



BELLVILLE INDEPENDENT SCHOOL DISTRICT
Meeting of the BISD Board of Trustees

May 27, 2021

Subject:	BISD CTE Innovative Course Approval for 2021-22
Presenter:	Natalie Jones, Chief Academic Officer
Board Policy:	
BISD Goal:	1. Develop and attain local standards for high levels of integrated learning and performance. [LEARNING]

Summary:	<p>With approval of the local board of trustees, school districts may offer state-approved innovative courses for state elective credit. In accordance with the BISD Course Catalog and programs of study, BISD is seeking approval of three CTE innovative courses.</p>
Attachments:	BISD CTE Innovative Course List for 2021-22
Recommendation:	It is recommended to approve the BISD CTE Innovative Course List for the 2021-22 school year.

BELLVILLE BRAHMAS
LEARNERS TODAY. LEADERS TOMORROW.



Bellville Independent School District

Board Goal: Develop and obtain local standards for high levels of integrated learning and performance. [LEARNING]

To: Bellville ISD Board of Trustees
From: Natalie Jones, Chief Academic Officer
Date: May 27, 2021
RE: BISD CTE Innovative Course List for 2021-22

It is my recommendation to approve the following list of CTE innovative courses for the 2021-22 school year. All of these courses are state-approved. Additional information from TEA can be found in the links provided.

Disaster Response

https://tea.texas.gov/sites/default/files/Disaster%20Response_2017.pdf

Advanced Floral Design

https://tea.texas.gov/sites/default/files/Advanced%20Floral%20Design_2017.pdf

Engineering Essentials (Project Lead The Way)

https://tea.texas.gov/sites/default/files/PLTW_Engineering_Essentials_2020-2021.pdf

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Course: Disaster Response

PEIMS Code: N1303011

Abbreviation: DISRESP

Grade Level(s): 9-12

Number of Credits: 1.0

Course description:

Disaster Response includes basic training of students in disaster survival and rescue skills that would improve the ability of citizens to survive until responders or other assistance could arrive. Students will receive education, training, and volunteer service to make communities safer, stronger, and better prepared to respond to the threats of terrorism, crime, public health issues and disasters of all kinds.

Essential knowledge and skills:

- (a) General requirements. This course is recommended for students in Grades 10-12. Recommended prerequisite: Principles of Law, Public Safety, Corrections, and Security. Students shall be awarded one-half credit for successful completion of this course.
- (b) Introduction.
 - (1) Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.
 - (2) The 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) Disaster Response prepares students to help themselves, their families and neighbors in the event of a catastrophic disaster by covering basic skills that are important to know during a disaster when emergency services are not available.
 - (4) Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.



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- (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 achieve business and industry employability skills standards such as good attendance, on-time arrival, meeting deadlines, working toward personal/team goals every day, and ethical use of technology.
- (2) The student distinguishes the functions of the Community Emergency Response Team (CERT) and its role in immediate response to disasters. The student is expected to:
- (A) analyze, review, and evaluate the role and function of CERT members in a disaster;
 - (B) analyze, review, and evaluate the types of hazards that are most likely to encounter in a disaster; and
 - (C) analyze the state and local laws that protect first responders, including CERT members, in their given area.
- (3) The student identifies various disaster situations. The student is expected to:
- (A) classify types of disasters, including man-made and natural; and
 - (B) examine common causes of disasters, including weather, accidental, acts of human conflict.
- (4) The student explains hazard mitigation and how it applies to disasters. The student is expected to:
- (A) identify common or potential hazards associated with various types of disaster events;
 - (B) identify personal safety measures for managing hazards and disasters; and
 - (C) summarize measures that can be taken prior to a disaster, during the time of the disaster, and after the disaster occurs to mitigate hazards.
- (5) The student develops a disaster plan. The student is expected to:
- (A) plan and organize how one will escape from a home in the event of an emergency;
 - (B) identify a route out of a neighborhood or workplace if an evacuation takes



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place; and

- (C) demonstrate knowledge of First Aid and Cardiopulmonary Resuscitation (CPR) as it is used in a disaster plan.
- (6) The student demonstrates knowledge of disaster preparedness recommendations as stipulated by federal, state, and local agencies. The student is expected to:
- (A) identify the components of a first aid kit for home and vehicle as recommended by the American Red Cross;
 - (B) identify the tools and supplies for disaster supply kit as recommended by the Federal Emergency Management Agency (FEMA);
 - (C) identify the appropriate food, water, kitchen items, clothing, bedding documents, and contact numbers for disaster kit, as recommended by the FEMA;
 - (D) simulate assisting first responders in fire safety, light search and rescue, and disaster medical operations in accordance with standard operating procedures developed by the sponsoring agency and the Emergency Operations Plan (EOP); and
 - (E) identify the components relating to disaster preparedness in the Volunteer Protection Act of 1997.
- (7) The student demonstrates the use of knowledge and skills of fire safety to assist in disaster situations. The student is expected to:
- (A) explain the role of the CERT in fire safety and conduct an assessment for response to a fire emergency;
 - (B) explain the safety precautions such as buddy system and backup teams, safety equipment, and utility controls, used in the event of a disaster;
 - (C) identify and predict the locations of hazardous materials in the community and home;
 - (D) define and explain the Limit, Isolate, Eliminate, Separate (LIES) methods; and
 - (E) define and demonstrate measures for fire prevention.
- (8) The student explains fire chemistry and its application in fire disasters. The student is expected to:
- (A) identify how fires start and the factors that perpetuate them;
 - (B) define and explain the elements that are required for a fire;



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- (C) identify ordinary combustibles, flammable and combustible liquids energized electrical equipment, and combustible metals; and
 - (D) describe and differentiate between the classes of fires.
- (9) The student demonstrates knowledge of common firefighting resources such as portable fire extinguishers and interior wet standpipes. The student is expected to:
- (A) identify fire containment techniques and methods to restrict the spread of smoke and heat;
 - (B) define the differences between fuel types;
 - (C) determine which resource to select to fight a fire based on fuel type or other contributing factors;
 - (D) define and explain the information on the labels of fire extinguishers;
 - (E) identify the types of fire extinguishers and the components of a portable fire extinguisher;
 - (F) simulate how to use portable fire extinguishers using the Pull, Aim, Squeeze, Sweep (PASS) technique; and
 - (G) compare best practices and precautions of fire suppression safety;
 - (H) identify appropriate response to professional firefighters in a disaster.
- (10) The student demonstrates knowledge of hazardous materials. The student is expected to:
- (A) define and evaluate the characteristics of hazardous materials;
 - (B) define and classify the types of hazardous materials;
 - (C) define and explain the National Fire Protection Association (NFPA) 704 diamond placard;
 - (D) define and explain the different colors of placards and how they relate to hazmat assessment in a disaster; and
 - (E) define and explain the different acronyms and symbols under the National Fire Codes.
- (11) The student explains how to assess and treat an airway obstruction, bleeding, and shock. The student is expected to:
- (A) apply the Head-Tilt/Chin-Lift Method for opening an airway;
 - (B) identify the types of bleeding and the main methods for controlling bleeding;



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- (C) identify the parts of the body that shock effects and investigate the effects of shock on those body parts;
 - (D) explain the signs of shock, including clammy skin, rapid pulse, and nausea;
 - (E) simulate the procedures for treating victims of shock; and
 - (F) explain how to control the symptoms of shock such as elevating the feet, and covering with a blanket.
- (12) The student explains how to maintain hygiene and sanitation in a disaster situation. The student is expected to:
- (A) define and analyze the steps to maintain proper hygiene, including sleep, dental care, bathing, and washing hands;
 - (B) investigate how to dispose of bacterial sources and waste products; and
 - (C) simulate and test a water purification system.
- (13) The student organizes, plans, and establishes disaster medical triage areas. The student is expected to:
- (A) define and explain the concept of Simple Triage and Rapid Treatment (START) when dealing with casualties in a disaster;
 - (B) plan and conduct the major sub-functions of disaster medical operations such as triage, sanitation, and treatment areas;
 - (C) select and evaluate a designated triage area based on proximity to the incident;
 - (D) evaluate a designated triage area for accessibility by transportation vehicles and potential expansion of triage area;
 - (E) designate triage area for immediate care, delayed care and morgue; and
 - (F) establish a documentation protocol for triage victims including verifying that documentation includes available identifying information, description (age, sex, body build, height, and weight), clothing description, injuries, treatment, and transfer location.
- (14) The student simulates a head-to-toe patient evaluation to identify and treat injuries. The student is expected to:
- (A) define and summarize the indicators of injury;
 - (B) distinguish between the extent of various injuries and treatment needed;
 - (C) collect documentation on injuries; and



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- (D) define and describe the most common closed-head, neck, or spinal injuries.
- (15) The student simulates treatment of disaster-related injuries. The student is expected to:
- (A) explain vocabulary terms related to the layers of skin;
 - (B) classify the severity of a burn;
 - (C) define and identify the methods for control of bleeding to prevent secondary infection;
 - (D) simulate the cleaning of wounds and how to apply dressings and bandages;
 - (E) identify treatment options and actions for a foreign object impaled in a patient's body; and
 - (F) define and demonstrate methods for the immobilization of joints immediately above and below the injury.
- (16) The student performs simulated light search and rescue operations. The student is expected to:
- (A) assess a simulated rescue scene and formulate a plan of action based upon the available information;
 - (B) organize teams and apply safe techniques for debris removal and victim extrication;
 - (C) identify necessary materials for cribbing operations;
 - (D) manipulate cribbing materials to stabilize the object prior to lifting; and
 - (E) simulate the lift and troubleshoot possible impediments.
- (17) The student explains documentation requirements required during a disaster response by CERT Team members. The student is expected to:
- (A) organize and deploy volunteer resources such as CERT organizational procedures and command structure;
 - (B) review with the command post the transfer of information; and
 - (C) simulate the collection of documentation on incident status, incident location, access routes, identified hazards, and support locations.
- (18) The student examines rescuer safety during a search and rescue. The student is expected to:



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- (A) classify response activities based on team capabilities and training;
 - (B) compare the degrees of damage and determine whether a rescue may be attempted;
 - (C) define and use the common terminology that contributes to effective communication and shared understanding at a rescue site; and
 - (D) determine team organization based on the scope of an incident, prediction of overall strategy, review of resources, and evaluation of actions and results.
- (19) The student describes the psychological impact of a disaster on rescuers and victims and demonstrates psychological first aid. The student is expected to:
- (A) investigate appropriate communication techniques for crisis situations;
 - (B) identify and explain the post disaster emotional environment;
 - (C) identify the steps that rescuers can take to relieve stressors on themselves and disaster survivors;
 - (D) analyze the psychological and physiological responses that may be observed in rescuers after a disaster;
 - (E) model and explain to team members, before the effort begins, what they can expect to see and what they can expect in terms of emotional response in the survivors and themselves; and
 - (F) examine and explain the goals of on-scene psychological intervention.
- (20) The student discusses terrorism and its relationship to and impact on CERT. The student is expected to:
- (A) define vocabulary associated with terrorism;
 - (B) identify the risk posed by various weapons employed by terrorists;
 - (C) identify potential targets for terrorist attacks within the community;
 - (D) develop a plan of action for a suspected terrorist incident;
 - (E) define and evaluate the environmental indicators of a biological or chemical attack; and
 - (F) simulate procedures for the protection of people and property from terrorist threats.



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Description of specific student needs this course is designed to meet:

Students enrolled in this course will gain knowledge and skills as related to the Emergency and Fire Management Services pathway. This course will provide opportunities for students to develop the skills necessary for disaster preparedness within their communities. Once students complete the training, they will be able to educate and train other students, community members and school personnel on disaster preparedness, as recommended by FEMA. In addition, Homeland Security has been identified as a "high-demand" occupation and students enrolled in this course will receive information and skills related to careers with the United States Department of Homeland Security and other related emergency service providers. The Department of Labor estimates that opportunities within this pathway will continue to grow. Students will have the opportunity to become better citizens and be better prepared to face numerous unknown challenges that may occur in their future, upon completion of this of this course.

Major resources and materials:

- A. Community Emergency Response Team (CERT) model curriculum
- B. FEMA curriculum, PowerPoint presentations, videos and other resources.
- B. CERT Community trainer.
 1. Assist with development of Personal Response Plans and Campus Response.
 2. Provide resources to teach specialized skills.
- C. American Red Cross
 1. Curriculum.
 2. First Aid Training
 3. CPR Training.
- D. Local law enforcement agencies and firefighters.

Recommended course activities:

- A. Formal CERT team organization training and demonstrations.
- B. Personal, family and workplace preparedness plans.
- C. Occupational Safety and Health Administration (OSHA) 10-hour safety course.
- D. Basic First-Aid and CPR certification.
- E. Fire Safety.
 1. Fire safety walkthrough and reports.
 2. Safe fire suppression.
- F. Hazardous materials safety.
- G. Disaster medical operations (Red Cross First Aid and CPR).
 1. Triage (Simulation and skills assessment)



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2. Medical operations teaming simulations and drills. (Red Cross, Irving Fire and Rescue)
3. Emergency treatment (First-Aid).
4. Search and Rescue.

Suggested methods for evaluating student outcomes:

- A. Student Certifications (OSHA, CPR, and First Aid).
- B. Skills assessment rubric will be created and used throughout the course.
- C. Completion of disaster plans evaluated, and presented, to panel of CERT experts.

Teacher qualifications:

An assignment for Disaster Response requires a valid license appropriate for the assignment plus one of the following certificates:

- (1) Trade and Industrial Education: Grades 6-12 with appropriate work approval as identified on the certificate
- (2) Trade and Industrial Education: Grades 8-12 with appropriate work approval as identified on the certificate
- (3) Vocational Trades and Industry: Grades 8-12 with appropriate work approval as identified on the certificate
- (4) Health Science Technology: Grades 8-12.
- (5) Health Science: Grades 6-12.

Additional information:



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Course: Advanced Floral Design

PEIMS Code: N1300270

Abbreviation: ADVFLDS

Grade Level(s): 11-12

Number of Credits: 1.0

Course description:

In this course, students build on the knowledge from the Floral Design course and are introduced to more advanced floral design concepts, with an emphasis on specialty designs and specific occasion planning. This course focuses on building skills in advanced floral design and providing students with a thorough understanding of the design elements and planning techniques used to produce unique specialty floral designs that support the goals and objectives of a specific occasion or event. Through the analysis and evaluation of various occasion and event types, students explore the design needs and expectations of clients and propose and evaluate appropriate creations. From conception to evaluation, students are challenged to create and design appropriate specialty floral designs that meet the needs of the client. Furthermore, an emphasis on budgetary adherence and entrepreneurship equips students with many of the necessary skills needed for success in floral enterprises.

Essential knowledge and skills:

- (a) **General requirements.** This course is recommended for students in Grades 11-12. Prerequisite: Floral Design. Students shall be awarded one credit for successful completion of this course.
- (b) **Introduction.**
 - (1) Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.
 - (2) The Agriculture, Food, and Natural Resources Career Cluster focuses on the production, processing, marketing, distribution, financing, and development of agricultural commodities and resources, including food, fiber, wood products, natural resources, horticulture, and other plant and animal products/resources.
 - (3) In Advanced Floral Design, students gain advanced knowledge and skills specifically needed to enter the workforce as floral designers or as freelance floral



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event designers, with an emphasis on specialty designs and occasion-specific designs and planning. Students are also prepared to enter postsecondary certification or degree programs in floral design or special events design. Students build on the knowledge base from Principles and Elements of Floral Design and are introduced to more advanced floral design concepts. In addition, students gain knowledge of the design elements and planning techniques used to produce unique specialty floral designs that support the goals and objectives of an occasion or event.

- (4) Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.
 - (5) Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.
- (c) Knowledge and skills.
- (1) The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:
 - (A) identify career development and entrepreneurship opportunities;
 - (B) apply competencies related to resources, information, interpersonal skills, and systems of operation;
 - (C) demonstrate personal and occupational health and safety practices in the workplace;
 - (D) identify employer expectations and appropriate work habits;
 - (E) demonstrate good citizenship characteristics, including advocacy, stewardship, and community leadership; and
 - (F) identify training, education, and certification requirements for occupational choice.
 - (2) The student develops a supervised agriculture experience program. The student is expected to:
 - (A) plan, propose, conduct, document, and evaluate a supervised agriculture experience program as an experiential learning activity;
 - (B) apply proper record-keeping skills as they relate to the supervised agriculture experience;
 - (C) participate in youth leadership opportunities to create a well-rounded experience program; and



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- (D) produce and participate in a local program of activities using a strategic planning process.
- (3) The student understands advanced floral design principles and techniques. The student is expected to:
- (A) demonstrate appropriate use of advanced botanical terminology;
 - (B) classify and identify flowers and plants used in floral design to symbolize specific meanings;
 - (C) compare and contrast contemporary floral design styles such as abstract, assemblage, asymmetrical, Biedermeier, cascade/waterfall, mille fleur, and underwater and their characteristics;
 - (D) illustrate ideas for arrangements using contemporary floral design styles from direct observation, experience, and imagination; and
 - (E) evaluate the effective use of floral design elements such as design schema, sources of inspiration, design proportions, and use of color and texture.
- (4) The student demonstrates advanced design techniques using fresh and permanent floral designs. The student is expected to:
- (A) plan and execute fresh and permanent botanical arrangements using various contemporary design styles;
 - (B) prepare and evaluate floral designs using various basing design techniques such as layering, terracing, pave, clustering, and pillowing;
 - (C) prepare and evaluate floral designs using advanced focal-emphasis design techniques, s-grouping, banding, binding, shadowing, sequencing, framing, zoning, and parallelism; and
 - (D) prepare and evaluate thematic floral designs such as southwestern, rustic, seasonal, and color palettes.
- (5) The student describes effective design planning and the processes used to create floral designs for specific occasions and events. The student is expected to:
- (A) explain the importance of proper planning of floral designs;
 - (B) identify the steps of effective planning used to design floral arrangements for specific occasions and events;
 - (C) analyze and discuss contingency factors to consider when planning large-volume floral designs; and



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- (D) identify effective practices for conferencing with customers to determine customer's mission, goals, objectives, and expectations for décor design including budget considerations.
- (6) The student applies key floral design elements to enhance the experience of specific occasions and events. The student is expected to:
- (A) identify floral design elements and terminology used for specific occasions and events;
 - (B) analyze the aesthetic benefits of floral design elements such as bouquets, boutonnieres and corsages, and pedestal arrangements for specific occasions and events such as weddings, funerals, and banquets;
 - (C) critique current floral design trends;
 - (D) demonstrate the proper use of floral design tools; and
 - (E) compare and contrast ideas for occasion-specific floral designs from direct observation, experience, and imagination.
- (7) The student demonstrates effective planning of occasion-specific floral designs from the conceptual stage through completion. The student is expected to:
- (A) conduct a floral design planning consultation;
 - (B) evaluate and select floral design elements that achieve the objectives and budget expectations of an occasion or event;
 - (C) present a proposal that showcases floral design elements appropriate to the selected occasion;
 - (D) assess the design, creation, and installation and dismantle of floral décor when creating a production schedule;
 - (E) ensure necessary resources are obtained within a specified budget and timeframe by developing a procurement plan;
 - (F) identify, assess, manage and reduce risks and functional impediments as they pertain to floral décor;
 - (G) implement the floral design plan through project completion; and
 - (H) evaluate strategies to determine the effectiveness of floral design planning and performance.
- (8) The student demonstrates business and merchandising skills necessary for floral design and freelance floral event design professionals. The student is expected to:
- (A) calculate mark-up of floral products and design services;



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- (B) evaluate pricing policies;
 - (C) discuss the contracts and negotiations processes;
 - (D) design a floral décor budget, including per item total costs;
 - (E) demonstrate correct procedures for handling customer sales transactions;
 - (F) identify strategies to establish business relationships with a variety of locations, venues, vendors, and other suppliers such as floral suppliers; and
 - (G) analyze basic marketing principles and procedures entrepreneurs can apply to target consumers.
- (9) The student explains the significance of professional organizations to the floral design industry. The student is expected to:
- (A) identify industry-related professional organizations; and
 - (B) describe the benefits of participating professional organizations and earning certifications.

Description of specific student needs this course is designed to meet:

Students are exposed to aspects of occasion-specific design through the Floral Design course, but there is not an advanced course to help students enrich and enhance their skills and interest in specialty designs or design planning for specific occasions and events. Freelance floral design for occasions and events is part of a \$30 billion industry and is especially in-demand across the state of Texas. The goal of this course is to provide students with advanced-level floral design knowledge, skills, and experiences that can transition to floral design careers and advancement in the floral design industry.

The standards of this course are designed in a manner in order to enhance the ability of students in mastering the TSFA Level 2 Floral Design certification.

Major resources and materials:

Hunter, N. (2013). *The art of floral design* (3rd ed.). New York: Cengage.

Monroe, J. (2006). *Art of the event: Complete guide to designing and decorating special events*. New Jersey: John Wiley & Sons, Inc.

Space, P. & DelPrince, J. (2014). *Principles of floral design: An illustrated guide*. Tinley Park, IL: Goodhearted Wilcox.



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Texas Master Florists. *Principles and elements of floral design: Teacher's manual*. Austin, TX: Texas State Florist Association.

Texas State Florist Association. *Texas Agricultural Science Teacher Floral Design Professional Development and CEU Opportunities: Texas Certified Florists Program*. Retrieved from <http://www.tsfa.org/development.html>.

Recommended course activities:

- Create and evaluate advanced floral arrangements
- Observe and evaluate occasion-specific designs
- Plan occasion-specific floral design schematics using floral arrangements and floral decor elements
- Design an occasion-specific design inspiration board
- Develop an occasion or event design budget and procurement plan
- Create and present a comprehensive occasion or event design proposal
- Implement and evaluate an occasion-specific floral design plan

Suggested methods for evaluating student outcomes:

- Rubric grading of individual student work
- Documented observation and assessment of student performance
- Externally reviewed practicum experiences
- Student portfolios

Teacher qualifications:

Agriculture, Food, and Natural Resources: Grades 6-12

Agricultural Science and Technology: Grades 6-12

Any vocational agriculture certificate

Trade and Industrial Education: Grades 6-12 with appropriate work approval

Trade and Industrial Education: Grades 8-12 with appropriate work approval

Vocational Trades and Industry with appropriate work approval

Additional information:

The Texas State Florists' Association (TSFA) was consulted and contributed to the development of this course.



Engineering Essentials

PEIMS Code: N1303760

Abbreviation: ENGESS

Grade Level(s): 9-10

Award of Credit: 1.0

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- Districts must have local board approval to implement innovative courses.
- In accordance with Texas Administrative Code (TAC) §74.27, school districts must provide instruction in all essential knowledge and skills identified in this innovative course.
- Innovative courses may only satisfy elective credit toward graduation requirements.
- Please refer to [TAC §74.13](#) for guidance on endorsements.

Course Description:

The purpose of the PLTW *Engineering Essentials* (EES) course is to provide a multidisciplinary approach to teaching and learning foundational concepts of engineering practice, providing students opportunities to explore the breadth of engineering career opportunities and experiences, and solve engaging and challenging real-world problems. Goals and outcomes for students include developing a strategic, systematic design and inquiry processes to guide development of an effective solution to a problem. In EES, students discover that successful STEM professionals exhibit personal and professional characteristics that lend themselves to the creative, collaborative, and solution-driven nature of their professions. Students investigate engineering career fields and determine the technical literacy and career-specific knowledge and skills to support professional practice. They incorporate computational thinking, modeling, systems thinking, professional practices and communication, project management, collaboration, professionalism and ethics as critical parts of a problem-solving process that supports the ability to interpret complex, open-ended problems across disciplines.

Teacher qualifications:

An assignment for Engineering Essentials is allowed with one of the following certificates as well as successful completion of the Project Lead The Way's Core Training requirements for Aerospace Engineering.

PLTW Core Training:

PLTW's Core Training requires approximately 90 hours of instruction led by PLTW approved Master Teachers. Course mastery is demonstrated by the submission and approval of a course portfolio that meet's PLTW's requirements. After successful completion of Core Training, teachers receive access to the National PLTW Engineering Professional Learning Community, course-specific student and classroom instructional resources, and Ongoing Training resources

through the PLTW Content Management System.

- Legacy Master Science Teacher.
- Mathematics/Physical Science/Engineering: Grades 6-12.
- Mathematics/Physical Science/Engineering: Grades 8-12.
- Physical Science: Grades 6-12.
- Physical Science: Grades 8-12.
- Physics/Mathematics: Grades 7-12.
- Physics/Mathematics: Grades 8-12.
- Science: Grades 7-12.
- Science: Grades 8-12.
- Science, Technology, Engineering, and Mathematics: Grades 6-12.
- Secondary Industrial Arts (Grades 6-12).
- Secondary Industrial Technology (Grades 6-12).
- Secondary Physics (Grades 6-12).
- Secondary Science (Grades 6-12).
- Secondary Science, Composite (Grades 6-12).
- Technology Education: Grades 6-12.
- Legacy Master Mathematics Teacher.
- Mathematics: Grades 7-12.
- Mathematics: Grades 8-12.
- Secondary Mathematics: Grades 6-12
- Secondary Physical Science (Grades 6-12)
- Trade and Industrial Education: Grades 6-12. This assignment requires appropriate work approval.
- Trade and Industrial Education: Grades 8-12. This assignment requires appropriate work approval.
- Vocational Trades and Industry (Grades 6-12). This assignment requires appropriate work approval.
- Vocational Trades and Industry Pre-Employment Laboratory (Grades 6-12). This assignment requires appropriate work approval.
- Vocational Trades and Industry Co-op (Grades 6-12). This assignment requires appropriate work approval.

Additional information:

Districts may use these courses only with the approval of Project Lead The Way. All requirements of Project Lead The Way must be met. Please contact Project Lead The Way directly for these requirements:

Project Lead The Way
Solution Center
Toll Free: 877.335.PLTW (7589)
solutioncenter@pltw.org

Teachers are required to successfully complete PLTW Core Training to gain access to and teach the appropriate PLTW course curriculum. Core Training is provided in a variety of platforms – face to face, on-line and blended instruction, to meet teachers' needs.

Engineering Essentials

Core Training helps teachers build skills and confidence around activity-, project-, and problem-based (APB) learning; prepares educators to become facilitators and coaches; and empowers them to bring learning to life through their PLTW program.

PLTW provides a number of resources to help districts, schools, and teachers build strong PLTW programs including an Implementation Guide, best practices, regional and national events, and more. Additionally, the PLTW Solution Center provides support to help teachers 24 hours a day, seven days a week.

The cost for PLTW Engineering Essentials Core Training is currently \$2,400.00.

