

Chapter 130. Texas Essential Knowledge and Skills for Career and Technical Education

Subchapter A. Agriculture, Food, and Natural Resources

§130.32. Extended Practicum in Agriculture, Food, and Natural Resources (One Credit), Adopted 2015.

- (a) General requirements. This course is recommended for students in Grades 11 and 12. The practicum course is a paid or unpaid capstone experience for students participating in a coherent sequence of career and technical education courses in the Agriculture, Food, and Natural Resources Career Cluster. Recommended prerequisite: a minimum of one credit from the courses in the Agriculture, Food, and Natural Resources Career Cluster. Corequisite: Practicum in Agriculture, Food, and Natural Resources. This course must be taken concurrently with Practicum in Agriculture, Food, and Natural Resources and may not be taken as a stand-alone course. Students shall be awarded one credit for successful completion of this course. A student may repeat this course once for credit provided that the student is experiencing different aspects of the industry and demonstrating proficiency in additional and more advanced knowledge and skills.
- (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) Extended Practicum in Agriculture, Food, and Natural Resources is designed to give students supervised practical application of knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experiences such as employment, independent study, internships, assistantships, mentorships, or laboratories. To prepare for careers in agriculture, food, and natural resources, students must attain academic skills and knowledge, acquire technical knowledge and skills related to 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) participate in a paid or unpaid, laboratory- or work-based application of previously studied knowledge and skills related to agriculture, food, and natural resources;
 - (B) participate in training, education, or preparation for licensure, certification, or other relevant credentials to prepare for employment;
 - (C) demonstrate professional standards and personal qualities needed to be employable such as punctuality, time management, initiative, and cooperation with increased fluency;
 - (D) complete tasks with high standards to ensure quality products and services;

- (E) employ teamwork and conflict-management skills with increased fluency to achieve collective goals; and
 - (F) employ planning and time-management skills and tools with increased fluency to enhance results and complete work tasks.
- (2) The student implements advanced professional communications strategies. The student is expected to:
 - (A) apply appropriate content knowledge, technical concepts, and vocabulary with increased fluency when analyzing information and following directions;
 - (B) demonstrate verbal and non-verbal communication consistently in a clear, concise, and effective manner;
 - (C) analyze, interpret, and effectively communicate information, data, and observations;
 - (D) observe and interpret verbal and nonverbal cues and behaviors to enhance communication; and
 - (E) apply active listening skills to obtain and clarify information.
- (3) The student applies concepts of critical thinking and problem solving. The student is expected to:
 - (A) employ critical-thinking skills with increased fluency both independently and in groups to solve problems and make decisions;
 - (B) analyze elements of a problem to develop creative and innovative solutions; and
 - (C) demonstrate the use of content, technical concepts, and vocabulary when analyzing information and following directions.
- (4) The student understands and applies proper safety techniques in the workplace. The student is expected to:
 - (A) demonstrate an understanding of and consistently follow workplace safety rules and regulations;
 - (B) demonstrate safe operation of tools and equipment;
 - (C) describe and perform hazard analysis; and
 - (D) demonstrate knowledge of procedures for reporting and handling accidents and safety incidents.
- (5) The student understands the professional, ethical, and legal responsibilities in agriculture, food, and natural resources. The student is expected to:
 - (A) demonstrate a positive, productive work ethic by performing assigned tasks as directed;
 - (B) apply ethical reasoning to a variety of situations in order to make ethical decisions; and
 - (C) comply with all applicable rules, laws, and regulations in a consistent manner.
- (6) The student participates in an agriculture, food, or natural resources experience. The student is expected to:
 - (A) conduct, document, and evaluate learning activities in a supervised agriculture, food, or natural resources experience;
 - (B) develop advanced technical knowledge and skills related to the student's occupational objective;
 - (C) demonstrate proper record-keeping skills related to the supervised agriculture, food, or natural resources experience;
 - (D) practice equipment maintenance procedures, as appropriate;

- (E) decide between replacement, maintenance, repair, and reconditioning of agricultural vehicles and machinery, as appropriate;
- (F) demonstrate growth of technical skill competencies;
- (G) evaluate strengths and weaknesses in technical skill proficiency; and
- (H) collect representative work samples.

Subchapter B. Architecture and Construction

§130.68. Extended Practicum in Construction Management (One Credit), Adopted 2015.

- (a) General requirements. This course is recommended for students in Grade 12. The practicum course is a paid or unpaid capstone experience for students participating in a coherent sequence of career and technical education courses in the Architecture and Construction Career Cluster. Prerequisite: Construction Management II. Corequisite: Practicum in Construction Management. This course must be taken concurrently with Practicum in Construction Management and may not be taken as a stand-alone course. Students shall be awarded one credit for successful completion of this course. A student may repeat this course once for credit provided that the student is experiencing different aspects of the industry and demonstrating proficiency in additional and more advanced knowledge and skills.
- (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 Architecture and Construction Career Cluster focuses on designing, planning, managing, building, and maintaining the built environment.
 - (3) Extended Practicum in Construction Management is an occupationally specific course designed to provide classroom technical instruction or on-the-job training experiences. Safety and career opportunities are included in addition to work ethics and job-related study in the classroom.
 - (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) participate in a paid or unpaid, laboratory- or work-based application of previously studied knowledge and skills related to construction management;
 - (B) participate in training, education, or preparation for licensure, certification, or other relevant credentials to prepare for employment;
 - (C) demonstrate professional standards and personal qualities needed to be employable such as punctuality, time management, initiative, and cooperation with increased fluency;
 - (D) complete tasks with high standards to ensure quality products and services;
 - (E) employ teamwork and conflict-management skills with increased fluency to achieve collective goals; and
 - (F) employ planning and time-management skills and tools with increased fluency to enhance results and complete work tasks.
 - (2) The student implements advanced professional communications strategies. The student is expected to:
 - (A) apply appropriate content knowledge, technical concepts, and vocabulary when analyzing information and following directions;
 - (B) demonstrate verbal and non-verbal communication consistently in a clear, concise, and effective manner;
 - (C) analyze, interpret, and effectively communicate information, data, and observations;

- (D) observe and interpret verbal and nonverbal cues and behaviors to enhance communication; and
- (E) apply active listening skills to obtain and clarify information.
- (3) The student applies concepts of critical thinking and problem solving. The student is expected to:
 - (A) employ critical-thinking skills with increased fluency both independently and in groups to solve problems and make decisions; and
 - (B) analyze elements of a problem to develop creative and innovative solutions.
- (4) The student understands and applies proper safety techniques in the workplace. The student is expected to:
 - (A) demonstrate understanding of and consistently follow workplace safety rules and regulations;
 - (B) demonstrate safe operation of tools and equipment;
 - (C) describe and perform hazard analysis;
 - (D) specify safety devices that allow for the safe completion of a task; and
 - (E) demonstrate knowledge of procedures for reporting and handling accidents and safety incidents.
- (5) The student understands the professional, ethical, and legal responsibilities in construction management. The student is expected to:
 - (A) demonstrate a positive, productive work ethic by performing assigned tasks as directed;
 - (B) apply ethical reasoning to a variety of situations in order to make ethical decisions;
 - (C) exhibit ethical practices as defined in construction management; and
 - (D) comply with all applicable rules, laws, and regulations in a consistent manner.
- (6) The student participates in a construction management experience. The student is expected to:
 - (A) conduct, document, and evaluate learning activities in a supervised construction management experience;
 - (B) develop advanced technical knowledge and skills related to the student's occupational objective;
 - (C) demonstrate advanced construction-management skills by building products in a more efficient manner using a variety of tools, equipment, machines, materials, and processes;
 - (D) design or improve a product using appropriate design processes and techniques;
 - (E) maintain tools and materials correctly;
 - (F) design an object or a service using an accepted design process;
 - (G) demonstrate growth of technical skill competencies;
 - (H) evaluate strengths and weaknesses in technical skill proficiency; and
 - (I) collect representative work samples.

§130.69. Extended Practicum in Construction Technology (One Credit), Adopted 2015.

- (a) General requirements. This course is recommended for students in Grade 12. The practicum course is a paid or unpaid capstone experience for students participating in a coherent sequence of career and technical education courses in the Architecture and Construction Career Cluster. Prerequisite: Construction Technology II. Corequisite: Practicum in Construction Technology. This course must be taken concurrently with Practicum in Construction Technology and may not be taken as a stand-alone course. Students shall be

awarded one credit for successful completion of this course. A student may repeat this course once for credit provided that the student is experiencing different aspects of the industry and demonstrating proficiency in additional and more advanced knowledge and skills.

(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 Architecture and Construction Career Cluster focuses on designing, planning, managing, building, and maintaining the built environment.
- (3) In Extended Practicum in Construction Technology, students will be challenged with the application of gained knowledge and skills from Construction Technology I and II. In many cases students will be allowed to work at a job (paid or unpaid) outside of school or be involved in local projects the school has approved for this class.
- (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) participate in a paid or unpaid, laboratory- or work-based application of previously studied knowledge and skills related to construction technology;
 - (B) participate in training, education, or preparation for licensure, certification, or other relevant credentials to prepare for employment;
 - (C) demonstrate professional standards and personal qualities needed to be employable such as punctuality, time management, initiative, and cooperation with increased fluency;
 - (D) complete tasks with high standards to ensure quality products and services;
 - (E) employ teamwork and conflict-management skills with increased fluency to achieve collective goals; and
 - (F) employ planning and time-management skills and tools with increased fluency to enhance results and complete work tasks.
- (2) The student implements advanced professional communications strategies. The student is expected to:
 - (A) apply appropriate content knowledge, technical concepts, and vocabulary with increased fluency when analyzing information and following directions;
 - (B) demonstrate verbal and non-verbal communication consistently in a clear, concise, and effective manner;
 - (C) analyze, interpret, and effectively communicate information, data, and observations;
 - (D) observe and interpret verbal and nonverbal cues and behaviors to enhance communication; and
 - (E) apply active listening skills to obtain and clarify information.
- (3) The student applies concepts of critical thinking and problem solving. The student is expected to:
 - (A) employ critical-thinking skills with increased fluency both independently and in groups to solve problems and make decisions;

- (B) analyze elements of a problem to develop creative and innovative solutions; and
- (C) develop or improve a project by following a problem-solving strategy;
- (4) The student understands and applies proper safety techniques in the workplace. The student is expected to:
 - (A) demonstrate understanding of and consistently follow workplace safety rules and regulations; and
 - (B) demonstrate knowledge of procedures for reporting and handling accidents and safety incidents.
- (5) The student understands the professional, ethical, and legal responsibilities in construction technology. The student is expected to:
 - (A) demonstrate a positive, productive work ethic by performing assigned tasks as directed;
 - (B) apply ethical reasoning to a variety of situations in order to make ethical decisions; and
 - (C) comply with all applicable rules, laws, and regulations in a consistent manner.
- (6) The student participates in a construction technology experience. The student is expected to:
 - (A) conduct, document, and evaluate learning activities in a supervised construction technology experience;
 - (B) develop advanced technical knowledge and skills related to the student's occupational objective;
 - (C) develop a management plan for a project or an activity;
 - (D) apply the appropriate codes, laws, standards, or regulations related to a research and development project;
 - (E) develop a flowchart to plan a project;
 - (F) determine and use the appropriate technology to solve a problem or complete a task;
 - (G) demonstrate growth of technical skill competencies;
 - (H) evaluate strengths and weaknesses in technical skill proficiency; and
 - (I) collect representative work samples.

§130.70. Extended Practicum in Masonry Technology (One Credit), Adopted 2015.

- (a) General requirements. This course is recommended for students in Grade 12. The practicum course is a paid or unpaid capstone experience for students participating in a coherent sequence of career and technical education courses in the Architecture and Construction Career Cluster. Prerequisite: Masonry Technology II. Corequisite: Practicum in Masonry Technology. This course must be taken concurrently with Practicum in Masonry Technology and may not be taken as a stand-alone course. Students shall be awarded one credit for successful completion of this course. A student may repeat this course once for credit provided that the student is experiencing different aspects of the industry and demonstrating proficiency in additional and more advanced knowledge and skills.
- (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 Architecture and Construction Career Cluster focuses on designing, planning, managing, building, and maintaining the built environment.
 - (3) Extended Practicum in Masonry Technology is an occupationally specific course designed to provide classroom technical instruction or work-based learning experiences. Instruction may be

delivered through laboratory training or through career preparation delivery arrangements. Safety and career opportunities are included, in addition to work ethics and job-related study in the classroom. Trade and industrial education provides the knowledge, skills, and technologies required for employment in masonry construction. Students will develop knowledge of the concepts and skills related to this trade in order to apply them to personal/career development. Trade and industrial education depends on and supports integration of academic, career, and technical knowledge and skills. To prepare for success, students must have opportunities to reinforce, apply, and transfer their knowledge and skills to a variety of settings and problems. Knowledge about career opportunities, requirements, and expectations and the development of workplace skills prepare students for success. For safety and liability considerations, including power tools usage during training, limiting course enrollment to 15 students is recommended.

- (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) participate in a paid or unpaid, laboratory- or work-based application of previously studied knowledge and skills related to masonry technology;
 - (B) participate in training, education, or preparation for licensure, certification, or other relevant credentials to prepare for employment;
 - (C) demonstrate professional standards and personal qualities needed to be employable such as punctuality, time management, initiative, and cooperation with increased fluency;
 - (D) employ teamwork and conflict-management skills with increased fluency to achieve collective goals; and
 - (E) employ planning and time-management skills and tools with increased fluency to enhance results and complete work tasks.
- (2) The student implements advanced professional communications strategies. The student is expected to:
 - (A) demonstrate verbal and non-verbal communication consistently in a clear, concise, and effective manner;
 - (B) observe and interpret verbal and nonverbal cues and behaviors to enhance communication; and
 - (C) apply active listening skills to obtain and clarify information.
- (3) The student applies concepts of critical thinking and problem solving. The student is expected to employ critical-thinking skills with increased fluency both independently and in groups to solve problems and make decisions.
- (4) The student understands and applies proper safety techniques in the workplace. The student is expected to:
 - (A) demonstrate understanding of and consistently follow workplace safety rules and regulations; and
 - (B) demonstrate knowledge of procedures for reporting and handling accidents and safety incidents.
- (5) The student understands the professional, ethical, and legal responsibilities in masonry technology. The student is expected to:

- (A) demonstrate a positive, productive work ethic by performing assigned tasks as directed;
- (B) apply ethical reasoning to a variety of situations in order to make ethical decisions; and
- (C) comply with all applicable rules, laws, and regulations in a consistent manner.
- (6) The student participates in a masonry technology experience. The student is expected to:
 - (A) conduct, document, and evaluate learning activities in a supervised masonry technology experience;
 - (B) develop advanced technical knowledge and skills related to the student's occupational objective;
 - (C) demonstrate proficiency spreading mortar;
 - (D) construct single wythe brick walls with level;
 - (E) construct a brick wall demonstrating different brick positions in a wall;
 - (F) build a brick column with advanced proficiency;
 - (G) lay concrete masonry unit (CMU) with advanced proficiency;
 - (H) build a block CMU column with advanced proficiency;
 - (I) construct a composite masonry wall of brick and block;
 - (J) install coping on a masonry wall with advanced proficiency;
 - (K) construct a natural stone wall with advanced proficiency;
 - (L) install manufactured stone with advanced proficiency;
 - (M) lay brick and CMU to a line with advanced proficiency;
 - (N) demonstrate growth of technical skill competencies;
 - (O) evaluate strengths and weaknesses in technical skill proficiency; and
 - (P) collect representative work samples.

§130.71. Extended Practicum in Architectural Design (One Credit), Adopted 2015.

- (a) General requirements. This course is recommended for students in Grade 12. The practicum course is a paid or unpaid capstone experience for students participating in a coherent sequence of career and technical education courses in the Architecture and Construction Career Cluster. Prerequisite: Architectural Design II. Corequisite: Practicum in Architectural Design. This course must be taken concurrently with Practicum in Architectural Design and may not be taken as a stand-alone course. Students shall be awarded one credit for successful completion of this course. A student may repeat this course once for credit provided that the student is experiencing different aspects of the industry and demonstrating proficiency in additional and more advanced knowledge and skills.
- (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 Architecture and Construction Career Cluster focuses on designing, planning, managing, building, and maintaining the built environment.
 - (3) Extended Practicum in Architectural Design is an occupationally specific course designed to provide technical instruction in architectural design. Safety and career opportunities are included in addition to work ethics and architectural design study.
 - (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) participate in a paid or unpaid, laboratory- or work-based application of previously studied knowledge and skills related to architectural design;
 - (B) participate in training, education, or preparation for licensure, certification, or other relevant credentials to prepare for employment;
 - (C) demonstrate professional standards and personal qualities needed to be employable such as self-discipline, positive attitude, integrity, leadership, appreciation for diversity, customer service, work ethic, and adaptability with increased fluency;
 - (D) employ teamwork and conflict-management skills with increased fluency to achieve collective goals; and
 - (E) employ planning and time-management skills and tools with increased fluency to enhance results and complete work tasks.
- (2) The student applies professional communications strategies. The student is expected to:
- (A) demonstrate verbal and non-verbal communication consistently in a clear, concise, and effective manner;
 - (B) apply active listening skills to obtain and clarify information;
 - (C) create and deliver formal and informal presentations effectively;
 - (D) analyze, interpret, and effectively communicate information, data, and observations; and
 - (E) observe and interpret verbal and nonverbal cues and behaviors to enhance communication.
- (3) The student implements advanced problem-solving methods. The student is expected to:
- (A) employ critical-thinking skills with increased fluency both independently and in groups to solve problems and make decisions;
 - (B) analyze elements of problems to develop creative and innovative solutions;
 - (C) apply decision-making techniques with increased fluency to the selection of technological solutions;
 - (D) develop or improve a product by following a problem-solving strategy;
 - (E) apply critical-thinking strategies to the analysis and evaluation of proposed technological solutions; and
 - (F) conduct technical research to gather information necessary for decision making.
- (4) The student understands and applies proper safety and security techniques in the workplace. The student is expected to:
- (A) demonstrate understanding of and consistently follow workplace safety rules and regulations;
 - (B) handle and dispose of environmentally hazardous materials used in the student's chosen field in a proper manner; and
 - (C) demonstrate use of tools and equipment commonly employed in the architectural design field in a safe manner.

- (5) The student understands the professional, ethical, and legal responsibilities in architectural design. The student is expected to:
 - (A) demonstrate a positive, productive work ethic by performing assigned tasks as directed;
 - (B) apply ethical reasoning to a variety of situations in order to make ethical decisions;
 - (C) exhibit ethical practices as defined by the architectural industry; and
 - (D) comply with all applicable rules, laws, and regulations in a consistent manner.
- (6) The student participates in a supervised architectural design experience. The student is expected to:
 - (A) conduct, document, and evaluate learning activities in a supervised architectural design experience;
 - (B) develop advanced technical knowledge and skills related to the student's occupational objective;
 - (C) read and interpret appropriate schematics, charts, graphs, drawings, construction documents, directions, manuals, bulletins, and regulations;
 - (D) design multimedia communication and rendering products using appropriate architectural design processes and techniques;
 - (E) produce multimedia communication and rendering products using the appropriate tools, equipment, machines, and materials;
 - (F) evaluate strengths and weaknesses in technical skill proficiency; and
 - (G) collect representative work samples.

§130.72. Extended Practicum in Interior Design (One Credit), Adopted 2015.

- (a) General requirements. This course is recommended for students in Grade 12. The practicum course is a paid or unpaid capstone experience for students participating in a coherent sequence of career and technical education courses in the Architecture and Construction Career Cluster. Prerequisite: Interior Design II. Corequisite: Practicum in Interior Design. This course must be taken concurrently with Practicum in Interior Design and may not be taken as a stand-alone course. Students shall be awarded one credit for successful completion of this course. A student may repeat this course once for credit provided that the student is experiencing different aspects of the industry and demonstrating proficiency in additional and more advanced knowledge and skills.
- (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 Architecture and Construction Career Cluster focuses on designing, planning, managing, building, and maintaining the built environment.
 - (3) Extended Practicum in Interior Design is an occupationally specific course designed to provide job-specific skills through laboratory training, job shadowing, or work situations in areas compatible with identified career goals in interior design. In addition, students will be expected to develop knowledge and skills related to housing, furnishings, and equipment construction or equipment management and services.
 - (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) participate in a paid or unpaid, laboratory- or work-based application of previously studied knowledge and skills related to interior design;
 - (B) participate in training, education, or preparation for licensure, certification, or other relevant credentials to prepare for employment;
 - (C) demonstrate professional standards and personal qualities needed to be employable such as self-discipline, positive attitude, integrity, leadership, appreciation for diversity, customer service, work ethic, and adaptability with increased fluency;
 - (D) employ teamwork and conflict-management skills with increased fluency to achieve collective goals; and
 - (E) employ planning and time-management skills and tools with increased fluency to enhance results and complete work tasks.
- (2) The student applies professional communications strategies. The student is expected to:
 - (A) demonstrate verbal and non-verbal communication consistently in a clear, concise, and effective manner;
 - (B) apply active listening skills to obtain and clarify information;
 - (C) create and deliver formal and informal presentations effectively;
 - (D) analyze, interpret, and effectively communicate information, data, and observations; and
 - (E) observe and interpret verbal and nonverbal cues and behaviors to enhance communication.
- (3) The student implements advanced problem-solving methods. The student is expected to:
 - (A) employ critical-thinking skills with increased fluency both independently and in groups to solve problems and make decisions;
 - (B) analyze elements of problems to develop creative and innovative solutions; and
 - (C) conduct technical research to gather information necessary for decision making.
- (4) The student understands and applies proper safety and security techniques in the workplace. The student is expected to:
 - (A) demonstrate understanding of and consistently follow workplace safety rules and regulations;
 - (B) apply safety rules in performing various workplace procedures according to industry standards; and
 - (C) demonstrate safe and skillful tool care and use.
- (5) The student understands the professional, ethical, and legal responsibilities in interior design. The student is expected to:
 - (A) demonstrate a positive, productive work ethic by performing assigned tasks as directed;
 - (B) apply ethical reasoning to a variety of situations in order to make ethical decisions;
 - (C) exhibit ethical practices as defined by the housing, furnishings, and equipment industries and
 - (D) comply with all applicable rules, laws, and regulations in a consistent manner.
- (6) The student participates in a supervised interior design experience. The student is expected to:

- (A) conduct, document, and evaluate learning activities in a supervised interior design experience;
- (B) develop advanced technical knowledge and skills related to the student's occupational objective;
- (C) apply elements and principles of design for coordinating furnishings with advanced proficiency;
- (D) identify characteristics of materials and workmanship in relationship to appearance, performance, use, and care of furnishings;
- (E) demonstrate advanced procedures for the care and maintenance of different types of furnishings and equipment;
- (F) determine appropriate use of accessories, lighting, materials, and space in various environments;
- (G) arrange furniture and equipment to accommodate floor plans to meet needs and wants;
- (H) apply knowledge of design application, selection, and construction to complete furnishings projects;
- (I) evaluate strengths and weaknesses in technical skill proficiency; and
- (J) collect representative work samples.

Subchapter C. Arts, Audio/Video Technology, and Communications

§130.117. Extended Practicum in Animation (One Credit), Adopted 2015.

- (a) General requirements. This course is recommended for students in Grades 11 and 12. The practicum course is a paid or unpaid capstone experience for students participating in a coherent sequence of career and technical education courses in the Arts, Audio/Video Technology, and Communications Career Cluster. Prerequisites: Animation II and Animation II Lab. Corequisite: Practicum in Animation. This course must be taken concurrently with Practicum in Animation and may not be taken as a stand-alone course. Students shall be awarded one credit for successful completion of this course. A student may repeat this course once for credit provided that the student is experiencing different aspects of the industry and demonstrating proficiency in additional and more advanced knowledge and skills.
- (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) Careers in animation span all aspects of the arts, audio/video technology, and communications industry. Building upon the concepts taught in Animation II and Animation II Lab, in addition to developing advanced technical knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications Career Cluster, students will be expected to develop an increasing understanding of the industry with a focus on applying pre-production, production, and post-production animation products in a professional environment. Instruction may be delivered through lab-based classroom experiences or career preparation opportunities.
 - (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 and employability skills as required by business and industry. The student is expected to:
 - (A) participate in a paid or unpaid, laboratory- or work-based application of previously studied knowledge and skills related to animation;
 - (B) participate in training, education, or preparation for licensure, certification, or other relevant credentials to prepare for employment;
 - (C) demonstrate professional standards and personal qualities needed to be employable such as leadership, teamwork, appreciation for diversity, conflict management, customer service, work ethic, and adaptability with increased fluency;
 - (D) demonstrate technology applications skills such as effective use of social media, email, Internet, publishing tools, presentation tools, spreadsheets, or databases for animation projects with increased fluency;
 - (E) use appropriate vocabulary and correct grammar and punctuation to compose and edit copy for a variety of written documents such as scripts, captions, schedules, reports, manuals, proposals, and other client-based documents; and
 - (F) employ effective planning and time-management skills with increased fluency by prioritizing tasks, following schedules, and tending to goal-relevant activities in a way that uses time wisely and optimizes efficiency and results.

- (2) The student implements advanced professional communications strategies. The student is expected to:
- (A) demonstrate verbal and non-verbal communication consistently in a clear, concise, and effective manner;
 - (B) analyze, interpret, and effectively communicate information, data, and observations;
 - (C) create and deliver formal and informal presentations effectively;
 - (D) observe and interpret verbal and nonverbal cues and behaviors to enhance communication; and
 - (E) exhibit public relations skills to maintain internal and external customer/client satisfaction.
- (3) The student implements advanced problem-solving methods. The student is expected to:
- (A) employ critical-thinking skills with increased fluency both independently and in groups to solve problems and make decisions;
 - (B) analyze elements of a problem to develop creative and innovative solutions; and
 - (C) demonstrate the transfer and adaptation of knowledge through the creation of original work.
- (4) The student understands and applies proper safety techniques in the workplace. The student is expected to demonstrate an understanding of and consistently follow workplace safety rules and regulations.
- (5) The student understands the professional, ethical, and legal responsibilities in animation. The student is expected to:
- (A) demonstrate a positive, productive work ethic by performing assigned tasks as directed;
 - (B) exhibit ethical conduct by providing proper credit for ideas and maintaining privacy of sensitive content;
 - (C) model respect for intellectual property when manipulating, morphing, and editing graphics, video, text, and sound;
 - (D) practice safe, legal, and responsible use of information and technology; and
 - (E) comply with all applicable rules, laws, and regulations in a consistent manner.
- (6) The student engages in production activities for successful execution of an animation experience or project. The student is expected to:
- (A) conduct, document, and evaluate learning activities in a supervised animation experience;
 - (B) develop advanced technical knowledge and skills related to the student's occupational objective;
 - (C) implement an appropriate coherent sequence of production events;
 - (D) demonstrate appropriate use of necessary equipment and crew for quality productions;
 - (E) demonstrate appropriate use of editing systems;
 - (F) monitor production schedule, research-based production costs, and delivery and distribution to ensure alignment with client needs and expectations;
 - (G) make necessary adjustments regarding compatibility issues, including digital file formats and cross-platform connectivity;
 - (H) implement the appropriate delivery formats for the target audience;
 - (I) analyze distribution options to achieve optimal project reach;

- (J) demonstrate growth of technical skill competencies;
- (K) evaluate strengths and weaknesses in technical skill proficiency; and
- (L) collect representative work samples.

§130.118. Extended Practicum in Audio/Video Production (One Credit), Adopted 2015.

- (a) General requirements. This course is recommended for students in Grades 11 and 12. The practicum course is a paid or unpaid capstone experience for students participating in a coherent sequence of career and technical education courses in the Arts, Audio/Video Technology, and Communications Career Cluster. Prerequisites: Audio/Video Production II and Audio/Video Production II Lab. Corequisite: Practicum in Audio/Video Production. This course must be taken concurrently with Practicum in Audio/Video Production and may not be taken as a stand-alone course. Students shall be awarded one credit for successful completion of this course. A student may repeat this course once for credit provided that the student is experiencing different aspects of the industry and demonstrating proficiency in additional and more advanced knowledge and skills.
- (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) Careers in audio/video production span all aspects of the audio/video communications industry. Building upon the concepts taught in Audio/Video Production II and Audio/Video Production II Lab, in addition to developing advanced technical knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications Career Cluster, students will be expected to develop an increasing understanding of the industry with a focus on applying pre-production, production, and post-production audio and video products in a professional environment. This course may be implemented in an advanced audio/video or audio format. Instruction may be delivered through lab-based classroom experiences or career preparation opportunities.
 - (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) participate in a paid or unpaid, laboratory- or work-based application of previously studied knowledge and skills related to audio/video production;
 - (B) participate in training, education, or preparation for licensure, certification, or other relevant credentials to prepare for employment;
 - (C) demonstrate professional standards and personal qualities needed to be employable such as effective oral and written communication, leadership, teamwork, appreciation for diversity, conflict management, customer service, work ethic, and adaptability with increased fluency;
 - (D) demonstrate technology applications skills such as effective use of social media, email, Internet, publishing tools, presentation tools, spreadsheets, or databases for audio and video production projects with increased fluency;

- (E) use appropriate vocabulary and correct grammar and punctuation to compose and edit copy for a variety of written documents such as scripts, captions, schedules, reports, manuals, proposals, and other client-based documents; and
- (F) employ effective planning and time-management skills with increased fluency to complete work tasks.
- (2) The student implements advanced professional communications strategies. The student is expected to:
 - (A) demonstrate verbal and non-verbal communication consistently in a clear, concise, and effective manner;
 - (B) analyze, interpret, and effectively communicate information, data, and observations;
 - (C) create and deliver formal and informal presentations effectively; and
 - (D) exhibit public relations skills to maintain internal and external customer/client satisfaction.
- (3) The student implements advanced problem-solving methods. The student is expected to:
 - (A) employ critical-thinking skills with increased fluency both independently and in groups to solve problems and make decisions; and
 - (B) demonstrate the transfer and adaptation of knowledge through the creation of original work.
- (4) The student understands and applies proper safety techniques in the workplace. The student is expected to:
 - (A) demonstrate an understanding of and consistently follow workplace safety rules and regulations; and
 - (B) recognize and resolve potential safety concerns.
- (5) The student understands the professional, ethical, and legal responsibilities in audio/video production. The student is expected to:
 - (A) demonstrate a positive, productive work ethic by performing assigned tasks as directed;
 - (B) exhibit ethical conduct by providing proper credit for ideas and maintaining privacy of sensitive content;
 - (C) model respect for intellectual property when manipulating, morphing, and editing graphics, video, text, and sound;
 - (D) practice safe, legal, and responsible use of information and technology;
 - (E) show integrity by choosing the ethical course of action when making decisions; and
 - (F) comply with all applicable rules, laws, and regulations in a consistent manner.
- (6) The student participates in an audio/video production experience. The student is expected to:
 - (A) conduct, document, and evaluate learning activities in a supervised audio/video production experience;
 - (B) develop advanced technical knowledge and skills related to the student's occupational objective;
 - (C) demonstrate an advanced understanding of a client-based production in all stages of production;
 - (D) engage in pre-production activities such as identifying cast, crew, equipment, and location requirements; developing a budget; and analyzing script and storyboard processes for successful execution of a project;

- (E) engage in production activities for successful execution of the project, including making decisions appropriate for each element of a production;
- (F) engage in post-production activities such as making necessary adjustments regarding compatibility issues, including digital file formats and cross-platform connectivity, and researching the appropriate delivery formats for the target audience for a successful output and distribution of a project;
- (G) demonstrate growth of technical skill competencies;
- (H) evaluate strengths and weaknesses in technical skill proficiency; and
- (I) collect representative work samples.

§130.119. Extended Practicum in Printing and Imaging Technology (One Credit), Adopted 2015.

- (a) General requirements. This course is recommended for students in Grades 10-12. The practicum course is a paid or unpaid capstone experience for students participating in a coherent sequence of career and technical education courses in the Arts, Audio/Video Technology, and Communications Career Cluster. Prerequisites: Printing and Imaging Technology II and Printing and Imaging Technology II Lab. Corequisite: Practicum in Printing and Imaging Technology. This course must be taken concurrently with Practicum in Printing and Imaging Technology and may not be taken as a stand-alone course. Students shall be awarded one credit for successful completion of this course. A student may repeat this course once for credit provided that the student is experiencing different aspects of the industry and demonstrating proficiency in additional and more advanced knowledge and skills.
- (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) Careers in printing span all aspects of the industry, including prepress, press, and finishing and bindery operations. In addition to developing advanced technical knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications Career Cluster, students will be expected to develop an advanced technical understanding of the printing industry with a focus on finishing and bindery operations and customer-based projects. Instruction may be delivered through lab-based classroom experiences or career preparation opportunities.
 - (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) participate in a paid or unpaid, laboratory- or work-based application of previously studied knowledge and skills related to printing and imaging technology;
 - (B) participate in training, education, or preparation for licensure, certification, or other relevant credentials to prepare for employment;
 - (C) demonstrate professional standards and personal qualities needed to be employable such as self-discipline, self-worth, positive attitude, integrity, and commitment with increased fluency;

- (D) demonstrate use of personal information management, email, Internet, writing and publishing, presentation, and spreadsheet or database applications for printing and imaging projects with increased fluency;
- (E) employ teamwork and conflict-management skills with increased fluency to achieve collective goals; and
- (F) employ planning and time-management skills and tools with increased fluency to enhance results and complete work tasks.
- (2) The student implements advanced communications strategies. The student is expected to:
 - (A) demonstrate verbal and non-verbal communication consistently in a clear, concise, and effective manner;
 - (B) present information formally and informally effectively;
 - (C) apply active listening skills to obtain and clarify information; and
 - (D) exhibit public relations skills to maintain internal and external customer/client satisfaction.
- (3) The student implements advanced problem-solving methods. The student is expected to employ critical-thinking skills with increased fluency both independently and in groups to solve problems and make decisions.
- (4) The student understands and applies proper safety and security techniques in the workplace. The student is expected to demonstrate an understanding of and consistently follow workplace safety rules and regulations.
- (5) The student understands the professional, ethical, and legal responsibilities in printing and imaging technology. The student is expected to:
 - (A) demonstrate a positive, productive work ethic by performing assigned tasks as directed;
 - (B) exhibit ethical conduct by maintaining client confidentiality and privacy of sensitive content and providing proper credit for ideas;
 - (C) apply copyright laws in relation to fair use and duplication of materials in a consistent manner;
 - (D) apply Creative Commons laws, including all licensing; and
 - (E) comply with all applicable rules, laws, and regulations in a consistent manner.
- (6) The student implements an advanced technical understanding of professional printing and imaging. The student is expected to:
 - (A) conduct, document, and evaluate learning activities in a supervised printing and imaging technology experience;
 - (B) practice use of various printing systems;
 - (C) demonstrate use of appropriate printing processes with increased fluency;
 - (D) demonstrate use of binding processes such as cutting, folding, and trimming with increased fluency;
 - (E) demonstrate folding of a variety of print pieces by adapting equipment as needed;
 - (F) use appropriate embossing, foil stamping, die cutting, and laminating samples with increased fluency;
 - (G) meet customer needs for labeling, packaging, and shipping according to regulatory standards;

- (H) develop advanced technical knowledge and skills related to the student's occupational objective;
- (I) demonstrate growth of technical skill competencies;
- (J) evaluate strengths and weaknesses in technical skill proficiency; and
- (K) collect representative work samples.

§130.120. Extended Practicum in Commercial Photography (One Credit), Adopted 2015.

- (a) General requirements. This course is recommended for students in Grades 10-12. The practicum course is a paid or unpaid capstone experience for students participating in a coherent sequence of career and technical education courses in the Arts, Audio/Video Technology, and Communications Career Cluster. Prerequisites: Commercial Photography I and Commercial Photography I Lab along with teacher recommendation. Corequisite: Practicum in Commercial Photography. This course must be taken concurrently with Practicum in Commercial Photography and may not be taken as a stand-alone course. Students shall be awarded one credit for successful completion of this course. A student may repeat this course once for credit provided that the student is experiencing different aspects of the industry and demonstrating proficiency in additional and more advanced knowledge and skills.
- (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) Careers in commercial photography span all aspects of the industry from setting up a shot to delivering products in a competitive market. In addition to developing advanced technical knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications Career Cluster, students will be expected to develop an advanced technical understanding of the commercial photography industry with a focus on producing, promoting, and presenting professional quality photographs.
 - (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) participate in a paid or unpaid, laboratory- or work-based application of previously studied knowledge and skills related to commercial photography;
 - (B) participate in training, education, or preparation for licensure, certification, or other relevant credentials to prepare for employment;
 - (C) demonstrate positive work behaviors and personal qualities needed to be employable with increased fluency;
 - (D) demonstrate use of personal information management, email, Internet, writing and publishing, presentation, and spreadsheet or database applications for commercial photography projects with increased fluency;
 - (E) employ teamwork and conflict-management skills with increased fluency to achieve collective goals; and

- (F) employ planning and time-management skills and tools with increased fluency to enhance results and complete work tasks.
- (2) The student applies professional communications strategies. The student is expected to:
 - (A) demonstrate verbal and non-verbal communication consistently in a clear, concise, and effective manner;
 - (B) analyze, interpret, and effectively communicate information, data, and observations;
 - (C) present information formally and informally effectively;
 - (D) apply active listening skills to obtain and clarify information; and
 - (E) exhibit public relations skills to maintain internal and external customer/client satisfaction.
- (3) The student implements advanced problem-solving methods. The student is expected to employ critical-thinking skills with increased fluency both independently and in groups to solve problems and make decisions.
- (4) The student understands and applies proper safety techniques in the workplace. The student is expected to demonstrate understanding of and consistently follow workplace safety rules and regulations.
- (5) The student understands the professional, ethical, and legal responsibilities in commercial photography. The student is expected to:
 - (A) demonstrate a positive, productive work ethic by performing assigned tasks as directed;
 - (B) practice ethical conduct related to interacting with others such as maintaining client confidentiality and privacy of sensitive content and providing proper credit for ideas; and
 - (C) comply with all applicable rules, laws, and regulations in a consistent manner.
- (6) The student participates in a commercial photography experience. The student is expected to:
 - (A) conduct, document, and evaluate learning activities in a supervised commercial photography experience;
 - (B) demonstrate the use of appropriate cameras and lenses with increased proficiency;
 - (C) apply appropriate photographic composition and layout principles with increased fluency;
 - (D) apply effective photographic lighting techniques such as three point, studio, portraiture, and product with increased fluency;
 - (E) produce professional-quality photographs;
 - (F) demonstrate use of the most appropriate types of photographic paper for projects;
 - (G) demonstrate use of the most appropriate solutions for mounting, matting, or framing photographs;
 - (H) demonstrate use of appropriate, current, and industry-standard production processes to produce photographs;
 - (I) demonstrate use of appropriate resolution and digital file formats;
 - (J) demonstrate growth of technical skill competencies;
 - (K) evaluate strengths and weaknesses in technical skill proficiency; and
 - (L) collect representative work samples.

§130.121. Extended Practicum in Fashion Design (Two to Three Credits), Adopted 2015.

- (a) General requirements. This course is for students in Grades 11 and 12. The practicum course is a paid or unpaid capstone experience for students participating in a coherent sequence of career and technical education courses in the Arts, Audio/Video Technology, and Communications Career Cluster. Prerequisite: Fashion Design II and Fashion Design II Lab. Corequisite: Practicum in Fashion Design. This course must be taken concurrently with Practicum in Fashion Design and may not be taken as a stand-alone course. Students shall be awarded one credit for successful completion of this course. A student may repeat this course once for credit provided that the student is experiencing different aspects of the industry and demonstrating proficiency in additional and more advanced knowledge and skills.
- (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) Careers in fashion span all aspects of the textile and apparel industries. Within this context, in addition to developing advanced technical knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications Career Cluster, students will be expected to develop an advanced technical understanding of the business aspects of fashion, with emphasis on promotion and retailing. Instruction may be delivered through lab-based classroom experiences or career preparation opportunities.
 - (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) participate in a paid or unpaid, laboratory- or work-based application of previously studied knowledge and skills related to fashion design;
 - (B) participate in training, education, or preparation for licensure, certification, or other relevant credentials to prepare for employment;
 - (C) demonstrate professional standards and personal qualities needed to be employable such as self-discipline, self-worth, positive attitude, integrity, and commitment with increased fluency;
 - (D) demonstrate use of personal information management, email, Internet, and industry programs for fashion, textiles, and apparel projects with increased fluency; and
 - (E) employ planning and time-management skills and tools with increased fluency to enhance results and complete work tasks.
 - (2) The student implements advanced professional communications strategies. The student is expected to:
 - (A) demonstrate verbal and non-verbal communication consistently in a clear, concise, and effective manner;
 - (B) analyze, interpret, and effectively communicate information, data, and observations;
 - (C) apply active listening skills to obtain and clarify information;

- (D) observe and interpret verbal and nonverbal cues and behaviors to enhance communication; and
- (E) exhibit public relations skills to maintain internal and external customer/client satisfaction.
- (3) The student implements advanced problem-solving methods. The student is expected to employ critical-thinking skills with increased fluency both independently and in groups to solve problems and make decisions.
- (4) The student understands and applies proper safety techniques in the workplace. The student is expected to:
 - (A) demonstrate understanding of and consistently follow workplace safety rules and regulations; and
 - (B) demonstrate procedures for reporting and handling accidents, safety, and security incidents.
- (5) The student understands the professional, ethical, and legal responsibilities in fashion design. The student is expected to:
 - (A) demonstrate a positive, productive work ethic by performing assigned tasks as directed;
 - (B) practice ethical conduct related to interacting with others such as maintaining client confidentiality and privacy of sensitive content and providing proper credit for ideas;
 - (C) employ ethical practices in promotional activities; and
 - (D) comply with all applicable rules, laws, and regulations in a consistent manner.
- (6) The student participates in a fashion design experience. The student is expected to:
 - (A) conduct, document, and evaluate learning activities in a supervised fashion design experience;
 - (B) compose a scenario plan for retail pricing, sales, inventory, and purchasing;
 - (C) plan special fashion events such as fashion shows, trunk shows, retail shows, and educational events;
 - (D) create product displays using the principles of design;
 - (E) implement aspects of the fashion buying process such as preparing a buying plan, completing purchase orders, and processing invoices;
 - (F) demonstrate growth of technical skill competencies;
 - (G) evaluate strengths and weaknesses in technical skill proficiency; and
 - (H) collect representative work samples.

§130.122. Extended Practicum in Graphic Design and Illustration (One Credit), Adopted 2015.

- (a) General requirements. This course is recommended for students in Grades 10-12. The practicum course is a paid or unpaid capstone experience for students participating in a coherent sequence of career and technical education courses in the Arts, Audio/Video Technology, and Communications Career Cluster. Prerequisites: Graphic Design and Illustration II and Graphic Design and Illustration II Lab. Corequisite: Practicum in Graphic Design and Illustration. This course must be taken concurrently with Practicum in Graphic Design and Illustration and may not be taken as a stand-alone course. Students shall be awarded one credit for successful completion of this course. A student may repeat this course once for credit provided that the student is experiencing different aspects of the industry and demonstrating proficiency in additional and more advanced knowledge and skills.
- (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 is focused on careers in designing, producing, exhibiting, performing, writing, and publishing multimedia content, including visual and performing arts and design, journalism, and entertainment services.
 - (3) Careers in graphic design and illustration span all aspects of the advertising and visual communications industry. Within this context, in addition to developing technical knowledge and skills needed for success in the Arts, Audio/Video Technology, and Communications Career Cluster, students will be expected to develop a technical understanding of the industry with a focus on skill proficiency. Instruction may be delivered through lab-based classroom experiences or career preparation opportunities.
 - (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) participate in a paid or unpaid, laboratory- or work-based application of previously studied knowledge and skills related to graphic design or illustration;
 - (B) participate in training, education, or preparation for licensure, certification, or other relevant credentials to prepare for employment;
 - (C) demonstrate professional standards and personal qualities needed to be employable such as self-discipline, self-worth, positive attitude, integrity, and commitment with increased fluency;
 - (D) demonstrate use of personal information management, email, Internet, writing and publishing, and presentation applications for graphic design and illustration projects with increased fluency; and
 - (E) employ planning and time-management skills and tools with increased fluency to enhance results and complete work tasks.
 - (2) The student implements advanced professional communications strategies. The student is expected to:
 - (A) demonstrate verbal and non-verbal communication consistently in a clear, concise, and effective manner;
 - (B) analyze, interpret, and effectively communicate information;
 - (C) apply active listening skills to obtain and clarify information; and
 - (D) exhibit public relations skills to maintain internal and external customer/client satisfaction.
 - (3) The student implements advanced problem-solving methods. The student is expected to employ critical-thinking skills with increased fluency both independently and in groups to solve problems and make decisions.
 - (4) The student understands and applies proper safety techniques in the workplace. The student is expected to demonstrate understanding of and consistently follow workplace safety rules and regulations.

- (5) The student understands the professional, ethical, and legal responsibilities in graphic design and illustration. The student is expected to:
- (A) demonstrate a positive, productive work ethic by performing assigned tasks as directed;
 - (B) practice safe, responsible, and legal behavior while using technology tools and resources;
 - (C) practice ethical conduct when interacting with others such as maintaining client confidentiality and privacy of sensitive content and providing proper credit for ideas;
 - (D) apply copyright laws in relation to fair use and acquisition and use of digital information using established methods to cite sources;
 - (E) practice respect for intellectual property when manipulating, morphing, and editing graphics, video, text, and sound;
 - (F) demonstrate proper etiquette and knowledge of acceptable use policies when using networks, especially resources on the Internet and intranet; and
 - (G) comply with all applicable rules, laws, and regulations in a consistent manner.
- (6) The student participates in a graphic design and illustration experience. The student is expected to:
- (A) conduct, document, and evaluate learning activities in a supervised graphic design and illustration experience;
 - (B) interpret, evaluate, and justify design decisions;
 - (C) identify and apply art elements and principles to designs and illustrations with increased fluency;
 - (D) employ a creative design process to create professional-quality, two- or three-dimensional projects;
 - (E) demonstrate growth of technical skill competencies;
 - (F) evaluate strengths and weaknesses in technical skill proficiency; and
 - (G) collect representative work samples.

Subchapter D. Business Management and Administration

§130.144. Extended Practicum in Business Management (One Credit), Adopted 2015.

- (a) General requirements. This course is recommended for students in Grades 11 and 12. The practicum course is a paid or unpaid capstone experience for students participating in a coherent sequence of career and technical education courses in the Business Management and Administration Career Cluster. Recommended prerequisites: Touch System Data Entry and Business Management or Business Information Management II. Corequisite: Practicum in Business Management. This course must be taken concurrently with Practicum in Business Management and may not be taken as a stand-alone course. Students shall be awarded one credit for successful completion of this course. A student may repeat this course once for credit provided that the student is experiencing different aspects of the industry and demonstrating proficiency in additional and more advanced knowledge and skills.
- (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 Business Management and Administration Career Cluster focuses on careers in planning, organizing, directing, and evaluating business functions essential to efficient and productive business operations.
 - (3) Extended Practicum in Business Management is designed to give students supervised practical application of previously studied knowledge and skills. Practicum experiences occur in a paid or unpaid arrangement and a variety of locations appropriate to the nature and level of experience. Students implement personal and interpersonal skills to strengthen individual performance in the workplace and in society and to make a successful transition to the workforce or postsecondary education. Students apply technical skills to address business applications of emerging technologies. Students develop a foundation in the economic, financial, technological, international, social, and ethical aspects of business to become competent consumers, employees, and entrepreneurs. Students enhance reading, writing, computing, communication, and reasoning skills and apply them to the business environment. Students incorporate a broad base of knowledge that includes the legal, managerial, marketing, financial, ethical, and international dimensions of business to make appropriate business decisions.
 - (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) participate in a paid or unpaid, laboratory- or work-based application of previously studied knowledge and skills related to business management;
 - (B) participate in training, education, or preparation for licensure, certification, or other relevant credentials to prepare for employment;
 - (C) demonstrate professional standards and personal qualities needed to be employable such as self-discipline, integrity, customer service, work ethic, and adaptability with increased fluency;
 - (D) complete tasks with the highest standards to ensure quality products and services;
 - (E) employ teamwork and conflict-management skills to achieve collective goals with increased fluency; and

- (F) employ planning and time-management skills and tools with increased fluency to enhance results and complete work tasks.
- (2) The student applies professional communications strategies. The student is expected to:
 - (A) demonstrate proper use of written, verbal, and visual communication techniques with increased proficiency;
 - (B) apply active listening skills to obtain and clarify information;
 - (C) create and deliver formal and informal presentations effectively;
 - (D) analyze, interpret, and effectively communicate information; and
 - (E) exhibit public relations skills to maintain internal and external customer/client satisfaction.
- (3) The student implements advanced problem-solving methods. The student is expected to:
 - (A) employ critical-thinking skills independently and in groups with increased fluency to solve problems and make decisions;
 - (B) apply critical-thinking strategies with increased fluency to develop solutions using appropriate technologies and resources;
 - (C) conduct technical research to gather information necessary for decision making; and
 - (D) analyze elements of a problem to develop creative and innovative solutions.
- (4) The student understands and applies proper safety and security techniques in the workplace. The student is expected to:
 - (A) understand and consistently follow workplace safety rules and regulations;
 - (B) adhere to technology safety and security policies such as acceptable use policy and web page policies; and
 - (C) follow policies to prevent loss of data integrity.
- (5) The student understands the professional, ethical, and legal responsibilities in business management. The student is expected to:
 - (A) demonstrate a positive, productive work ethic by performing assigned tasks as directed;
 - (B) describe and practice ethical and legal responsibilities associated with business management;
 - (C) show integrity by choosing the ethical course of action when making decisions; and
 - (D) comply with all applicable rules, laws, and regulations in a consistent manner.
- (6) The student participates in a business management experience. The student is expected to:
 - (A) conduct, document, and evaluate learning activities in a supervised business management experience;
 - (B) develop advanced technical knowledge and skills related to the student's occupational objective;
 - (C) facilitate internal and external office communications to support work activities;
 - (D) demonstrate appropriate use of information technology tools to manage and perform work responsibilities;
 - (E) create customary styles of business documents such as memoranda, letters, emails, and reports, as appropriate;
 - (F) perform scheduling functions electronically to facilitate on-time, prompt completion of work activities;

- (G) demonstrate growth of technical skill competencies;
- (H) evaluate strengths and weaknesses in technical skill proficiency; and
- (I) collect representative work samples.

Subchapter E. Education and Training

§130.166. Extended Practicum in Education and Training (One Credit), Adopted 2015.

- (a) General requirements. This course is recommended for students in Grade 12. The practicum course is a paid or unpaid capstone experience for students participating in a coherent sequence of career and technical education courses in the Education and Training Career Cluster. Prerequisite: Instructional Practices. Recommended prerequisites: Principles of Education and Training and Human Growth and Development. Corequisite: Practicum in Education and Training. This course must be taken concurrently with Practicum in Education and Training and may not be taken as a stand-alone course. Students shall be awarded one credit for successful completion of this course. A student may repeat this course once for credit provided that the student is experiencing different aspects of the industry and demonstrating proficiency in additional and more advanced knowledge and skills.
- (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) Extended Practicum in Education and Training is a field-based internship that provides students background knowledge of child and adolescent development principles as well as principles of effective teaching and training practices. Students in the course work under the joint direction and supervision of both a teacher with knowledge of early childhood, middle childhood, and adolescence education and exemplary educators in direct instructional roles with elementary-, middle school-, and high school-aged students. Students learn to plan and direct individualized instruction and group activities, prepare instructional materials, assist with record keeping, make physical arrangements, and complete other responsibilities of classroom teachers, trainers, paraprofessionals, or other educational personnel.
 - (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) participate in a paid or unpaid, laboratory- or work-based application of previously studied knowledge and skills related to education and training;
 - (B) participate in training, education, or preparation for licensure, certification, or other relevant credentials to prepare for employment;
 - (C) demonstrate professional standards and personal qualities needed to be employable such as leadership, appreciation for diversity, conflict management, work ethic, and adaptability with increased fluency;
 - (D) demonstrate technology applications skills such as effective use of social media, email, Internet, publishing tools, presentation tools, spreadsheets, or databases with increased fluency to enhance work products; and
 - (E) employ planning and time-management skills and tools with increased fluency to enhance results and complete work tasks.
 - (2) The student applies professional communications strategies. The student is expected to:

- (A) demonstrate verbal and non-verbal communication consistently in a clear, concise, and effective manner;
- (B) effectively present information formally and informally;
- (C) analyze, interpret, and effectively communicate information; and
- (D) apply active listening skills to obtain and clarify information.
- (3) The student implements advanced problem-solving methods. The student is expected to employ critical-thinking skills with increased fluency both independently and in groups to solve problems and make decisions.
- (4) The student understands the professional, ethical, and legal responsibilities in education and training. The student is expected to:
 - (A) demonstrate a positive, productive work ethic by performing assigned tasks as directed;
 - (B) show integrity by choosing the ethical course of action when making decisions;
 - (C) demonstrate proper etiquette and knowledge of acceptable-use policies when using networks, especially resources on the Internet and intranet; and
 - (D) comply with all applicable rules, laws, and regulations in a consistent manner.
- (5) The student continues to participate in field-based experiences in education and training. The student is expected to:
 - (A) apply instructional strategies and concepts with increased fluency within a local educational or training facility;
 - (B) apply principles and theories that impact instructional planning;
 - (C) develop curriculum and related materials to support instruction that align with the Texas Essential Knowledge and Skills;
 - (D) demonstrate competency in foundation and enrichment subject areas;
 - (E) create lessons plans that meet instructional goals;
 - (F) document, assess, and reflect on instructional experiences; and
 - (G) collect representative work samples.

Subchapter G. Government and Public Administration

§130.211. Extended Practicum in Local, State, and Federal Government (One Credit), Adopted 2015.

- (a) General requirements. This course is recommended for students in Grades 11 and 12. The practicum course is a paid or unpaid capstone experience for students participating in a coherent sequence of career and technical education courses in the Government and Public Administration Career Cluster. Corequisite: Practicum in Local, State, and Federal Government. This course must be taken concurrently with Practicum in Local, State, and Federal Government and may not be taken as a stand-alone course. Students shall be awarded one credit for successful completion of this course. A student may repeat this course once for credit provided that the student is experiencing different aspects of the industry and demonstrating proficiency in additional and more advanced knowledge and skills.
- (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 Government and Public Administration Career Cluster focuses on planning and performing governmental functions at the local, state, and federal levels, including governance, national security, foreign service, planning, revenue and taxation, and regulations.
 - (3) Students in the Extended Practicum in Local, State, and Federal Government will concurrently learn advanced concepts of political science and government workings in the classroom setting and in the workplace. In addition, students will apply technical skills pertaining to government and public administration in a direct mentorship by individuals in professional settings such as government, public management and administration, national security, municipal planning, foreign service, revenue, taxation, and regulation.
 - (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) participate in a paid or unpaid, laboratory- or work-based application of previously studied knowledge and skills related to government or public administration;
 - (B) participate in training, education, or preparation for licensure, certification, or other relevant credentials to prepare for employment;
 - (C) demonstrate professional standards and personal qualities needed to be employable such as leadership, teamwork, appreciation for diversity, conflict management, work ethic, and adaptability with increased fluency;
 - (D) demonstrate technology applications skills such as effective use of social media, email, Internet, publishing tools, presentation tools, spreadsheets, or databases to enhance work products with increased fluency; and
 - (E) employ effective planning and time-management skills with increased fluency by prioritizing tasks, following schedules, and tending to goal-relevant activities in a way that uses time wisely and optimizes efficiency and results.
 - (2) The student implements advanced professional communications strategies. The student is expected to:

- (A) demonstrate verbal and non-verbal communication consistently in a clear, concise, and effective manner;
 - (B) analyze, interpret, and effectively communicate information, data, and observations;
 - (C) create and deliver formal and informal presentations in an effective manner; and
 - (D) observe and interpret verbal and nonverbal cues and behaviors to enhance communication.
- (3) The student applies concepts of critical thinking and problem solving. The student is expected to:
- (A) employ critical-thinking skills with increased fluency both independently and in groups to solve problems and make decisions; and
 - (B) analyze elements of a problem to develop creative and innovative solutions.
- (4) The student understands the professional, ethical, and legal responsibilities in government and public administration. The student is expected to:
- (A) demonstrate a positive, productive work ethic by performing assigned tasks as directed;
 - (B) show integrity by choosing the ethical course of action when making decisions; and
 - (C) comply with all applicable rules, laws, and regulations in a consistent manner.
- (5) The student conducts a project using analytical problem-solving techniques. The student is expected to:
- (A) conduct, document, and evaluate learning activities in a supervised government or public administration experience;
 - (B) research a problem, complete a feasibility study, or complete a product evaluation related to a government and public administration issue;
 - (C) collect primary data such as interviews, surveys, and observations;
 - (D) interpret and present quantitative data;
 - (E) evaluate strengths and weaknesses in technical skill proficiency; and
 - (F) collect representative work samples.

Subchapter H. Health Science

§130.234. Extended Practicum in Health Science (One Credit), Adopted 2015.

- (a) General requirements. This course is recommended for students in Grades 11 and 12. The practicum course is a paid or unpaid capstone experience for students participating in a coherent sequence of career and technical education courses in the Health Science Career Cluster. Prerequisites: Principles of Health Science, Health Science Theory, and Biology. Corequisite: Practicum in Health Science. This course must be taken concurrently with Practicum in Health Science and may not be taken as a stand-alone course. Students shall be awarded one credit for successful completion of this course. A student may repeat this course once for credit provided that the student is experiencing different aspects of the industry and demonstrating proficiency in additional and more advanced knowledge and skills.
- (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 Health Science Career Cluster focuses on planning, managing, and providing therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development.
 - (3) The Extended Practicum in Health Science course is designed to give students practical application of previously studied knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experience.
 - (4) To pursue a career in the health science industry, students should learn to reason, think critically, make decisions, solve problems, and communicate effectively. Students should recognize that quality health care depends on the ability to work well with others.
 - (5) The health science industry is comprised of diagnostic, therapeutic, health informatics, support services, and biotechnology research and development systems that function individually and collaboratively to provide comprehensive health care. Students should identify the employment opportunities, technology, and safety requirements of each system. Students are expected to apply the knowledge and skills necessary to pursue a health science career through further education and employment.
 - (6) Professional integrity in the health science industry is dependent on acceptance of ethical and legal responsibilities. Students are expected to employ their ethical and legal responsibilities, recognize limitations, and understand the implications of their actions.
 - (7) Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.
 - (8) 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) participate in a paid or unpaid, laboratory- or work-based application of previously studied knowledge and skills related to health science;
 - (B) participate in training, education, or preparation for licensure, certification, or other relevant credentials to prepare for employment;
 - (C) demonstrate professional standards and personal qualities needed to be employable such as self-discipline, positive attitude, integrity, commitment, leadership, appreciation for diversity, customer service, and adaptability with increased fluency;

- (D) employ teamwork and conflict-management skills with increased fluency to achieve collective goals; and
 - (E) employ planning and time-management skills and tools with increased fluency to enhance results and complete work tasks.
- (2) The student applies professional communications strategies. The student is expected to:
 - (A) demonstrate verbal and non-verbal communication consistently in a clear, concise, and effective manner;
 - (B) report information according to facility policies and procedures accurately;
 - (C) demonstrate therapeutic communication skills with increased fluency to provide quality care;
 - (D) analyze, interpret, and effectively communicate information, data, and observations;
 - (E) apply active listening skills to obtain and clarify information; and
 - (F) observe and interpret verbal and nonverbal cues and behaviors to enhance communication.
- (3) The student implements advanced problem-solving methods. The student is expected to employ critical-thinking skills with increased fluency both independently and in groups to solve problems and make decisions.
- (4) The student understands and applies proper safety techniques in the workplace to prevent hazardous situations. The student is expected to:
 - (A) demonstrate an understanding of and follow workplace safety rules and regulations;
 - (B) implement regulatory standards such as standard precautions and safe patient handling with increased fluency;
 - (C) evaluate hazardous materials according to the material safety data sheets in a consistent manner; and
 - (D) apply principles of infection control and body mechanics in all aspects of the health care industry.
- (5) The student understands the professional, ethical, and legal responsibilities in health science. The student is expected to:
 - (A) demonstrate a positive, productive work ethic by performing assigned tasks as directed;
 - (B) implement individual ethical and legal behavior standards according to professional regulatory agencies;
 - (C) show integrity by choosing the ethical course of action when making decisions; and
 - (D) comply with all applicable rules, laws, and regulations in a consistent manner.
- (6) The student implements the knowledge and skills of a health care professional necessary to acquire and retain employment. The student is expected to demonstrate proficiency in medical terminology and skills related to the health care of an individual.
- (7) The student participates in a supervised health science experience. The student is expected to:
 - (A) conduct, document, and evaluate learning activities in a supervised health science experience;
 - (B) develop advanced technical knowledge and skills related to a personal occupational objective;
 - (C) evaluate strengths and weaknesses in technical skill proficiency; and
 - (D) collect representative work samples.

Subchapter I. Hospitality and Tourism

§130.262. Extended Practicum in Culinary Arts (One Credit), Adopted 2015.

- (a) General requirements. This course is recommended for students in Grades 11 and 12. The practicum course is a paid or unpaid capstone experience for students participating in a coherent sequence of career and technical education courses in the Hospitality and Tourism Career Cluster. Prerequisite: Culinary Arts. Corequisite: Practicum in Culinary Arts. This course must be taken concurrently with Practicum in Culinary Arts and may not be taken as a stand-alone course. Students shall be awarded one credit for successful completion of this course. A student may repeat this course once for credit provided that the student is experiencing different aspects of the industry and demonstrating proficiency in additional and more advanced knowledge and skills.
- (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 Hospitality and Tourism Career Cluster focuses on the management, marketing, and operations of restaurants and other food/beverage services, lodging, attractions, recreation events, and travel-related services.
 - (3) Extended Practicum in Culinary Arts is a unique practicum that provides occupationally specific opportunities for students to participate in a learning experience that combines classroom instruction with actual business and industry career experiences. Extended Practicum in Culinary Arts integrates academic and career and technical education; provides more interdisciplinary instruction; and supports strong partnerships among schools, businesses, and community institutions with the goal of preparing students with a variety of skills in a fast-changing workplace.
 - (4) Students are taught employability skills to prepare for college and career success, which include job-specific skills applicable to their training plan, job interview techniques, communication skills, financial and budget activities, human relations, and portfolio development.
 - (5) Instruction may be delivered through school-based laboratory training or through work-based delivery arrangements such as cooperative education, mentoring, and job shadowing.
 - (6) Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.
 - (7) 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) participate in a paid or unpaid, laboratory- or work-based application of previously studied knowledge and skills related to culinary arts;
 - (B) participate in training, education, or preparation for licensure, certification, or other relevant credentials to prepare for employment;
 - (C) demonstrate professional standards and personal qualities needed to be employable such as self-discipline, positive attitude, integrity, leadership, customer service, work ethic, and adaptability with increased fluency;
 - (D) employ teamwork and conflict-management skills with increased fluency to achieve collective goals; and

- (E) employ planning and time-management skills and tools with increased fluency to enhance results and complete work tasks.
- (2) The student applies professional communications strategies. The student is expected to:
 - (A) demonstrate verbal and non-verbal communication consistently in a clear, concise, and effective manner;
 - (B) present information formally and informally in an effective manner;
 - (C) apply active listening skills to obtain and clarify information; and
 - (D) exhibit public relations skills to maintain internal and external customer/client satisfaction.
- (3) The student implements advanced problem-solving methods. The student is expected to employ critical-thinking skills with increased fluency both independently and in groups to solve problems and make decisions.
- (4) The student understands and applies proper safety techniques in the workplace. The student is expected to:
 - (A) comply with Occupational Safety and Health Administration regulations in the workplace;
 - (B) demonstrate knowledge of procedures for reporting and handling accidents and safety incidents;
 - (C) analyze health and wellness practices that influence job performance; and
 - (D) understand and follow workplace safety rules and regulations.
- (5) The student understands the professional, ethical, and legal responsibilities in culinary arts. The student is expected to:
 - (A) demonstrate a positive, productive work ethic by performing assigned tasks as directed;
 - (B) show integrity by choosing the ethical course of action when making decisions; and
 - (C) comply with all applicable rules, laws, and regulations in a consistent manner.
- (6) The student demonstrates proper culinary techniques and knowledge of the professional kitchen. The student is expected to:
 - (A) demonstrate proper use of large and small equipment in a commercial kitchen with increased proficiency;
 - (B) demonstrate advanced food production and presentation techniques;
 - (C) demonstrate moist, dry, and combination cookery methods;
 - (D) demonstrate advanced food preparation skills used in commercial food service preparations;
 - (E) demonstrate advanced baking techniques;
 - (F) demonstrate proper receiving and storage techniques; and
 - (G) demonstrate proper cleaning of equipment and maintenance of the commercial kitchen.

§130.263. Extended Practicum in Hospitality Services (One Credit), Adopted 2015.

- (a) General requirements. This course is recommended for students in Grades 11 and 12. The practicum course is a paid or unpaid capstone experience for students participating in a coherent sequence of career and technical education courses in the Hospitality and Tourism Career Cluster. Recommended prerequisite: Hospitality Services. Corequisite: Practicum in Hospitality Services. This course must be taken concurrently with Practicum in Hospitality Services and may not be taken as a stand-alone course. Students shall be awarded one credit for successful completion of this course. A student may repeat this course once for credit provided that the student is experiencing different aspects of the industry and demonstrating proficiency in additional and more advanced knowledge and skills.
- (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 Hospitality and Tourism Career Cluster focuses on the management, marketing, and operations of restaurants and other food/beverage services, lodging, attractions, recreation events, and travel-related services.
 - (3) Extended Practicum in Hospitality Services is a unique practicum experience that provides opportunities for students to participate in a learning experience that combines classroom instruction with actual business and industry career experiences. Extended Practicum in Hospitality Services integrates academic and career and technical education; provides more interdisciplinary instruction; and supports strong partnerships among schools, businesses, and community institutions with the goal of preparing students with a variety of skills in a fast-changing workplace.
 - (4) Students are taught employability skills, including job-specific skills applicable to their training plan, job interview techniques, communication skills, financial and budget activities, human relations, and portfolio development. Extended Practicum in Hospitality Services is relevant and rigorous, supports student attainment of academic and technical standards, and effectively prepares students for college and career success.
 - (5) Instruction may be delivered through school-based laboratory training or through work-based delivery arrangement such as cooperative education, mentoring, and job shadowing.
 - (6) Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.
 - (7) 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) participate in a paid or unpaid, laboratory- or work-based application of previously studied knowledge and skills related to hospitality services;
 - (B) participate in training, education, or preparation for licensure, certification, or other relevant credentials to prepare for employment;
 - (C) demonstrate professional standards and personal qualities needed to be employable such as leadership, appreciation for diversity, conflict management, customer service, work ethic, and adaptability with increased fluency;
 - (D) employ teamwork and conflict-management skills with increased fluency to achieve collective goals; and
 - (E) employ planning and time-management skills and tools with increased fluency to enhance results and complete work tasks.

- (2) The student applies professional communications strategies. The student is expected to:
- (A) demonstrate verbal and non-verbal communication consistently in a clear, concise, and effective manner;
 - (B) present information formally and informally in an effective manner;
 - (C) analyze, interpret, and effectively communicate information;
 - (D) apply active listening skills to obtain and clarify information; and
 - (E) exhibit public relations skills to maintain internal and external customer/client satisfaction.
- (3) The student implements advanced problem-solving methods. The student is expected to employ critical-thinking skills with increased fluency both independently and in groups to solve problems and make decisions.
- (4) The student understands and applies proper safety techniques in the workplace. The student is expected to:
- (A) demonstrate an understanding of and consistently follow workplace safety rules and regulations; and
 - (B) demonstrate knowledge of procedures for reporting and handling accidents and safety incidents.
- (5) The student understands the professional, ethical, and legal responsibilities in hospitality services. The student is expected to:
- (A) practice ethical conduct when interacting with others such as maintaining client confidentiality and maintaining privacy of sensitive content;
 - (B) demonstrate a positive, productive work ethic by performing assigned tasks as directed;
 - (C) show integrity by choosing the ethical course of action when making decisions;
 - (D) demonstrate proper etiquette and knowledge of acceptable-use policies when using networks, especially resources on the Internet and intranet; and
 - (E) comply with all applicable rules, laws, and regulations in a consistent manner.
- (6) The student participates in a supervised hospitality experience. The student is expected to:
- (A) conduct, document, and evaluate learning activities in a supervised hospitality experience;
 - (B) practice technical procedures such as registration, rate assignment, room assignment, and determination of payment methods needed to meet guest needs;
 - (C) examine, understand, and articulate job-specific technical vocabulary;
 - (D) demonstrate proficiency in the duties for an appropriate department of a hotel or tourism venue; and
 - (E) collect representative work samples.

Subchapter J. Human Services

§130.285. Extended Practicum in Human Services (One Credit), Adopted 2015.

- (a) General requirements. This course is recommended for students in Grades 11 and 12. The practicum course is a paid or unpaid capstone experience for students participating in a coherent sequence of career and technical education courses in the Human Services Career Cluster. Corequisite: Practicum in Human Services. This course must be taken concurrently with Practicum in Human Services and may not be taken as a stand-alone course. Students shall be awarded one credit for successful completion of this course. A student may repeat this course once for credit provided that the student is experiencing different aspects of the industry and demonstrating proficiency in additional and more advanced knowledge and skills.
- (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 Human Services Career Cluster focuses on preparing individuals for employment in career pathways that relate to families and human needs such as counseling and mental health services, family and community services, personal care services, and consumer services.
 - (3) Extended Practicum in Human Services provides background knowledge and occupation-specific training that focuses on the development of consumer services, early childhood development and services, counseling and mental health services, and family and community-services careers. Content for Extended Practicum in Human Services is designed to meet the occupational preparation needs and interests of students and should be based upon the knowledge and skills selected from two or more courses in a coherent sequence in the human services cluster.
 - (4) Instruction may be delivered through school-based laboratory training or through work-based delivery arrangements such as cooperative education, mentoring, and job shadowing.
 - (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) The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:
 - (A) participate in a paid or unpaid, laboratory- or work-based application of previously studied knowledge and skills related to human services;
 - (B) participate in training, education, or preparation for licensure, certification, or other relevant credentials to prepare for employment;
 - (C) demonstrate professional standards and personal qualities needed to be employable such as self-discipline, positive attitude, integrity, leadership, appreciation for diversity, customer service, work ethic, and adaptability with increased fluency;
 - (D) demonstrate use of personal information management, email, Internet, writing and publishing, presentation, and spreadsheet or database applications for relevant projects with increased fluency;
 - (E) employ teamwork and conflict-management skills with increased fluency to achieve collective goals; and
 - (F) employ planning and time-management skills and tools with increased fluency to enhance results and complete work tasks.
 - (2) The student applies professional communications strategies. The student is expected to:

- (A) demonstrate verbal and non-verbal communication consistently in a clear, concise, and effective manner;
- (B) present information formally and informally in an effective manner;
- (C) analyze, interpret, and effectively communicate information;
- (D) apply active listening skills to obtain and clarify information; and
- (E) exhibit public relations skills to maintain internal and external customer/client satisfaction.
- (3) The student implements advanced problem-solving methods. The student is expected to employ critical-thinking skills with increased fluency both independently and in groups to solve problems and make decisions.
- (4) The student understands and applies proper safety techniques in the workplace. The student is expected to:
 - (A) demonstrate an understanding of and consistently follow workplace safety rules and regulations;
 - (B) identify appropriate locations to safely offer human services;
 - (C) employ procedures necessary to provide emergency aid for workplace accidents; and
 - (D) demonstrate an understanding of components of a disaster and emergency response plan and use when directed.
- (5) The student understands the professional, ethical, and legal responsibilities in human services. The student is expected to:
 - (A) demonstrate a positive, productive work ethic by performing assigned tasks as directed;
 - (B) describe and practice ethical and legal responsibilities associated with providing human services;
 - (C) show integrity by choosing the ethical course of action when making decisions;
 - (D) address situations requiring client advocacy appropriately and advocate when necessary; and
 - (E) comply with all applicable rules, laws, and regulations in a consistent manner.
- (6) The student participates in a supervised human services experience. The student is expected to:
 - (A) conduct, document, and evaluate learning activities in a supervised human services experience;
 - (B) implement quality-control systems and practices that ensure quality products and services with increased fluency;
 - (C) identify a functional work environment, equipment needs, and required utilities for offering human services;
 - (D) employ appropriate social skills necessary for interacting with a diverse population; and
 - (E) collect representative work samples.

Subchapter K. Information Technology

§130.313. Extended Computer Technician Practicum (One Credit), Adopted 2015.

- (a) General requirements. This course is recommended for students in Grades 10-12. The practicum course is a paid or unpaid capstone experience for students participating in a coherent sequence of career and technical education courses in the Information Technology Career Cluster. Recommended prerequisites: Principles of Information Technology, Computer Maintenance, Computer Maintenance Lab, Networking, and Networking Lab. Corequisite: Computer Technician Practicum. This course must be taken concurrently with Computer Technician Practicum and may not be taken as a stand-alone course. Students shall be awarded one credit for successful completion of this course. A student may repeat this course once for credit provided that the student is experiencing different aspects of the industry and demonstrating proficiency in additional and more advanced knowledge and skills.
- (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 Extended Computer Technician Practicum, students will gain knowledge and skills in the area of computer technologies, including advanced knowledge of electrical and electronic theory, computer principles, and components related to the installation, diagnosis, service, and repair of computer-based technology systems. Students will reinforce, apply, and transfer their knowledge and skills to a variety of settings and problems. Proper use of analytical skills and application of IT concepts and standards are essential to prepare students for success in a technology-driven society. Critical thinking, IT experience, and product development may be conducted in a classroom setting with an instructor, with an industry mentor, or both.
 - (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) participate in a paid or unpaid, laboratory- or work-based application of previously studied knowledge and skills related to IT;
 - (B) participate in training, education, or preparation for licensure, certification, or other relevant credentials to prepare for employment;
 - (C) demonstrate professional standards and personal qualities needed to be employable such as self-discipline, regular attendance, promptness, integrity, pride in work, and customer service with increased fluency; and
 - (D) employ planning and time-management skills and tools with increased fluency to enhance results and complete work tasks.
 - (2) The student applies professional communications strategies. The student is expected to:
 - (A) demonstrate proper use of written, verbal, and visual communication techniques consistent with IT industry standards with increased proficiency;
 - (B) analyze, interpret, and effectively communicate information;

- (C) apply active listening skills to obtain and clarify information; and
- (D) exhibit public relations skills to maintain internal and external customer/client satisfaction.
- (3) The student implements advanced problem-solving methods. The student is expected to employ critical-thinking skills with increased fluency both independently and in groups to solve problems and make decisions.
- (4) The student understands and applies proper safety and security techniques in the workplace. The student is expected to:
 - (A) demonstrate an understanding of and consistently follow IT security rules, regulations, and procedures;
 - (B) recognize and analyze potential IT security threats and address security by installing and updating security software and using security software to clean an infected machine;
 - (C) identify the range of security needs and the problems that can occur due to security lapses with increased proficiency;
 - (D) demonstrate safe use of computer technology equipment such as hand and power tools with increased proficiency; and
 - (E) demonstrate the proper handling and disposal of environmentally hazardous materials used in computer technologies in a consistent manner.
- (5) The student understands the professional, ethical, and legal responsibilities in IT. The student is expected to:
 - (A) demonstrate a positive, productive work ethic by performing assigned tasks as directed;
 - (B) describe and practice ethical and legal responsibilities associated with the field of IT;
 - (C) show integrity by choosing the ethical course of action when making decisions; and
 - (D) comply with all applicable rules, laws, and regulations in a consistent manner.
- (6) The student participates in a supervised IT experience. The student is expected to:
 - (A) select and use the appropriate technological resources to conduct, document, and evaluate learning activities in a supervised IT experience;
 - (B) read and interpret technical documentation such as schematics, drawings, charts, diagrams, technical manuals, and bulletins with increased fluency;
 - (C) employ available reference tools, materials, and Internet sources with increased fluency to access information as needed;
 - (D) develop solutions using appropriate technologies, IT concepts, and IT industry standards with increased proficiency;
 - (E) implement project methodologies to manage information system projects; and
 - (F) collect representative work samples.

§130.314. Extended Practicum in Information Technology (One Credit), Adopted 2015.

- (a) General requirements. This course is recommended for students in Grade 12. The practicum course is a paid or unpaid capstone experience for students participating in a coherent sequence of career and technical education courses in the Information Technology Career Cluster. Prerequisite: a minimum of two high school information technology courses. Corequisite: Practicum in Information Technology. This course must be taken concurrently with Practicum in Information Technology and may not be taken as a stand-alone course. Students shall be awarded one credit for successful completion of this course. A student may repeat this course once for credit provided that the student is experiencing different aspects of the industry and demonstrating proficiency in additional and more advanced knowledge and skills.

(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 Extended Practicum in Information Technology, students will gain advanced knowledge and skills in the application, design, production, implementation, maintenance, evaluation, and assessment of products, services, and systems. Knowledge and skills in the proper use of analytical skills and application of IT concepts and standards are essential to prepare students for success in a technology-driven society. Critical thinking, IT experience, and product development may be conducted in a classroom setting with an instructor, with an industry mentor, or both.
- (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) participate in a paid or unpaid, laboratory- or work-based application of previously studied knowledge and skills related to IT;
 - (B) participate in training, education, or preparation for licensure, certification, or other relevant credentials to prepare for employment;
 - (C) demonstrate professional standards and personal qualities needed to be employable such as self-discipline, integrity, customer service, work ethic, and adaptability with increased fluency;
 - (D) employ teamwork and conflict-management skills with increased fluency to achieve collective goals; and
 - (E) employ planning and time-management skills and tools such as project management and storyboarding with increased fluency to enhance results and complete work tasks.
- (2) The student applies professional communications strategies. The student is expected to:
 - (A) demonstrate proper use of written, verbal, and visual communication techniques consistent with IT industry standards with increased proficiency;
 - (B) apply active listening skills to obtain and clarify information;
 - (C) create and deliver formal and informal presentations in an effective manner; and
 - (D) exhibit public relations skills to maintain internal and external customer/client satisfaction.
- (3) The student implements advanced problem-solving methods. The student is expected to:
 - (A) employ critical-thinking skills with increased fluency both independently and in groups to solve problems and make decisions;
 - (B) apply critical-thinking strategies with increased fluency to develop solutions using appropriate technologies and resources, IT concepts, and industry standards; and
 - (C) apply decision-making techniques with increased fluency to choose a technology-based solution.

- (4) The student understands and applies proper safety and security techniques in the workplace. The student is expected to:
- (A) demonstrate an understanding of and consistently follow IT security rules, regulations, and procedures; and
 - (B) develop and implement security management plans to address security requirements.
- (5) The student understands the professional, ethical, and legal responsibilities in IT. The student is expected to:
- (A) demonstrate a positive, productive work ethic by performing assigned tasks as directed;
 - (B) describe and practice ethical and legal responsibilities associated with the field of IT;
 - (C) show integrity by choosing the ethical course of action when making decisions; and
 - (D) comply with all applicable rules, laws, and regulations in a consistent manner.
- (6) The student participates in a supervised IT experience. The student is expected to:
- (A) design, create, and implement a product or service that addresses a problem or meets a specified need in the field of IT;
 - (B) identify areas where quality, reliability, and safety can be designed into a product or service;
 - (C) develop a sustainability plan for the product or service;
 - (D) develop an evaluation method to analyze the effect of the product or service on client satisfaction and problem resolution; and
 - (E) collect representative work samples.

Subchapter L. Law, Public Safety, Corrections, and Security

§130.343. Extended Practicum in Law, Public Safety, Corrections, and Security (One Credit), Adopted 2015.

- (a) General requirements. This course is recommended for students in Grades 11 and 12. The practicum course is a paid or unpaid capstone experience for students participating in a coherent sequence of career and technical education courses in the Law, Public Safety, Corrections, and Security Career Cluster. Corequisite: Practicum in Law, Public Safety, Corrections, and Security. This course must be taken concurrently with Practicum in Law, Public Safety, Corrections, and Security and may not be taken as a stand-alone course. Students shall be awarded one credit for successful completion of this course. A student may repeat this course once for credit provided that the student is experiencing different aspects of the industry and demonstrating proficiency in additional and more advanced knowledge and skills.
- (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 Law, Public Safety, Corrections, and Security Career Cluster focuses on planning, managing, and providing legal services, public safety, protective services, and homeland security, including professional and technical support services.
 - (3) Extended Practicum in Law, Public Safety, Corrections, and Security is designed to give students supervised practical application of previously studied knowledge and skills in law, public safety, corrections, and security. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experience.
 - (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) participate in a paid or unpaid, laboratory- or work-based application of previously studied knowledge and skills related to law, public safety, corrections, or security;
 - (B) participate in training, education, or preparation for licensure, certification, or other relevant credentials to prepare for employment;
 - (C) demonstrate professional standards and personal qualities needed to be employable such as self-discipline, positive attitude, integrity, leadership, appreciation for diversity, customer service, work ethic, and adaptability with increased fluency;
 - (D) use personal information management, email, Internet, writing and publishing, presentation, and spreadsheet or database applications with increased fluency;
 - (E) employ teamwork and conflict-management skills with increased fluency to achieve collective goals; and
 - (F) employ planning and time-management skills and tools with increased fluency to enhance results and complete work tasks.
 - (2) The student implements advanced professional communications strategies. The student is expected to:
 - (A) demonstrate verbal and non-verbal communication consistently in a clear, concise, and effective manner;

- (B) analyze, interpret, and effectively communicate information, data, and observations;
 - (C) observe and interpret verbal and nonverbal cues and behaviors to enhance communication; and
 - (D) apply active listening skills to obtain and clarify information.
- (3) The student applies concepts of critical thinking and problem solving. The student is expected to:
 - (A) employ critical-thinking skills with increased fluency both independently and in groups to solve problems and make decisions;
 - (B) analyze elements of a problem to develop creative and innovative solutions; and
 - (C) conduct technical research to gather information necessary for decision making.
- (4) The student understands and applies proper safety techniques in the workplace. The student is expected to:
 - (A) demonstrate an understanding of and consistently follow workplace safety rules and regulations; and
 - (B) demonstrate knowledge of procedures for reporting and handling accidents and safety incidents.
- (5) The student understands the professional, ethical, and legal responsibilities in teaching and training. The student is expected to:
 - (A) demonstrate a positive, productive work ethic by performing assigned tasks as directed;
 - (B) apply ethical reasoning to a variety of situations in order to make ethical decisions; and
 - (C) comply with all applicable rules, laws, and regulations in a consistent manner.
- (6) The student participates in a supervised law, public safety, corrections, or security experience. The student is expected to:
 - (A) conduct, document, and evaluate learning activities in a supervised law, public safety, corrections, or security experience;
 - (B) develop advanced technical knowledge and skills related to the student's occupational objective;
 - (C) examine, understand, and articulate job-specific technical vocabulary;
 - (D) evaluate strengths and weaknesses in technical skill proficiency; and
 - (E) collect representative work samples.

Subchapter M. Manufacturing

§130.367. Extended Practicum in Manufacturing (One Credit), Adopted 2015.

- (a) General requirements. This course is recommended for students in Grade 12. The practicum course is a paid or unpaid capstone experience for students participating in a coherent sequence of career and technical education courses in the Manufacturing Career Cluster. Corequisite: Practicum in Manufacturing. This course must be taken concurrently with Practicum in Manufacturing and may not be taken as a stand-alone course. Students shall be awarded one credit for successful completion of this course. A student may repeat this course once for credit provided that the student is experiencing different aspects of the industry and demonstrating proficiency in additional and more advanced knowledge and skills.
- (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 Manufacturing Career Cluster focuses on planning, managing, and performing the processing of materials into intermediate or final products and related professional and technical support activities such as production planning and control, maintenance, and manufacturing/process engineering.
 - (3) The Extended Practicum in Manufacturing course is designed to give students supervised practical application of previously studied knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experience.
 - (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) participate in a paid or unpaid, laboratory- or work-based application of previously studied knowledge and skills related to manufacturing;
 - (B) participate in training, education, or preparation for licensure, certification, or other relevant credentials to prepare for employment;
 - (C) demonstrate professional standards and personal qualities needed to be employable such as self-discipline, positive attitude, integrity, leadership, appreciation for diversity, customer service, work ethic, and adaptability with increased fluency;
 - (D) use personal information management, email, Internet, writing and publishing, presentation, and spreadsheet or database applications with increased fluency;
 - (E) employ teamwork and conflict-management skills with increased fluency to achieve collective goals; and
 - (F) employ planning and time-management skills and tools with increased fluency to enhance results and complete work tasks.
 - (2) The student implements advanced professional communications strategies. The student is expected to:
 - (A) demonstrate verbal and non-verbal communication consistently in a clear, concise, and effective manner;
 - (B) analyze, interpret, and effectively communicate information, data, and observations;

- (C) observe and interpret verbal and nonverbal cues and behaviors to enhance communication; and
 - (D) apply active listening skills to obtain and clarify information.
- (3) The student applies concepts of critical thinking and problem solving. The student is expected to:
 - (A) employ critical-thinking skills with increased fluency both independently and in groups to solve problems and make decisions;
 - (B) analyze elements of a problem to develop creative and innovative solutions; and
 - (C) conduct technical research to gather information necessary for decision making.
- (4) The student understands and applies proper safety techniques in the workplace. The student is expected to:
 - (A) demonstrate an understanding of and consistently follow workplace safety rules and regulations; and
 - (B) demonstrate knowledge of procedures for reporting and handling accidents and safety incidents.
- (5) The student understands the professional, ethical, and legal responsibilities in teaching and training. The student is expected to:
 - (A) demonstrate a positive, productive work ethic by performing assigned tasks as directed;
 - (B) apply ethical reasoning to a variety of situations in order to make ethical decisions; and
 - (C) comply with all applicable rules, laws, and regulations in a consistent manner.
- (6) The student participates in a manufacturing experience. The student is expected to:
 - (A) conduct, document, and evaluate learning activities in a supervised manufacturing experience;
 - (B) develop advanced technical knowledge and skills related to the student's occupational objective;
 - (C) demonstrate growth of technical skill competencies;
 - (D) evaluate strengths and weaknesses in technical skill proficiency; and
 - (E) collect representative work samples.

Subchapter N. Marketing

§130.388. Extended Practicum in Marketing (One Credit), Adopted 2015.

- (a) General requirements. This course is recommended for students in Grades 11 and 12. The practicum course is a paid or unpaid capstone experience for students participating in a coherent sequence of career and technical education courses in the Marketing Career Cluster. Recommended prerequisite: Principles of Business, Marketing, and Finance. Corequisite: Practicum in Marketing. This course must be taken concurrently with Practicum in Marketing and may not be taken as a stand-alone course. Students shall be awarded one credit for successful completion of this course. A student may repeat this course once for credit provided that the student is experiencing different aspects of the industry and demonstrating proficiency in additional and more advanced knowledge and skills.
- (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 Marketing Career Cluster focuses on planning, managing, and performing marketing activities to reach organizational objectives.
 - (3) Extended Practicum in Marketing is a series of dynamic activities that focus on the customer to generate a profitable exchange. Students will gain knowledge and skills that help them to be proficient in one or more of the marketing functional areas associated with distribution, financing, marketing information management, pricing, product planning, promotion, purchasing, risk management, and selling skills. Students will integrate skills from academic subjects, information technology, interpersonal communication, and management training to make responsible decisions.
 - (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) participate in a paid or unpaid, laboratory- or work-based application of previously studied knowledge and skills related to marketing;
 - (B) participate in training, education, or preparation for licensure, certification, or other relevant credentials to prepare for employment;
 - (C) demonstrate professional standards and personal qualities needed to be employable such as self-discipline, integrity, customer service, work ethic, adaptability with increased fluency;
 - (D) demonstrate use of personal information management, email, Internet, writing and publishing, presentation, and spreadsheet or database applications with increased fluency for relevant projects;
 - (E) employ teamwork and conflict-management skills with increased fluency to achieve collective goals; and
 - (F) employ planning and time-management skills and tools with increased fluency to enhance results and complete work tasks.
 - (2) The student applies professional communications strategies. The student is expected to:

- (A) demonstrate proper use of written, verbal, and visual communication techniques with increased proficiency;
- (B) apply active listening skills to obtain and clarify information;
- (C) create and deliver formal and informal presentations effectively;
- (D) analyze, interpret, and effectively communicate information; and
- (E) exhibit public relations skills to maintain internal and external customer/client satisfaction.
- (3) The student implements advanced problem-solving methods. The student is expected to:
 - (A) employ critical-thinking skills with increased fluency both independently and in groups to solve problems and make decisions;
 - (B) conduct technical research to gather information necessary for decision making; and
 - (C) analyze elements of a problem to develop creative and innovative solutions.
- (4) The student understands and applies proper safety and security techniques in the workplace. The student is expected to:
 - (A) demonstrate understanding of and consistently follow workplace safety rules and regulations; and
 - (B) adhere to technology safety and security policies such as acceptable use policy and webpage policies.
- (5) The student understands the professional, ethical, and legal responsibilities in marketing. The student is expected to:
 - (A) demonstrate a positive, productive work ethic by performing assigned tasks as directed;
 - (B) apply alternative responses to workplace situations based on personal or professional ethical responsibilities;
 - (C) show integrity by choosing the ethical course of action when making decisions; and
 - (D) comply with all applicable rules, laws, and regulations such as Occupational Safety and Health Administration and statutes such as the Americans with Disabilities Act in a consistent manner.
- (6) The student participates in a marketing experience. The student is expected to:
 - (A) conduct, document, and evaluate learning activities in a supervised marketing experience;
 - (B) develop advanced technical knowledge and skills related to the student's occupational objective;
 - (C) demonstrate use of information technology tools to manage and perform work responsibilities;
 - (D) apply concepts and strategies needed to communicate information about products, services, images, and ideas to achieve a desired outcome;
 - (E) model communication channels used in sales promotion;
 - (F) apply different components of the marketing mix to contribute to successful marketing;
 - (G) apply the elements and processes of product planning, including related product-mix strategies to meet customer expectations;
 - (H) identify and evaluate elements of an advertisement with increased fluency;
 - (I) demonstrate growth of technical skill competencies;
 - (J) evaluate strengths and weaknesses in technical skill proficiency; and

(K) collect representative work samples.

Subchapter O. Science, Technology, Engineering, and Mathematics

§130.419. Extended Practicum in Science, Technology, Engineering, and Mathematics (One Credit), Adopted 2015.

- (a) General requirements. This course is recommended for students in Grade 12. The practicum course is a paid or unpaid capstone experience for students participating in a coherent sequence of career and technical education courses in the Science, Technology, Engineering, and Mathematics (STEM) Career Cluster. Prerequisites: Algebra I and Geometry. Recommended prerequisites: two credits from the courses in the STEM Career Cluster. Corequisite: Practicum in Science, Technology, Engineering, and Mathematics. This course must be taken concurrently with Practicum in Science, Technology, Engineering, and Mathematics and may not be taken as a stand-alone course. Students shall be awarded one credit for successful completion of this course. A student may repeat this course once for credit provided that the student is experiencing different aspects of the industry and demonstrating proficiency in additional and more advanced knowledge and skills.
- (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 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) Extended Practicum in STEM is designed to give students supervised practical application of previously studied knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experience.
 - (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) participate in a paid or unpaid, laboratory- or work-based application of previously studied knowledge and skills related to STEM;
 - (B) participate in training, education, or preparation for licensure, certification, or other relevant credentials to prepare for employment;
 - (C) demonstrate professional standards and personal qualities needed to be employable such as self-discipline, positive attitude, integrity, leadership, appreciation for diversity, customer service, work ethic, and adaptability with increased fluency;
 - (D) employ teamwork and conflict-management skills with increased fluency to achieve collective goals; and
 - (E) employ planning and time-management skills and tools such as prioritizing tasks, following schedules, and performing goal-relevant activities with increased fluency to enhance results and complete work tasks.
 - (2) The student applies professional communications strategies. The student is expected to:
 - (A) demonstrate verbal and non-verbal communication consistently in a clear, concise, and effective manner;
 - (B) apply active listening skills to obtain and clarify information;

- (C) create and deliver formal and informal presentations effectively;
 - (D) analyze, interpret, and effectively communicate information, data, and observations; and
 - (E) observe and interpret verbal and nonverbal cues and behaviors to enhance communication.
- (3) The student implements advanced problem-solving methods. The student is expected to:
- (A) employ critical-thinking skills with increased fluency both independently and in groups to solve problems and make decisions;
 - (B) analyze elements of problems to develop creative and innovative solutions;
 - (C) apply decision-making techniques with increased fluency to the selection of technological solutions; and
 - (D) conduct technical research to gather information necessary for decision making.
- (4) The student understands and applies proper safety and security techniques in the workplace. The student is expected to understand and consistently follow workplace safety rules and regulations.
- (5) The student understands the professional, ethical, and legal responsibilities in STEM-related fields. The student is expected to:
- (A) demonstrate a positive, productive work ethic by performing assigned tasks as directed;
 - (B) apply ethical reasoning to a variety of situations in order to make ethical decisions; and
 - (C) comply with all applicable rules, laws, and regulations in a consistent manner.
- (6) The student participates in a supervised STEM experience. The student is expected to:
- (A) conduct, document, and evaluate learning activities in a supervised STEM experience;
 - (B) develop advanced technical knowledge and skills related to the student's occupational objective;
 - (C) evaluate strengths and weaknesses in technical skill proficiency; and
 - (D) collect representative work samples.

Subchapter P. Transportation, Distribution, and Logistics

§130.465. Extended Practicum in Transportation Systems (One Credit), Adopted 2015.

- (a) General requirements. This course is recommended for students in Grades 11 and 12. The practicum course is a paid or unpaid capstone experience for students participating in a coherent sequence of career and technical education courses in the Transportation, Distribution, and Logistics Career Cluster. Corequisite: Practicum in Transportation Systems. This course must be taken concurrently with Practicum in Transportation Systems and may not be taken as a stand-alone course. Students shall be awarded one credit for successful completion of this course. A student may repeat this course once for credit provided that the student is experiencing different aspects of the industry and demonstrating proficiency in additional and more advanced knowledge and skills.
- (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 Transportation, Distribution, and Logistics Career Cluster focuses on planning, management, and movement of people, materials, and goods by road, pipeline, air, rail, and water and related professional support services such as transportation infrastructure planning and management, logistics services, mobile equipment, and facility maintenance.
 - (3) Extended Practicum in Transportation Systems is designed to give students supervised practical application of knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experience such as internships, mentorships, independent study, or laboratories. Extended Practicum in Transportation Systems can be either school lab based or worked based.
 - (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) participate in a paid or unpaid, laboratory- or work-based application of previously studied knowledge and skills related to transportation systems;
 - (B) participate in training, education, or preparation for licensure, certification, or other relevant credentials to prepare for employment;
 - (C) demonstrate professional standards and personal qualities needed to be employable such as self-discipline, positive attitude, integrity, leadership, appreciation for diversity, customer service, work ethic, and adaptability with increased fluency;
 - (D) use personal information management, email, Internet, writing and publishing, presentation, and spreadsheet or database applications with increased fluency;
 - (E) employ teamwork and conflict-management skills with increased fluency to achieve collective goals; and
 - (F) employ planning and time-management skills and tools with increased fluency to enhance results and complete work tasks.
 - (2) The student implements advanced professional communications strategies. The student is expected to:

- (A) demonstrate verbal and non-verbal communication consistently in a clear, concise, and effective manner;
- (B) analyze, interpret, and effectively communicate information, data, and observations;
- (C) observe and interpret verbal and nonverbal cues and behaviors to enhance communication; and
- (D) apply active listening skills to obtain and clarify information.
- (3) The student applies concepts of critical thinking and problem solving. The student is expected to:
 - (A) employ critical-thinking skills with increased fluency both independently and in groups to solve problems and make decisions;
 - (B) analyze elements of a problem to develop creative and innovative solutions; and
 - (C) demonstrate the use of content, technical concepts, and vocabulary when analyzing information and following directions.
- (4) The student understands and applies proper safety techniques in the workplace. The student is expected to:
 - (A) understand and consistently follow workplace safety rules and regulations, including Occupational Safety and Health Administration regulations; and
 - (B) demonstrate knowledge of procedures for reporting and handling accidents and safety incidents.
- (5) The student understands the professional, ethical, and legal responsibilities in transportation systems. The student is expected to:
 - (A) demonstrate a positive, productive work ethic by performing assigned tasks as directed;
 - (B) apply ethical reasoning to a variety of situations in order to make ethical decisions; and
 - (C) comply with all applicable rules, laws, and regulations in a consistent manner.
- (6) The student participates in a transportation systems experience. The student is expected to:
 - (A) conduct, document, and evaluate learning activities in a supervised transportation systems experience;
 - (B) develop advanced technical knowledge and skills related to the student's occupational objective;
 - (C) demonstrate growth of technical skill competencies;
 - (D) evaluate strengths and weaknesses in technical skill proficiency; and
 - (E) collect representative work samples.

§130.466. Extended Practicum in Distribution and Logistics (One Credit), Adopted 2015.

- (a) General requirements. This course is recommended for students in Grades 11 and 12. The practicum course is a paid or unpaid capstone experience for students participating in a coherent sequence of career and technical education courses in the Transportation, Distribution, and Logistics Career Cluster. Corequisite: Practicum in Distribution and Logistics. This course must be taken concurrently with Practicum in Distribution and Logistics and may not be taken as a stand-alone course. Students shall be awarded one credit for successful completion of this course. A student may repeat this course once for credit provided that the student is experiencing different aspects of the industry and demonstrating proficiency in additional and more advanced knowledge and skills.
- (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 Transportation, Distribution, and Logistics Career Cluster focuses on planning, management, and movement of people, materials, and goods by road, pipeline, air, rail, and water and related professional support services such as transportation infrastructure planning and management, logistics services, mobile equipment, and facility maintenance.
 - (3) Extended Practicum in Distribution and Logistics is designed to give students supervised practical application of knowledge and skills. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experience such as internships, mentorships, independent study, or laboratories. Extended Practicum in Distribution and Logistics can be either school lab based or work based.
 - (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) participate in a paid or unpaid, laboratory- or work-based application of previously studied knowledge and skills related to distribution and logistics;
 - (B) participate in training, education, or preparation for licensure, certification, or other relevant credentials to prepare for employment;
 - (C) demonstrate professional standards and personal qualities needed to be employable such as self-discipline, positive attitude, integrity, leadership, appreciation for diversity, customer service, work ethic, and adaptability with increased fluency;
 - (D) use personal information management, email, Internet, writing and publishing, presentation, and spreadsheet or database applications with increased fluency;
 - (E) complete tasks with the highest standards to ensure quality products and services;
 - (F) employ teamwork and conflict-management skills with increased fluency to achieve collective goals; and
 - (G) employ planning and time-management skills and tools with increased fluency to enhance results and complete work tasks.
 - (2) The student implements advanced professional communications strategies. The student is expected to:

- (A) demonstrate verbal and non-verbal communication consistently in a clear, concise, and effective manner;
- (B) analyze, interpret, and effectively communicate information, data, and observations;
- (C) observe and interpret verbal and nonverbal cues and behaviors to enhance communication; and
- (D) apply active listening skills to obtain and clarify information.
- (3) The student applies concepts of critical thinking and problem solving. The student is expected to:
 - (A) employ critical-thinking skills with increased fluency both independently and in groups to solve problems and make decisions;
 - (B) analyze elements of a problem to develop creative and innovative solutions; and
 - (C) demonstrate the use of content, technical concepts, and vocabulary when analyzing information and following directions.
- (4) The student understands and applies proper safety techniques in the workplace. The student is expected to:
 - (A) understand and consistently follow workplace safety rules and regulations, including Occupational Safety and Health Administration regulations; and
 - (B) demonstrate knowledge of procedures for reporting and handling accidents and safety incidents.
- (5) The student understands the professional, ethical, and legal responsibilities in distribution and logistics systems. The student is expected to:
 - (A) demonstrate a positive, productive work ethic by performing assigned tasks as directed;
 - (B) apply ethical reasoning to a variety of situations in order to make ethical decisions; and
 - (C) comply with all applicable rules, laws, and regulations in a consistent manner.
- (6) The student participates in a distribution and logistics experience. The student is expected to:
 - (A) conduct, document, and evaluate learning activities in a supervised distribution and logistics experience;
 - (B) develop advanced technical knowledge and skills related to the student's occupational objective;
 - (C) demonstrate growth of technical skill competencies;
 - (D) evaluate strengths and weaknesses in technical skill proficiency; and
 - (E) collect representative work samples.