phrases, clauses, and sentences in increasingly accurate ways as more English is acquired;

(G) narrate, describe, and explain with increasing specificity and detail to fulfill content area writing needs as more English is acquired;

(H) use basic capitalization and punctuation correctly such as capitalizing names and first letters in sentences and using periods, question marks, and exclamation points;

(I) use graphic organizers as pre-writing activity to demonstrate prior knowledge, to add new information, and to prepare to write;

(J) write with more proficient use of orthographic patterns such as digraphs and consonant blends with the initial s- and rules such as "qu" together, consonant doubling, dropping final "e," and changing "y" to "i"; and

(K) develop drafts by categorizing ideas, organizing them into sentences and paragraphs, and blending paragraphs within larger units of text.]

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ATTACHMENT
Text of Proposed Repeal of 19 TAC

Chapter 105. Foundation School Program

Subchapter B. Use of State Funds

[**§105.11. Maximum Allowable Indirect Cost.**]

[(a)   No more than 48% of each school district's Foundation School Program (FSP) special allotments under the Texas Education Code, Chapter 42, Subchapter C, may be expended for indirect costs related to the following programs: compensatory education, bilingual education and special language programs, and special education. No more than 45% of each school district's FSP special allotments under the Texas Education Code, Chapter 42, Subchapter C, may be expended for indirect costs related to gifted and talented education programs. No more than 42% of each school district's FSP special allotments under the Texas Education Code, Chapter 42, Subchapter C, may be expended for indirect costs related to career and technical education programs. Indirect costs may be attributed to the following expenditure function codes: 34 - Student Transportation; 41 - General Administration; 81 - Facilities Acquisition and Construction; and the Function 90 series of the general fund, as defined in the Texas Education Agency publication, Financial Accountability System Resource Guide.

(b)   For the 2012-2013 school year and each year thereafter, a school district may choose to use a greater indirect cost allotment under the Texas Education Code, §§42.151, 42.153, 42.154, and 42.156, to the extent the school district receives less funding per weighted student in state and local maintenance and operations revenue than in the 2011-2012 school year. The commissioner of education shall develop a methodology for a school district to make a determination under this section and may require any information necessary to implement this subsection. The commissioner's methodology must limit the percentage increase in allowable indirect cost to no more than the percentage decrease in state and local maintenance and operations revenue from the 2011-2012 school year.]

[**§105.12. Basic Allotment.**]

[A school district may use state aid received pursuant to the Texas Education Code (TEC), Chapter 42, Subchapter B, and indirect costs as defined in §105.11 of this title (relating to Maximum Allowable Indirect Cost) for any lawful purpose, including operations and using, purchasing, or acquiring real property or land; improving real property; constructing or equipping buildings; renovating real property; repairing real property; or maintaining real property. A school district may fund obligations from state aid received pursuant to the TEC, Chapter 42, Subchapter B, including reduction of bond tax by deposit into the district debt service fund, lease purchase agreements, and public property finance contracts authorized under the Local Government Code, §271.004 and §271.005; time warrants issued pursuant to the TEC, §45.103; maintenance notes issued pursuant to the TEC, §45.108; and contracts issued pursuant to the TEC, §44.901.]

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ATTACHMENT
Text of Proposed Amendment to 19 TAC

Chapter 109. Budgeting, Accounting, and Auditing

Subchapter B. Texas Education Agency Audit Functions

§109.23. School District Independent Audits and Agreed-Upon Procedures.

(a)   A school district, governmental charter school, open-enrollment charter school, nonprofit service provider, county education district, or regional education service center must file with the Texas Education Agency (TEA) an annual financial and compliance report and, if applicable, a state compensatory agreed-upon procedures report. These reports must be audited by an independent auditor, and the audit must be reviewed by the TEA, including review of auditors' working papers, in accordance with the Financial Accountability System Resource Guide, as adopted by reference in §109.41 of this title (relating to Financial Accountability System Resource Guide).

(b)   The annual financial audit report and state compensatory agreed-upon procedures report are due 150 days after the end of the fiscal year.

(c)   Auditors from the TEA must review independent audit reports. The commissioner's designee must resolve audit findings.

(d)   The district or other educational entity must hire at its own expense an independent auditor to conduct an independent audit of its financial statements and provide an opinion on its annual financial and compliance report.

   (1)   The independent auditor must:

      (A)   be associated with a certified public accountancy (CPA) firm that has a current valid license issued by the Texas State Board of Public Accountancy <u>or a state licensing agency from another state</u> ;

      (B)   be a certified public accountant with a current valid license issued by the Texas State Board of Public Accountancy, as required under the Texas Education Code, §44.008; and

      (C)   adhere to the generally accepted auditing standards (GAAS), adopted by the American Institute of CPAs (AICPA), as amended, and the generally accepted government auditing standards (GAGAS), adopted by the US Government Accountability Office, as amended.

   (2)   The CPA firm must:

      (A)   be a member of the AICPA Governmental Audit Quality Center (GAQC);

      (B)   adhere to GAQC's membership requirements; and

      (C)   collectively have the knowledge, skills, and experience to be competent for the audit being conducted, including thorough knowledge of the government auditing requirements and:

         (i)   Texas public school district environment; [or]

         (ii)   public sector; or

         (iii)   nonprofit sector.

(e)   If at any time the TEA division responsible for financial compliance reviews an audit firm's working papers and finds that the firm or the quality of the work does not meet the standards required as stated in subsection (d) of this section, the division may require the district or other educational entity to change its audit firm.

(f)   To the extent that this section conflicts with any other rule regarding audits of school districts and other educational entities by independent auditors and the TEA, this section controls.

Minutes

State Board of Education Committees

April 16, 2020

**Report of the State Board of Education
Committee of the Full Board
April 16, 2020**

The State Board of Education Committee of the Full Board conducted a virtual meeting at 9:13 a.m. on Thursday, April 16, 2020. Attendance was noted as follows:

Present: Keven Ellis, chair; Lawrence A. Allen, Jr.; Donna Bahorich; Barbara Cargill; Ruben Cortez, Jr.; Aicha Davis; Pat Hardy; Pam Little; Tom Maynard; Sue Melton-Malone; Ken Mercer; Georgina C. Pérez; Marisa B. Perez-Diaz; Matt Robinson; Marty Rowley

Public Testimony

The Committee of the Full Board heard public testimony on agenda items #3 and #6. Information regarding the individuals who presented public testimony is included in the discussion of that item.

ACTION ITEMS

1. **Proposed Amendments to 19 TAC Chapter 74, <u>Curriculum Requirements,</u> Subchapter B, <u>Graduation Requirements,</u> §74.11, <u>High School Graduation Requirements</u>, §74.12, <u>Foundation High School Program</u>, and §74.13, <u>Endorsements</u>**
    (Second Reading and Final Adoption)
    (Board agenda page I-1)
    [Official agenda item #2]

    Shelly Ramos, senior director, curriculum standards and student support, summarized the proposed changes to the graduation rules and explained that the changes would align the rules with the requirements of House Bill (HB) 678, 86th Texas Legislature, 2019, and with revisions to career and technical education (CTE) courses and programs of study. Ms. Ramos stated that no public comments had been received for this item.

    MOTION AND VOTE: *It was moved by Mr. Rowley, seconded by Dr. Robinson, and carried unanimously to recommend that the State Board of Education approve for second reading and final adoption the proposed amendments to 19 TAC Chapter 74, <u>Curriculum Requirements</u>, Subchapter B, <u>Graduation Requirements</u>, §74.11, <u>High School Graduation Requirements</u>; §74.12, <u>Foundation High School Program</u>; and §74.13, <u>Endorsements</u>; and*

    Make an affirmative finding that immediate adoption of the proposed amendments to 19 TAC Chapter 74, <u>Curriculum Requirements</u>, Subchapter B, <u>Graduation Requirements</u>, §74.11, <u>High School Graduation Requirements</u>; §74.12, <u>Foundation High School Program</u>; and §74.13, <u>Endorsements</u>, is necessary and shall have an effective date of August 1, 2020.

2. **Proposed Revisions to 19 TAC Chapter 126, <u>Texas Essential Knowledge and Skills for Technology Applications, and Chapter 130, <u>Texas Essential Knowledge and Skills for Career and Technical Education</u></u>**
(Second Reading and Final Adoption)
(Board agenda page I-12)
[Official agenda item #3]

Ms. Ramos explained that the proposed revisions would consolidate technology applications and career and technical (CTE) courses and eliminate duplicative courses. Additionally, Ms. Ramos stated that the proposed revisions would add a new subchapter for energy courses to align with revisions to the CTE programs of study.

<u>MOTION AND VOTE</u>: *It was moved by Mr. Maynard, seconded by Mrs. Little, and carried unanimously to recommend that the State Board of Education approve for second reading and final adoption proposed revisions to 19 TAC Chapter 126, <u>Texas Essential Knowledge and Skills for Technology Applications</u>, Subchapter C, <u>High School</u>, and Subchapter D, <u>Other Technology Applications Courses</u>, and Chapter 130, <u>Texas Essential Knowledge and Skills for Career and Technical Education</u>, Subchapter A, <u>Agriculture, Food, and Natural Resources</u>; Subchapter C, <u>Arts, Audio/Video Technology, and Communications</u>; Subchapter K, <u>Information Technology</u>; Subchapter O, <u>Science, Technology, Engineering, and Mathematics</u>; and Subchapter Q, <u>Energy</u>; and*

Make an affirmative finding that immediate adoption of the proposed revisions to 19 TAC Chapter 126, <u>Texas Essential Knowledge and Skills for Technology Applications</u>, Subchapter C, <u>High School</u>, and Subchapter D, <u>Other Technology Applications Courses</u>, and Chapter 130, <u>Texas Essential Knowledge and Skills for Career and Technical Education</u>, Subchapter A, <u>Agriculture, Food, and Natural Resources</u>; Subchapter C, <u>Arts, Audio/Video Technology, and Communications</u>; Subchapter K, <u>Information Technology</u>; Subchapter O, <u>Science, Technology, Engineering, and Mathematics</u>; and Subchapter Q, <u>Energy</u>, is necessary and shall have an effective date of August 1, 2020.

3. **Proposed Revisions to 19 TAC Chapter 113, <u>Texas Essential Knowledge and Skills for Social Studies</u>, Subchapter C, <u>High School</u>, and Subchapter D, <u>Other Social Studies Courses</u>**
(Second Reading and Final Adoption)
(Board agenda page I-103)
[Official agenda item #4]

Public testimony was provided by the following individuals:

NAME: Deyadira Arellano
AFFILIATION: Texas Environmental Justice Advocacy Services

NAME: Juan Parras
AFFILIATION: Texas Environmental Justice Advocacy Services

NAME: Orlando Lara
AFFILIATION: Ethnic Studies Network of Texas

NAME: Robert Ford
AFFILIATION: Self

MOTION: *It was moved by Mrs. Melton-Malone and seconded by Mr. Mercer to recommend that the State Board of Education approve for second reading and final adoption proposed revisions to 19 TAC Chapter 113, Texas Essential Knowledge and Skills for Social Studies, Subchapter C, High School, and Subchapter D, Other Social Studies Courses; and*

Make an affirmative finding that immediate adoption of proposed revisions to 19 TAC Chapter 113, Texas Essential Knowledge and Skills for Social Studies, Subchapter C, High School, and Subchapter D, Other Social Studies Courses, is necessary and shall have an effective date of August 1, 2020.

Ms. Ramos explained that this item would add new Texas Essential Knowledge and Skills (TEKS) for the Ethnic Studies: African American Studies course and would align course titles and renumber sections to make room for the inclusion of other ethnic studies courses in the future.

MOTION AND VOTE: *It was moved by Mr. Rowley, seconded by Mrs. Melton-Malone, and carried unanimously to suspend board operating procedure §5.7 to allow board members to provide proposed amendments to the TEKS to staff by 3:00 p.m., April 16, 2020.*

MOTION AND VOTE: *It was moved by Ms. Davis, seconded by Mrs. Bahorich, and carried without objection to recommend that the State Board of Education amend §113.51(c)(2)(A) to read:*

"analyze the ~~economic, political, and social reasons for the~~ African diaspora, including the role of Africans and Europeans;"

MOTION AND VOTE: *It was moved by Ms. Davis, seconded by Ms. Perez-Diaz, and carried without objection to recommend that the State Board of Education amend §113.51(c)(3)(A) to read:*

"analyze ~~and evaluate~~ the economic, social religious, and legal rationalization used by <u>some</u> Americans to continue and expand slavery after declaring independence from Great Britain;"

MOTION AND VOTE: *It was moved by Ms. Davis, seconded by Ms. Pérez, and carried without objection to recommend that the State Board of Education amend §113.51(c)(3)(F) to read:*

"analyze national and international abolition efforts, including <u>the gradual emancipation of enslaved people in the North,</u> the U.S. ban on the slave trade (1808), and the abolition of slavery in Mexico (1829) and Great Britain (1833) and the significance of the Guerrero Decree in the Texas Revolution;"

MOTION AND VOTE: *It was moved by Ms. Davis, seconded by Ms. Perez-Diaz, and carried to recommend that the State Board of Education amend §113.51(c)(3)(E) to read:*

"analyze the influence of significant individuals and groups prior to and during the abolitionist movement to determine their impact on ending slavery <u>such as</u> ~~, including~~ the work of David Walker, Elijah P. Lovejoy, John Brown, Sojourner Truth, Frederick Douglass, the American Anti-Slavery Society, and the Underground Railroad; and"

MOTION: *It was moved by Ms. Davis and seconded by Ms. Hardy to recommend that the State Board of Education add new §113.51(c)(4)(E) to read:*

"explain the impact of the convict leasing system on African Americans such as those known as the Sugar Land 95;"

MOTION AND VOTE: *It was moved by Mrs. Bahorich, seconded by Ms. Hardy, and carried unanimously to recommend that the State Board of Education strike "those known as."*

VOTE: *A vote was taken on the original motion to recommend that the State Board of Education add new §113.50(c)(4)(E) as amended. The motion carried unanimously.*

MOTION AND VOTE: *It was moved by Ms. Davis, seconded by Mrs. Little, and carried without objection to recommend that the State Board of Education amend §113.51(c)(4)(E) by replacing the word "analyze" with the word "explain."*

MOTION AND VOTE: *It was moved by Ms. Davis, seconded by Ms. Hardy, and carried without objection to recommend that the State Board of Education amend §113.51(c)(4)(F) to read:*

"discuss ~~describe~~ the impact of the U.S. Supreme Court decisions ~~decision~~ Plessy v. Ferguson (1896), Sweatt v. Painter (1950), and Brown v. Board (1954);"

The board requested that staff move the references to Sweatt v. Painter and Brown v. Board to the appropriate place in the standards as a technical edit.

MOTION AND VOTE: *It was moved by Ms. Davis, seconded by Ms. Hardy, and carried without objection to recommend that the State Board of Education amend §113.51(c)(4)(I) by replacing the word "evaluate" with the word "describe."*

MOTION AND VOTE: *It was moved by Ms. Davis, seconded by Ms. Hardy, and carried without objection to recommend that the State Board of Education amend §113.51(c)(5)(B) to read:*

"discuss the continued struggle for civil rights in America during this time in history such as ~~, including~~ the notable works of the NAACP, National Urban League, Jackie Robinson, Rosa Parks, Martin Luther King Jr., the Student Non-Violent Coordinating Committee (SNCC), Daisy Bates and the Little Rock Nine, and local leaders;"

MOTION AND VOTE: *It was moved by Ms. Davis, seconded by Ms. Hardy, and carried without objection to recommend that the State Board of Education amend §113.51(c)(5)(F) by replacing "including" with "such as."*

MOTION AND VOTE: *It was moved by Ms. Davis, seconded by Mr. Maynard, and carried without objection to recommend that the State Board of Education amend §113.51(c)(5)(G) to read:*

"analyze the successes, ~~and~~ failures, and ongoing impact of the Civil Rights Movement, including methods such as sit-ins, boycotts, marches, speeches, music, and organizations; and"

MOTION AND VOTE: *It was moved by Ms. Davis, seconded by Ms. Hardy, and carried without objection to recommend that the State Board of Education amend §113.51(c)(6)(A) by replacing the phrase "quest for" with the phrase "effort to achieve."*

MOTION AND VOTE: *It was moved by Ms. Davis, seconded by Ms. Pérez, and carried without objection to recommend that the State Board of Education amend §113.51(c)(6)(B) to read:*

"describe the major <u>achievements</u> ~~contributions~~ of contemporary African Americans and how their contributions have shaped the American experience such as John H. Johnson, Muhammad Ali, <u>Fannie Lou Hamer,</u> Shirley Chisholm, Earl G. Graves, Barbara Jordan, Colin Powell, Condoleezza Rice, and Barack Obama; and"

MOTION AND VOTE: *It was moved by Ms. Pérez, seconded by Mr. Rowley, and carried unanimously to recommend that the State Board of Education strike §113.51(c)(7)(B) and replace it to read:*

"<u>identify and explain the physical and human geographic factors that contributed to the Atlantic Slave Trade, the rise of the plantation system in the South, the development of textile mills in the North, and economic interdependence between the North and South;</u>"

MOTION AND VOTE: *It was moved by Ms. Davis, seconded by Ms. Hardy, and carried without objection to recommend that the State Board of Education strike §113.51(c)(8)(A) and §113.51(c)(8)(B).*

MOTION AND VOTE: *It was moved by Ms. Davis, seconded by Ms. Hardy, and carried unanimously to recommend that the State Board of Education amend §113.51(c)(8)(C) by inserting the phrase "the role of 'King Cotton,'" after the phrase "Industrial Revolution."*

MOTION AND VOTE: *It was moved by Ms. Davis, seconded by Ms. Hardy, and carried without objection to recommend that the State Board of Education amend §113.51(c)(8)(D) to read:*

"explain how ~~economic policies such as~~ sharecropping, ~~Jim Crow economies,~~ and redlining <u>limited economic opportunities for</u> ~~impacted the standard of living of~~ African Americans;"

MOTION AND VOTE: *It was moved by Ms. Davis, seconded by Mr. Rowley, and carried without objection to recommend that the State Board of Education amend §113.51(c)(8)(E) to read:*

"explain how ~~unsatisfactory~~ economic <u>conditions and racism contributed to</u> ~~opportunities in the South and increased economic opportunities in cities of the North and West cause~~ the Great Migration;"

MOTION AND VOTE: *It was moved by Ms. Davis, seconded by Ms. Hardy, and carried without objection to recommend that the State Board of Education amend §113.51(c)(8)(J) by replacing Fannie Lou Hamer with Maggie L. Walker.*

MOTION AND VOTE: *It was moved by Ms. Davis, seconded by Ms. Hardy, and carried unanimously to recommend that the State Board of Education amend §113.51(c)(9)(A) to read:*

"<u>explain how unalienable rights</u> ~~compare the effects of revolutionary ideologies~~ such as life, liberty, and the pursuit of happiness <u>influence</u> ~~on~~ political perspectives of African Americans;"

MOTION AND VOTE: *It was moved by Ms. Davis, seconded by Ms. Pérez, and carried without objection to recommend that the State Board of Education amend §113.51(c)(9)(E) by inserting the phrase "the war on crime and drugs with mass incarceration" after the phrase "affirmative action."*

MOTION AND VOTE: *It was moved by Ms. Davis, seconded by Ms. Pérez, and carried without objection to recommend that the State Board of Education amend §113.51(c)(10)(C) to read:*

"identify ~~and analyze~~ the contributions of African American <u>leaders</u> ~~leadership roles~~ at local, state, and national levels of government~~, including U.S. Supreme Court cases~~."

MOTION: *It was moved by Ms. Davis and seconded by Ms. Hardy to recommend that the State Board of Education add new §113.51(c)(11)(E) to read:*

"<u>identify and describe the diverse peoples of African ancestry such as descendants of Afro-Latinos, Afro-Caribbeans, and African immigrants;</u>"

MOTION AND VOTE: *It was moved by Ms. Pérez and carried unanimously to replace "diverse" with "diversity of."*

MOTION AND VOTE: *It was moved by Ms. Pérez and carried unanimously to delete "descendants of" and to add "recent" before "African immigrants."*

VOTE: *A vote was taken on the original motion to recommend that the State Board of Education add new §113.51(c)(11)(E) as amended. The motion carried unanimously.*

MOTION: *It was moved by Ms. Davis and seconded by Ms. Hardy to recommend that the State Board of Education amend §113.51(c)(14)(A) to read:*

"describe the development <u>and the influence</u> ~~impacts~~ of ~~the~~ blues, ragtime, ~~and~~ jazz music, <u>and hip hop such as,</u> ~~including~~ the achievements of composers ~~such as~~ Scott Joplin and James Reese Europe;"

MOTION AND VOTE: *It was moved by Mrs. Bahorich and carried without objection to recommend that the State Board of Education delete the word "impacts."*

VOTE: *A vote was taken on the original motion to recommend that the State Board of Education amend §113.51(c)(14)(A) as amended. The motion carried without objection.*

MOTION AND VOTE: *It was moved by Ms. Davis, seconded by Mrs. Bahorich, and carried unanimously to recommend that the State Board of Education amend §113.51(c)(14)(C) by replacing "including" with "such as."*

MOTION AND VOTE: *It was moved by Ms. Davis, seconded by Mrs. Bahorich, and carried without objection to recommend that the State Board of Education amend §113.51(c)(14)(D) by inserting the phrase "Beloved by Toni Morrison" after Zora Neal Hurston.*

MOTION AND VOTE: *It was moved by Ms. Davis, seconded by Ms. Perez-Diaz, and carried without objection to recommend that the State Board of Education amend §113.51(c)(14)(E) by adding James Baldwin.*

MOTION AND VOTE: *It was moved by Ms. Davis, seconded by Ms. Hardy, and carried without objection to recommend that the State Board of Education amend §113.51(c)(15)(C) by replacing "including" with "such as."*

MOTION: *It was moved by Ms. Davis and seconded by Ms. Hardy to recommend that the State Board of Education add new §113.51(c)(15) to read:*

"(15) Culture. The student understands African American educational developments, achievements, and opportunities before and after the U.S. Supreme Court decision of Brown v. Board of Education (1954). The student is expected to:
"(A) describe the efforts to prevent the education of enslaved people and free African Americans, including anti-literacy laws;
"(B) analyze the expansion of educational opportunities for African Americans, including the Freedman's Bureaus and Rosenwald Schools, and the establishment of Historically Black Colleges and Universities, and the role the National Pan-Hellenic Council (Divine 9); and
"(C) describe contemporary issues in education for African American students, such as the school-to-prison pipeline, opportunity gaps, overrepresentation in special education, and underrepresentation in gifted and talented opportunities."

MOTION AND VOTE: *It was moved by Mr. Maynard, seconded by Ms. Davis, and carried unanimously to recommend that the State Board of Education amend the new §113.51(c)(15)(C) by inserting "the second Morrill Act (1890)."*

VOTE: *A vote was taken on the original motion to recommend that the State Board of Education add new §113.51(c)(15) as amended. The motion carried unanimously.*

MOTION AND VOTE: *It was moved by Ms. Davis, seconded by Ms. Hardy, and carried without objection to recommend that the State Board of Education amend §113.51(c)(15)(E) by replacing "including" with "such as."*

Ms. Ramos requested approval for staff to make any necessary technical edits to the proposed amendments. The committee agreed without objection.

VOTE: *A vote was taken on the original motion to recommend that the State Board of Education approve for second reading and final adoption proposed revisions to 19 TAC Chapter 113, Texas Essential Knowledge and Skills for Social Studies, Subchapter C, High School, and Subchapter D, Other Social Studies Courses, as amended; and*

Make an affirmative finding that immediate adoption of proposed revisions to 19 TAC Chapter 113, Texas Essential Knowledge and Skills for Social Studies, Subchapter C, High School, and Subchapter D, Other Social Studies Courses, is necessary and shall have an effective date of August 1, 2020.

The motion carried with 15 members voting Aye, and 0 members voting No, as follows:

Aye:
Mr. Allen	Mr. Maynard
Mrs. Bahorich	Mrs. Melton-Malone
Mrs. Cargill	Mr. Mercer
Mr. Cortez	Ms. Pérez
Ms. Davis	Ms. Perez-Diaz
Dr. Ellis	Dr. Robinson
Ms. Hardy	Mr. Rowley
Mrs. Little	

4. ***Proclamation 2022* of the State Board of Education Advertising for Bids on Instructional Materials**
(Board agenda page I-128)
[Official agenda item #5]

Kelly Callaway, senior director, instructional materials division, explained that no public comment was received from publishers; however, physical education TEKS review work groups recommended that language be clarified to call for teacher-only physical education materials instead of student and teacher materials.

MOTION: *It was moved by Mr. Rowley and seconded by Mrs. Little to recommend that the State Board of Education approve Proclamation 2022 of the State Board of Education Advertising for Bids for Instructional Materials.*

MOTION AND VOTE: *It was moved by Mr. Rowley, seconded by Dr. Robinson, and carried unanimously to recommend that the State Board of Education amend the current draft of Proclamation 2022 to call for physical education instructional materials for teachers only instead of for students and teachers and to direct staff to make technical edits to reflect this change throughout the proclamation.*

VOTE: *A vote was taken on the original motion as amended to recommend that the State Board of Education approve Proclamation 2022 of the State Board of Education Advertising for Bids for Instructional Materials, as amended. The motion carried unanimously.*

5. **Perkins Reauthorization and Approval of State Plan**
    (Board agenda page I-163)
    [Official agenda item #6]

    Heather Justice, director, college, career, and military preparation division, presented the Texas Perkins V four-year career and technical education state plan for approval and explained where the State Board of Education long-range plan was incorporated into the plan.

    MOTION AND VOTE: *It was moved by Dr. Robinson, seconded by Mr. Cortez, and carried unanimously to recommend that the State Board of Education approve the* Texas State Plan for Strengthening Career and Technical Education for the 21st Century Act (Perkins V).

6. **Update on Texas Essential Knowledge and Skills (TEKS) Review**
    (Board agenda page I-458)
    [Official agenda item #7]

    Public testimony was provided by the following individuals:

    NAME: Mary Castle
    AFFILIATION: Texas Values

    NAME: Jonathan Covey
    AFFILIATION: Texas Values

    NAME: Anne Newman
    AFFILIATION: Self

    NAME: Moss Hampton
    AFFILIATION: Self

    Ms. Martinez provided an update on the impact of COVID-19 on the Texas Essential Knowledge and Skills (TEKS) review and revision timelines for science, health education, and physical education.

    Ms. Ramos provided an update on the review of the English Language Proficiency Standards (ELPS).

Dr. Ellis adjourned the meeting at 3:19 p.m.

The State Board of Education Committee on Instruction conducted a virtual meeting at 3:34 p.m. on Thursday, April 16, 2020. Attendance was noted as follows:

Present: Sue Melton-Malone, chair; Pam Little, vice chair; Aicha Davis; Georgina C. Pérez; Marty Rowley

Public Testimony

The Committee on Instruction heard public testimony on agenda item #2. Information regarding the individuals who presented public testimony is included in the discussion of that item.

ACTION ITEMS

1. **Proposed Repeal of 19 TAC Chapter 110, Texas Essential Knowledge and Skills for English Language Arts and Reading, Subchapter C, High School, §§110.30-110.34, and Subchapter D, Other High School English Language Arts and Reading Courses, §110.85, and Chapter 128, Texas Essential Knowledge and Skills for Spanish Language Arts and Reading and English as a Second Language, Subchapter C, High School, §§128.30-128.32**
   (Second Reading and Final Adoption)
   (Board agenda II-1)
   [Official agenda item #8]

   Shelly Ramos, senior director, curriculum standards and student support, explained that with the implementation of the revised TEKS for English I-IV and ESOL I-II, the former TEKS must be repealed.

   MOTION AND VOTE: *It was moved by Mr. Rowley, seconded by Ms. Davis, and carried unanimously to recommend that the State Board of Education approve for second reading and final adoption the proposed repeal of 19 TAC Chapter 110, Texas Essential Knowledge and Skills for English Language Arts and Reading, Subchapter C, High School, §§110.30-110.34, and Subchapter D, Other High School English Language Arts and Reading Courses, §110.85, and Chapter 128, Texas Essential Knowledge and Skills for Spanish Language Arts and Reading and English as a Second Language, Subchapter C, High School, §§128.30-128.32; and*

   Make an affirmative finding that immediate adoption of the proposed repeal of 19 TAC Chapter 110, Texas Essential Knowledge and Skills for English Language Arts and Reading, Subchapter C, High School, §§110.30-110.34, and Subchapter D, Other High School English Language Arts and Reading Courses, §110.85, and Chapter 128, Texas Essential Knowledge and Skills for Spanish Language Arts and Reading and English as a Second Language, Subchapter C, High School, §§128.30-128.32, is necessary and shall have an effective date of August 1, 2020.

2. **Action Regarding Origo Education**
   (Board agenda II-5)
   [Official agenda item #9]

   Kelly Callaway, senior director, instructional materials division, explained that ORIGO Education provided the information needed for approval of substituted content. Ms. Callaway provided an overview of actions that have taken place since the instructional materials division was made aware of the content changes.

   Public testimony was provided by the following individuals:

   NAME: Susie Johnson
   AFFILIATION: Magnolia ISD

   NAME: James Burnett
   AFFILIATION: ORIGO Education

   MOTION AND VOTE: *It was moved by Mr. Rowley and seconded by Mrs. Little to recommend that the State Board of Education approve the changes that have been submitted by ORIGO Education under the condition that they pay all assessed liquidated damages. The motion failed.*

   MOTION AND VOTE: *It was moved by Mrs. Little, seconded by Ms. Davis, and carried to reconsider the vote.*

   MOTION AND VOTE: *It was moved by Mr. Rowley, seconded by Mrs. Little, and carried to recommend that the State Board of Education approve the changes that have been submitted by ORIGO Education.*

   MOTION AND VOTE: *It was moved by Mr. Rowley to recommend that the State Board of Education assess liquidated damages in the amount of $35,494. The motion died because of a lack of a second.*

   MOTION AND VOTE: *It was moved by Mr. Rowley, seconded by Mrs. Little, and carried to recommend that the State Board of Education assess liquidated damages in the amount of $113,494.*

   MOTION AND VOTE: *It was moved by Mrs. Little, seconded by Ms. Davis, and carried unanimously to recommend that the State Board of Education establish a due date of June 1, 2020 for payment of the liquidated damages.*

The meeting of the Committee on Instruction adjourned at 5:52 p.m.

The State Board of Education Committee on School Finance/Permanent School Fund conducted a virtual meeting at 3:46 p.m. on Thursday, April 16, 2020. Attendance was noted as follows:

Present: Tom Maynard, chair; Lawrence A. Allen, Jr., vice chair; Donna Bahorich; Patricia Hardy; Ken Mercer

Public Testimony

The Committee on School Finance/Permanent School Fund received no presentations of public testimony.

ACTION ITEMS

1. **Proposed Repeal of 19 TAC Chapter 105, <u>Foundation School Program</u>, Subchapter B, <u>Use of State Funds</u>**
   (Second Reading and Final Adoption)
   (Board agenda page III-1)
   [Official agenda item #10]

   David Marx, director, financial compliance, explained that the proposed repeals would implement House Bill (HB) 3, 86th Texas Legislature, 2019, which removed the State Board of Education's rulemaking authority related to maximum allowable indirect costs and the basic allotment for the Foundation School Program.

   MOTION AND VOTE: *It was moved by Mr. Allen, seconded by Mrs. Bahorich, and carried unanimously to recommend that the State Board of Education approve for second reading and final adoption the proposed repeal of 19 Texas Administrative Code (TAC) Chapter 105, <u>Foundation School Program</u>, Subchapter B, <u>Use of State Funds</u>; and*

   Make an affirmative finding that immediate adoption of the proposed repeal of 19 TAC Chapter 105, <u>Foundation School Program</u>, Subchapter B, <u>Use of State Funds</u>, is necessary and shall have an effective date of 20 days after filing as adopted with the Texas Register.

2. **Proposed Amendment to 19 TAC Chapter 109, <u>Budgeting, Accounting, and Auditing</u>, Subchapter B, <u>Texas Education Agency Audit Functions</u>, §109.23, <u>School District Independent Audits and Agreed-Upon Procedures</u>**
   (First Reading and Filing Authorization)
   (Board agenda page III-5)
   [Official agenda item #11]

   Mr. Marx presented this item for first reading and filing authorization. Mr. Marx explained that the proposed amendment would reflect changes made by HB 1520, 86th Texas Legislature, 2019, which eliminated the requirement for out-of-state certified public accountancy (CPA) firms to be licensed in Texas. Mr. Maynard commented on the item.

MOTION AND VOTE: *It was moved by Mr. Allen and carried unanimously to recommend that the State Board of Education approve for first reading and filing authorization the proposed amendment to 19 TAC Chapter 109, Budgeting, Accounting, and Auditing, Subchapter B, Texas Education Agency Audit Functions, §109.23, School District Independent Audits and Agreed-Upon Procedures.*

DISCUSSION ITEM

3. **Review of Permanent School Fund Securities Transactions and the Investment Portfolio**
    (Board agenda page III-10)

    Catherine Civiletto, deputy executive administrator, provided a summary on the status of the Permanent School Fund portfolio. Reports presented to the committee were for the reporting period December 2019 and January and February 2020 unless otherwise noted. Ms. Civiletto's report included the current fair market value of the Fund; the asset allocation mix as of February 29, 2020; PSF transactions occurring in the reporting period; revenues and expenditures for the fiscal year period of September 1, 2019 to February 29, 2020; the activity in the securities lending program for the fiscal period beginning September 1, 2019 through August 31, 2020; the status of transfers from the General Land Office as of February 29, 2020, as per approved resolutions; the current status of the Bond Guarantee Program and the available capacity in the program; broker commissions on both the internal and external equity portfolios for the period beginning January 1, 2019 through December 31, 2019 and for the period January 1, 2020 through February 29, 2020; fixed income rating changes for the fiscal period September 1, 2019 through February 29, 2020; and short-term cash investments.

CONSENT ITEM

4. **Ratification of the Purchases and Sales of the Investment Portfolio of the Permanent School Fund for the Months of December 2019, January and February 2020**
    (Board agenda page III-11)
    [Consent agenda item #(1)]

    MOTION AND VOTE: *Based on the information provided by staff and the recommendation of the executive administrator and chief investment officer and the commissioner of education, the committee recommended by unanimous consent that the State Board of Education ratify the purchases and sales for the months of December 2019 and January and February 2020, in the amount of $1,167,603,588 and $1,322,360,449 respectively* (Attachment A).

DISCUSSION ITEM

5. **Report of the Permanent School Fund Executive Administrator and Chief Investment Officer**
    (Board agenda page III-12)

    Holland Timmins, executive administrator and chief investment officer, provided the committee an update on both the current global financial market and the PSF portfolio. Keith Stronkowsky, senior consultant, and Rhett Humphreys, partner with NEPC also updated the committee on current financial markets as well as the PSF's portfolio.

    Mr. Timmins gave a brief overview of the status of the PSF Liquid Account.

The meeting of the Committee on School Finance/Permanent School Fund adjourned at 4:47 p.m.

TEXAS PERMANENT SCHOOL FUND
SUMMARY OF TRANSACTIONS FOR APPROVAL
(Including External Manager's Trades)
For December 1, 2019 through February 29, 2020

Purchases/Capital Calls:

Long Term Fixed Income	$	360,405,911
Public Market Equities		219,125,208
Alternative Investments		588,072,469
TOTAL	$	1,167,603,588

Sales/Distributions:

Long Term Fixed Income	$	353,588,859
Public Market Equities		362,103,516
Alternative Investments		606,668,074
TOTAL	$	1,322,360,449

General Land Office Contributions:

FY 2019 Cumulative February 2019	FY 2020 Cumulative February 2020
$127,500,000	$5,000,000

Based on the above information provided by staff including a report that deposits to the Permanent School Fund from the General Land Office were $127,500,000 through February 2019 for fiscal year 2019 versus $5,000,000 through February 2020 for fiscal year 2020, and the recommendation of the Executive Administrator and Chief Investment Officer and the Commissioner of Education; it is moved by unanimous consent that the Committee on School Finance/Permanent School Fund ratify for the months of December 2019, January 2020 and February 2020 Permanent School Fund portfolio purchases of $1,167,603,588 and sales of $1,322,360,449.

Report of the State Board of Education
Committee on School Initiatives
April 16, 2020

The State Board of Education Committee on School Initiatives conducted a virtual meeting at 3:29 p.m. on Thursday, April 16, 2020. Attendance was noted as follows:

Present: Barbara Cargill, chair; Marisa B. Perez-Diaz, vice chair; Ruben Cortez, Jr.; Keven Ellis; Matt Robinson

Public Testimony

The Committee on School Initiatives received no presentations of public testimony.

CONSENT ITEMS

1. **Recommendation for Appointments to the Fort Sam Houston Independent School District Board of Trustees**
   (Board agenda page IV-1)
   [Consent agenda item #(2)]

   Christopher Lucas, director, policy, planning, and operations, explained that there is an existing vacancy on the board of trustees for Fort Sam Houston Independent School District. The commanding officer, Colonel Samuel E. Fiol, has requested that Mr. Richard Kling III be appointed to fill the vacancy.

   MOTION AND VOTE: *It was moved by Mr. Cortez, seconded by Dr. Robinson, and carried unanimously to recommend that the State Board of Education approve the appointment of Mr. Richard Kling III to serve a two-year term of office, from April 17, 2020, through April 17, 2022, on the Fort Sam Houston Independent School District Board of Trustees.*

2. **Recommendation for Appointments to Lackland Independent School District Board of Trustees**
   (Board agenda page IV-22)
   [Consent agenda item #(3)]

   Mr. Lucas explained that there are two existing vacancies on the board of trustees for Lackland Independent School District. The commanding officer, Colonel Scott J. Thompson, has requested that Mr. Khalil Gatlin and Ms. Sandra H. Wellma be appointed to fill the vacancies.

   MOTION AND VOTE: *It was moved by Ms. Perez-Diaz, seconded by Dr. Robinson, and carried unanimously to recommend that the State Board of Education approve the appointments of Mr. Khalil Gatlin and Ms. Sandra H. Wellma to serve two-year terms of office, from April 17, 2020, through April 17, 2022, on the Lackland Independent School District Board of Trustees.*

3. **Open-Enrollment Charter School Generation 25 Application Updates**
    (Board agenda page IV-33)

    Heather Mauzé, director, charter school authorization and administration division, presented information on the Generation 25 Open-Enrollment Charter Application cycle, its timeline, and next steps in the application process. Ms. Mauzé answered questions regarding the application process.

ACTION ITEMS

4. **Adoption of Review of 19 TAC Chapter 100, <u>Charters</u>, Subchapter A, <u>Open-Enrollment Charter Schools</u>, and Subchapter B, <u>Home-Rule School District Charters</u>**
    (Adoption of Review)
    (Board agenda page IV-34)
    [Official agenda item #12]

    > **MOTION AND VOTE:** *It was moved by Mrs. Cargill, seconded by Dr. Ellis, and carried unanimously to recommend that the State Board of Education adopt the review of 19 TAC Chapter 100, <u>Charters</u>, Subchapter A, <u>Open-Enrollment Charter Schools</u>, and Subchapter B, <u>Home-Rule School District Charters</u>.*

5. **Review of Proposed Amendments to 19 TAC Chapter 230, <u>Professional Educator Preparation and Certification</u>, Subchapter C, <u>Assessment of Educators</u>, Subchapter D, <u>Types and Classes of Certificates Issued</u>, Subchapter E, <u>Educational Aide Certificate</u>, and Subchapter G, <u>Certificate Issuance Procedures</u>**
    (Board agenda page IV-38)
    [Official agenda item #13]

    Jessica McLoughlin, director, educator standards and testing, explained that proposed amendments would implement the statutory requirements of Senate Bill (SB) 1839 and House Bills (HBs) 2039 and 3349, 85th Texas Legislature, Regular Session, 2017, and HB 3, 86th Texas Legislature, 2019. She explained that the proposed amendments would reduce the amount of time for computer- and paper-based examination retakes from 45 to 30 days and would update the figure specifying the required tests for issuance of the standard certification, including the removal of the master teacher certification class and the Principal: Early Childhood–Grade 12 certificate and the addition of Early Childhood–Grade 3 (EC–3) and Trade and Industrial Workforce Training. The proposed amendments would require the English as a Second Language Supplemental assessment for issuance of an intern certificate obtained through the intensive pre-service route and would repeal the master teacher certificate class, giving those certificates a "legacy" designation for educator assignment purposes until they expire. The proposed amendments would allow the Educational Aide I certificate to be issued to high school students 18 years of age or older who have completed certain career and technical education courses. Proposed changes would clarify that requests for certificate corrections be submitted to TEA within six weeks from the original date of issuance. The proposed changes would also implement the requirement specified in statute that certified classroom teachers must complete training prior to receiving test approval for the Early Childhood: Prekindergarten–Grade 3 certificate.

MOTION AND VOTE: *It was moved by Dr. Robinson, seconded by Mr. Cortez, and carried unanimously to recommend that the State Board of Education take no action on the proposed amendments to 19 TAC Chapter 230, Professional Educator Preparation and Certification, Subchapter C, Assessment of Educators, Subchapter D, Types and Classes of Certificates Issued, Subchapter E, Educational Aide Certificate, and Subchapter G, Certificate Issuance Procedures.*

The meeting of the Committee on School Initiatives adjourned at 4:29 p.m.