



## Disaster Response

PEIMS Code: N1303011

Abbreviation: DISRESP

Grade Level(s): 9-12

Award of Credit: 1.0

### Approved Innovative Course

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

### Course Description:

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

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### (c) Knowledge and Skills

- (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 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;

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- (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;
  - (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;

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- (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;
  - (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:

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- (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
  - (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:
- (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

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- (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.

### Recommended Resources and Materials:

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

### Recommended Course Activities:

- Formal CERT team organization training and demonstrations.
- Personal, family and workplace preparedness plans.
- Occupational Safety and Health Administration (OSHA) 10-hour safety course.
- Basic First-Aid and CPR certification.

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- Fire Safety.
  - Fire safety walkthrough and reports.
  - Safe fire suppression.
- Hazardous materials safety.
- Disaster medical operations (Red Cross First Aid and CPR).
  - Triage (Simulation and skills assessment)
  - Medical operations teaming simulations and drills. (Red Cross, Irving Fire and Rescue)
  - Emergency treatment (First-Aid).
  - Search and Rescue.

### Suggested methods for evaluating student outcomes:

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

### Teacher qualifications:

An assignment for Engineering Applications of Computing (EYW) is allowed with one of the following certificates.

- Trade and Industrial Education: Grades 6-12 with appropriate work approval as identified on the certificate
- Trade and Industrial Education: Grades 8-12 with appropriate work approval as identified on the certificate
- Vocational Trades and Industry: Grades 8-12 with appropriate work approval as identified on the certificate
- Health Science Technology: Grades 8-12.
- Health Science: Grades 6-12.

### Additional information:

None.