Communication and Technology in Education

PEIMS Code: N1300510
Abbreviation: CMTCHED
Grade Level(s): 10–12
Award of Credit: 1.0

Approved Innovative Course

- Districts must have local board approval to implement innovative courses.

- In accordance with Texas Administrative Code (TAC) §74.27, school districts must provide instruction in all essential knowledge and skills identified in this innovative course.

- Innovative courses may only satisfy elective credit toward graduation requirements.

- Please refer to TAC §74.13 for guidance on endorsements.

Course Description:

Communication and Technology in Education is an extended course of study designed to provide students with the fundamentals of planning, managing and training services needed to provide learning support services in K-12 classrooms. Students will develop knowledge and skills regarding the professional, ethical, and legal responsibilities in teaching related to educational technology; as well as, understand laws and pedagogical justifications regarding classroom technology use. This course provides an opportunity for students to participate in training related to Google for Education, Microsoft Office Fundamentals, Common Sense Media and Digital Citizenship as they relate to standards set by the International Society for Technology in Education (ISTE).

Essential Knowledge and Skills:

(a) General Requirements. This course is recommended for students in Grades 10-12. Recommended prerequisites: Principles of Education and Training. 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 Education and Training Career Cluster focuses on planning, managing, and providing education and training services and related learning support services.

   (3) Communication and Technology in Education is an extended course of study designed to provide students with the fundamentals of planning, managing and training services needed to provide learning support services in K-12

classrooms. Students will develop knowledge and skills regarding the professional, ethical, and legal responsibilities in teaching related to educational technology; as well as, understand laws and pedagogical justifications regarding classroom technology use. Students will develop knowledge of developmentally appropriate practice for age level when technology is used by learners. This course provides an opportunity for students to participate in training related to standards set by the International Society for Technology in Education.

   (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 written communication;

      (B)   perform job-appropriate numerical and arithmetic application;

      (C)   practice various forms of communication such as verbal and non-verbal communication skills used in educational and career settings;

      (D)   exhibit teamwork skills;

      (E)   apply decision-making skills;

      (F)   implement problem-solving techniques;

      (G)   acquire conflict management skills;

      (H)   develop leadership skills;

      (I)   demonstrate professionalism;

      (J)   develop effective work ethic practices;

      (K)   demonstrate appreciation for diversity;

      (L)   participate in training, education, or certification for employment;

      (M)   demonstrate skills related to seeking and applying for employment; and

      (N)   create a resume and cover letter to document information such as work experience, licenses, certifications, and work samples.

   (2)   The student understands the professional, ethical, and legal responsibilities when communicating in the educational field. The student is expected to:

      (A)   apply communication standards that promote professional, ethical, and legal conduct;

      (B)   identify times when communication between school and parents/community are necessary;

      (C)   distinguish between appropriate and inappropriate uses of social media and other communication platforms and methods; and

(D) cite sanctions and consequences for educator misconduct such as those stemming from inappropriate relationships.

(3) The student understands multiple forms of communication necessary for effective teaching. The student is expected to:

(A) demonstrate effective verbal communication skills with various stakeholders such as students, educators, parents/guardians, community members and other professionals;

(B) demonstrate active listening skills to obtain and clarify information;

(C) identify various forms of digital communication for educators such as email, blogs, wikis, podcasts, vlogs, digital streaming, infographics, digital portfolios, or social media;

(D) construct effective and professional electronic communication with parents and stakeholders such as newsletters, emails, and websites;

(E) demonstrate effective professional collaboration and communication such as participation in professional learning communities, peer-coaching, and mentoring;

(F) demonstrate effective student-teacher communication such as assignment feedback, and one-on-one interaction;

(G) facilitate effective student group work, including multiple strategies for student engagement;

(H) differentiate between approaches to communication based on student needs, including considerations for special populations and nonverbal communication; and

(I) demonstrate active-listening skills to obtain and clarify information.

(4) The student applies digital literacy concepts to communication with students and stakeholders. The student is expected to:

(A) apply digital literacy practices in communications to students and stakeholders such as knowledge of desktop publishing, elements of art and design, and design thinking;

(B) demonstrate appropriate search strategies for finding resources on the Internet such as boolean searches;

(C) compare various digital media technologies such as digital books, databases, websites, interactive games, and digital videos; and

(D) evaluate and select appropriate software for specific purposes such as communication and research.

(5) The student evaluates technology and applications for classroom use. The student is expected to:

(A) demonstrate understanding of laws regarding classroom technology use such as Family Educational Rights and Privacy Act (FERPA), Children's Online Privacy Protection Act (COPPA), end-user license agreements (EULAs), and age restrictions;

(B) apply laws related to the legal use of electronic materials, such as copyright, fair use, public domain, and open-source;

(C) evaluate usage of classroom technology using a model, such as substitution augmentation modification redefinition (SAMR) and technological pedagogical content knowledge (TPaCK);

(D) describe methods for approval of technology use in the district, such as inventorying, licensing, and budgeting; and

(E) identify classroom management strategies appropriate for technology use in the classroom.

(6) The student creates engaging lessons and lesson plans incorporating technology. The student is expected to:

(A) analyze the relationship between technology and student engagement in the classroom;

(B) design learning experiences that incorporate twenty-first century learning skills such as creativity, collaboration, critical thinking, communication and resiliency;

(C) create lessons using different types of technology such as presentation software, spreadsheet software, image editing software, video creation software, polling software, and word processing software;

(D) apply technology to assess student learning at the beginning, during and at the end of a lesson;

(E) design authentic learning experiences that align with content area TEKS and use technology to maximize active, deep learning across grade levels to show appropriate use based on age;

(F) create an interactive lesson that utilizes appropriate technology; and

(G) create a differentiated lesson, incorporating the appropriate use of technology.

Recommended Resources and Materials:

- Google Be Internet Awesome
  - o Description: Curriculum for younger students and their families that guides responsible internet use - good information for the technology teacher to have in hand. Also works in front of students in the classroom.
  - o Cost: Free
  - o Link: https://beinternetawesome.withgoogle.com/en_us
- Google Applied Digital Skills
  - o Training level: Beginner, Intermediate
  - o Description: Self-paced training on using each of the G Suite tools and then project-based training that teaches combining them in various contexts. Can be used alone for self-study and with a class of students.
  - o Cost: Free
  - o Link: https://applieddigitalskills.withgoogle.com/s/en/home
- Texas Computer Education Association
  - o Description:
  - o Cost: $49.00
  - o Link: https://tcea.org/about/

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Recommended Course Activities:

- Read articles from education journals relating to communication and technology in education
- Write and peer review lesson plans incorporating technology
- Develop lesson activities involving technology such as Kahoot, digital breakout, interactive field trip, etc.
- Use dyads to practice active listening
- Create a newsletter for parents and stakeholders
- Classroom discussion

Suggested methods for evaluating student outcomes:

- Portfolio of assignments from the course
- Written and revised lesson plans
- Students present a lesson to peers
- Research project
- Quizzes and tests

Teacher qualifications:

- An assignment for Communication and Technology in Education, Grades 10 -12, is allowed with any valid classroom teacher or administrator certificate.

- It is recommended that a teacher assigned to Communication and Technology in Education, Grades 10-12 completed appropriate additional 101-907 training in Technology such as GCE1, MS Fundamentals, or Google for Education.

Additional information:

- Google Cloud Certified-G Suite
  - Training level: Beginner, Intermediate
  - Description: A Google Cloud certification in G Suite signals to employers that you possess the digital skills to work collaboratively and productively in a professional environment. By earning the G Suite certification, you prove your ability to complete common workplace activities using cloud-based tools to create and share documents, spreadsheets, presentations, and files. You demonstrate that you can communicate effectively with email and online meeting solutions.
  - Cost: $75.00
  - Link: https://cloud.google.com/certification/gsuite

- Google for Education Teacher Training
  - Training level: Beginner, Intermediate
  - Description: Self-paced training on the use of G Suite for Education in the classroom, teaching Computer Science with Google tools, digital citizenship, using Chrome OS devices in the classroom, and using tech tools for ELLs. Training dovetails into Google Certified Educator and Google Certified Trainer.
  - Cost: Free
  - Link: https://teachercenter.withgoogle.com/training

- Google Applied Digital Skills

- o Training level: Beginner, Intermediate
- o Description: Self-paced training on using each of the G Suite tools and then project-based training that teaches combining them in various contexts. Can be used alone for self-study and with a class of students.
- o Cost: Free
- o Link: https://applieddigitalskills.withgoogle.com/s/en/home

- Google Be Internet Awesome
  - o Training level: Beginner
  - o Description: Curriculum for younger students and their families that guides responsible internet use - good information for the technology teacher to have in hand. Also works in front of students in the classroom.
  - o Cost: Free
  - o Link: https://beinternetawesome.withgoogle.com/en_us

- Google Certified Educator, Level 1
  - o Training level: Beginner
  - o Description: Beginner certification from Google on using G Suite for Education tools in the classroom. Includes a multiple-choice exam and a series of practical applications of G Suite.
  - o Cost: $10.00
  - o Link: https://teachercenter.withgoogle.com/certification_level1

- Google Certified Educator, Level 2
  - o Training level: Intermediate
  - o Description: Intermediate certification from Google on implementing G Suite tools in the classroom and using it to improve your teaching practice. Includes a multiple-choice exam and a series of practical applications of G Suite.
  - o Cost: $25.00
  - o Link: https://teachercenter.withgoogle.com/certification_level2

- Google Certified Trainer
  - o Training level: Advanced
  - o Description: Advanced certification from Google for providing professional development on G Suite for education tools. Includes a test, 5 PD delivery sessions, and a case study of training.
  - o Cost: $15.00
  - o Link: https://teachercenter.withgoogle.com/certification_trainer

- Microsoft 365 Certified Fundamentals
  - o Training level: Beginner
  - o Description: Certification from Microsoft to prove that you understand the options available in Microsoft 365 and the benefits of adopting cloud services, the Software as a Service (SaaS) cloud model, and implementing Microsoft 365 cloud service
  - o Cost: $99.00
  - o Link:https://docs.microsoft.com/en-us/learn/certifications/microsoft-365-fundamentals?wt.mc_id=learningredirect_certs-web-wwl

- Common Sense Education Digital Citizenship
  - o Training level: Beginner, Intermediate

- o Description: This recorded edWebinar will be of particular benefit to K-12 teachers, librarians, and school and district leaders. In this edWebinar:
  - Learn about the six topics covered in the new Digital Citizenship Curriculum
  - Define ways to teach digital citizenship, including developing skills and dispositions in students
  - Be introduced to activities and resources they can use with students
  - Identify ways to implement digital citizenship into their classrooms, schools, or districts
  - o Cost: Free
  - o Link: https://www.commonsense.org/education/webinars/all-new-digital-citizenship-curriculum

- Common Sense Educator
  - o Training level: Intermediate
  - o Description: Common Sense Educators are committed to helping kids and schools thrive in the digital age. Become a Common Sense Educator to earn a badge that publicly affirms your commitment to helping students think critically and use technology responsibly to learn, create, and participate, and build your confidence teaching digital citizenship and integrating technology into your classroom, school, or district.
  - o Cost: Free
  - o Link: https://www.commonsense.org/education/recognition-educators

- ISTE (International Society for Technology in Education) Certification
  - o Training level: Advanced
  - o Description: ISTE Certification is a competency-based, vendor-neutral teacher certification based on the ISTE Standards for Educators. It recognizes educators who use edtech for learning in meaningful and transformative ways.
  - o Cost: $800.00
  - o Link: https://www.iste.org/learn/iste-certification

- Region 10 Digital Fluency Institute
  - o Training level: Intermediate
  - o Description: This program provides extensive professional development for administrators, teachers, coaches, and librarians. Within the Institute, educators will experience the types of learning that should happen in the classroom, learn to explore and apply strategies that leverage technology for learning, share your learning and contribute to the advancement of innovation in education, reflect as part of the learning process in a variety of media, design experiences that promote ownership of learning for yourself and others, and advocate for a culture of collaboration, continuous learning, and positive contributions.
  - o Cost: $299.00
  - o Link: https://www.region10.org/programs/digital-learning/digital-fluency/