Emergency Medical Technician II

8334 36 weeks

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Acknowledgments

The components of this instructional framework were developed by the following curriculum development panelists:

Sandra Bailey, The Specialty Center at Hanover High School, Hanover County Public Schools

Jefferson Brittingham, New Horizons Regional Education Center, Hampton City Public Schools

Johnna Chandler, ACE Center at Hermitage High School, Henrico County Public Schools

Craig Evans, Executive Director, Virginia EMS Council, Gainesville William Fritz, BLS Training Specialist, Virginia Department of Health, Richmond Roxann Gabany, Training Center Coordinator, Peninsula Center for Life Support, Bena Catherine Gardner, Charlottesville-Albemarle Technical Education Center (CATEC), Charlottesville

Jackie Guilliams, William Fleming High School, Roanoke City Public Schools Rogger James, Richmond Technical Center, Richmond City Public Schools Danny Jarrell, Hopewell High School, Hopewell City Public Schools James N. Jones, Industry Expert/Business Partner, Dale City Volunteer Fire Department, Dale City

Jake Miller, Chesapeake Career Center, Chesapeake City Public Schools Sandra Sokol, Stone Bridge High School, Loudoun County Public Schools

Correlations to the Virginia Standards of Learning were reviewed and updated by:

Leslie R. Bowers, English Teacher (ret.), Newport News Public Schools Vickie L. Inge, Mathematics Committee Member, Virginia Mathematics and Science Coalition

Anne F. Markwith, New Teacher Mentor (Science), Gloucester County Public Schools Michael L. Nagy, Social Studies Department Chair, Rustburg High School, Campbell County Public Schools

Jane Best, Virginia HOSA State Advisor, reviewed and updated the HOSA correlations.

The framework was edited and produced by the CTE Resource Center:

Heather A. Widener, Writer/Editor Kevin P. Reilly, Administrative Coordinator

Virginia Department of Education Staff

Michele Green-Wright, Specialist, Health and Medical Sciences Education and Related Clusters
Dr. Tricia S. Jacobs, CTE Coordinator of Curriculum and Instruction
Dr. David S. Eshelman, Director, Workforce Development and Initiatives
George R. Willcox, Director, Operations and Accountability

Office of Career, Technical, and Adult Education Virginia Department of Education

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Course Description

Suggested Grade Level: 10 or 11 or 12

Prerequisites: 8333

The tasks for this course represent the National and Virginia Emergency Medical Services (EMS) Educational Standards. Students build on their knowledge and skills for providing basic life support by focusing on the areas of EMS operations, medical emergencies, and management of special patient populations. Supervised field experience that includes at least 10 patient contacts outside of school hours is required. Successful completion of this second course in the sequence will earn the student CTE completer status. Successful completion of all course requirements and instructor endorsement may lead to eligibility to take the Virginia State Psychomotor Exam and the National Registry of Emergency Medical Technicians (NREMT) cognitive exam. Students must meet the requirements of the Functional Position Description for the Basic Life Support Provider (refer to EMS.TR.14B and 12VAC5-31-1501 in the Code of Virginia). Students must complete a minimum of 85 percent of the didactic and lab aspects of the course, per 12VAC5-31-1501 in the Code of Virginia.

NOTE: Students must be at least 16 years old prior to the first day of EMT instruction. All students will need to undergo a criminal background check that includes fingerprinting and drug screening.

This course has specific state laws and regulations from a governing medical board or agency. Please contact the Virginia Department of Education, Office of Career and Technical Education Services prior to implementing this course. All inquiries may be sent to cte@doe.virginia.gov.

The Virginia Department of Education, in collaboration with the Virginia Department of Health, is pleased to provide the <u>High School Based Emergency Medical Technician (EMT) Educational Program Guidelines</u>. The guidelines are based on the newly revised state and national standards for emergency medical technician programs. This document serves as a guide to school divisions for implementing the revised EMT program standards consistently in all high schools and technical centers statewide.

Task Essentials Table

- Tasks/competencies designated by plus icons () in the left-hand column(s) are essential
- Tasks/competencies designated by empty-circle icons (O) are optional
- Tasks/competencies designated by minus icons (⊕) are omitted
- Tasks marked with an asterisk (*) are sensitive.

8334	Tasks/Competencies
⊕	Describe the assessment and management of an acutely ill patient.
•	Demonstrate the assessment and management of patients experiencing neurological emergencies.
•	Describe the assessment and management of patients with abdominal or gastrointestinal disorders.
•	Demonstrate the assessment and management of patients with hypersensitivity disorders or emergencies.
•	Demonstrate body substance isolation and the use of personal protective equipment (PPE) needed for protection from exposure to communicable or infectious diseases.

+	Describe the assessment and management of patients with diabetic emergencies.
①	Describe the assessment and management of patients displaying psychotic behaviors or
	signs of other psychiatric disorders.
⊕	Demonstrate the assessment and management of patients experiencing cardiac
_	emergencies.
⊕	Demonstrate the assessment and management of patients suspected of suffering from
	poisoning.
①	Demonstrate the assessment and management of patients with respiratory emergencies.
+	Describe the assessment and management of patients with hematological disorders.
①	Describe the assessment and management of patients with genitourinary/renal
	disorders.
+ +	Describe the emergency medical care of patients with gynecological emergencies.
•	Describe the assessment and management of patients with nontraumatic
	musculoskeletal disorders.
①	Describe the identification, assessment, and management of patients with disorders of
-	the eyes, ears, nose, and throat.
①	Describe the assessment and management of obstetric patients.
+ +	Describe the care of neonatal patients.
⊕	Describe the care of pediatric patients.
①	Demonstrate the assessment and management of geriatric patients.
\oplus	Describe the assessment and management of patients with special challenges.
①	Describe the risks and responsibilities of emergency response.
①	Demonstrate establishment of incident command.
①	Evaluate the role of an EMT in a multiple-casualty situation.
①	Describe the use of air medical transport.
①	Describe the fundamental concepts of extrication.
①	Explain the EMT's role during a call involving hazardous materials.
①	Evaluate the role of the EMT in a mass-casualty situation due to terrorism or disaster.
①	Research certification requirements for the EMT.
①	Participate in a supervised EMT clinical rotation.
①	Research recertification requirements for the EMT.
①	Describe the history and current state of the opioid crisis in the United States.
①	Describe the history and current state of the opioid crisis in Virginia.
⊕	Define the pharmacological components and common uses of opioids.
	Examine the science of addiction.
⊕	Explain prevention and early intervention strategies.
•	Identify addiction and its behavioral elements, as defined by the Diagnostic and
_	Statistical Manual of Mental Disorders (DSM-5).
\oplus	Describe the treatment models of addiction therapy.
⊕	Describe the medication management antidote used to prevent fatal opioid overdoses.
⊕	Explain the science of physiological and mental pain.
⊕	Describe the diagnostic tools used in developing pain management plans.
⊕	Describe pain treatment options available to various populations of patients.
①	Describe the effects of opioid dependency on the human body systems.
①	Explain the mechanism and physical effects of opioids on the human body.

•	Explain the use of opioids in practice settings, the role of opioids in pain management,
	and risk factors associated with the use of the medication.
①	Describe the withdrawal and tapering side effects of opioid use.
①	Describe storage and disposal options for opioids.
①	Explain community resources for education about opioid use.
①	Describe key communication topics involving opioids for patients.
①	Describe communication topics for caregivers and family members.

Legend: Essential Non-essential Omitted

Curriculum Framework

Managing Medical Emergencies

Task Number 39

Describe the assessment and management of an acutely ill patient.

Definition

Description should include the pathophysiology, assessment, management, and

- the steps needed to assess the patient's medical complaint, using signs/symptoms, allergies, medications, pertinent past history, last oral intake, events leading to injury or illness (SAMPLE) and onset, provocation, quality, radiation, severity, timing (OPQRST)
- how to determine the proper mode of transport
- how to decide the best destination for patient transport.

Process/Skill Questions

- What are the advantages of using SAMPLE and OPQRST when performing a patient assessment?
- When is it appropriate to use lights and sirens during an emergency call?
- Why would an emergency medical technician (EMT) choose a trauma center or other specialty treatment center over the closest appropriate hospital?

HOSA Competitive Events (High School)

Emergency Preparedness Events

- CPR/First Aid
- o Emergency Medical Technician

Task Number 40

Demonstrate the assessment and management of patients experiencing neurological emergencies.

Definition

Demonstration should include the anatomy, physiology, pathophysiology, assessment, and management of emergencies such as

- a decreased level of responsiveness
- a seizure
- status epilepticus
- a possible transient ischemic attack (TIA) (i.e., stroke)
- a severe headache.

Process/Skill Questions

- What are the steps in treating a patient with a loss of consciousness?
- What are the types of seizures and the treatments for each?
- What are the differences between a TIA and cerebrovascular accident (CVA)?

HOSA Competitive Events (High School)

Emergency Preparedness Events

- CPR/First Aid
- Emergency Medical Technician

Task Number 41

Describe the assessment and management of patients with abdominal or gastrointestinal disorders.

Definition

Description should include the anatomy, physiology, pathophysiology, assessment, and management of patients with

- acute and chronic gastrointestinal hemorrhage
- peritonitis
- ulcerative diseases.

Description also includes explaining and/or justifying the use of antiemetics and antidiarrheals.

Process/Skill Questions

- What are the common causes of acute and chronic nontraumatic abdominal pain?
- What are the solid and hollow abdominal organs, and where are they located?
- What are the common treatments for abdominal disorders?

HOSA Competitive Events (High School)

Emergency Preparedness Events

- o CPR/First Aid
- Emergency Medical Technician

Task Number 42

Demonstrate the assessment and management of patients with hypersensitivity disorders or emergencies.

Definition

Demonstration should include the anatomy, physiology, pathophysiology, assessment, and management of the

- signs and symptoms of an allergic reaction or anaphylaxis, or both
- interrelationship between the patient with an allergic reaction and airway management
- mechanisms of allergic response and implications for airway management
- use of H2 blockers
- use of an epinephrine autoinjector
- use of bronchodilator.

- What is the best position/posture for a conscious patient suffering from an allergic reaction, to maximize the effectiveness of the airway and to help the patient relax?
- What are the five most common categories of allergens?
- How does an epinephrine injection help a patient who is suffering from anaphylaxis?

HOSA Competitive Events (High School)

Emergency Preparedness Events

- o CPR/First Aid
- o Emergency Medical Technician

Task Number 43

Demonstrate body substance isolation and the use of personal protective equipment (PPE) needed for protection from exposure to communicable or infectious diseases.

Definition

Demonstration should include the assessment and management of

- patients who may have an infectious disease
- decontamination of ambulance and equipment after patient treatment
- legal requirements regarding the exposure of a healthcare provider.

Process/Skill Questions

- What is the minimum standard of personal protection when treating a patient?
- What are the decontamination protocols for an ambulance and equipment after treating a patient?
- How does one appropriately use and dispose of PPE after a potential infectious disease exposure?

HOSA Competitive Events (High School)

Emergency Preparedness Events

- CPR/First Aid
- o Emergency Medical Technician

Task Number 44

Describe the assessment and management of patients with diabetic emergencies.

Definition

Description should include the anatomy, physiology, pathophysiology, assessment, management, and

- Type 1 and Type 2 diabetes
- age-related variations
- ways to recognize acute diabetic emergencies (e.g., hyperglycemia, hypoglycemia)
- the procedure for administering oral glucose.

Process/Skill Questions

- What are the key symptoms of a diabetic emergency?
- When and how is oral glucose administered?
- How are symptoms of hyperglycemia and hypoglycemia different?

HOSA Competitive Events (High School)

Emergency Preparedness Events

- o CPR/First Aid
- o Emergency Medical Technician

Task Number 45

Describe the assessment and management of patients displaying psychotic behaviors or signs of other psychiatric disorders.

Definition

Description should include

• the ways to recognize behaviors that pose a risk to the EMT, patient, or others, including the risk of suicide

- the basic principles of the mental health system
- an explanation of acute psychosis
- an explanation of agitated delirium.

- What behaviors can indicate that a patient could be dangerous to the EMT, self, or others?
- What are the two basic categories that a physician uses for diagnosing a psychiatric disorder?
- When is it appropriate to restrain a patient?

HOSA Competitive Events (High School)

Health Science Events

Knowledge Test: Behavioral Health

Emergency Preparedness Events

- o CPR/First Aid
- o Emergency Medical Technician

Task Number 46

Demonstrate the assessment and management of patients experiencing cardiac emergencies.

Definition

Demonstration should include the anatomy, physiology, pathophysiology, assessment, and management of

- acute coronary syndrome (e.g., angina pectoris, myocardial infarction)
- aortic aneurysm/dissection
- thromboembolism
- heart failure
- hypertensive emergencies
- cardiac arrest
- chest pain.

Demonstration also includes administration of cardiac medications, continuous positive airway pressure (CPAP), and acquisition of a 12-lead electrocardiogram (ECG).

Process/Skill Questions

- What is the best treatment for a hypertensive emergency?
- What are the advantages to using an automated external defibrillator (AED)?
- What are some common errors in using an AED?
- What are three consequences of an acute myocardial infarction?
- What are the cardiac medications an EMT can administer?

HOSA Competitive Events (High School)

Emergency Preparedness Events

- o CPR/First Aid
- o Emergency Medical Technician

Task Number 47

Demonstrate the assessment and management of patients suspected of suffering from poisoning.

Definition

Demonstration should include the anatomy, physiology, pathophysiology, assessment, and management of

- carbon monoxide poisoning
- nerve agents poisoning
- inhaled poisons
- ingested poisons
- injected poisons
- absorbed poisons
- alcohol intoxication and withdrawal
- opiate overdose.

Demonstration also includes identifying how and when to contact a poison control center and knowing the antidotes for specific poisons.

- What is a poison?
- What are the two main types of food poisoning?
- What clues at the scene would help an EMT identify the cause of a patient's illness?
- What is the most commonly abused drug in the United States?

HOSA Competitive Events (High School)

Emergency Preparedness Events

- o CPR/First Aid
- Emergency Medical Technician

Task Number 48

Demonstrate the assessment and management of patients with respiratory emergencies.

Definition

Demonstration should include the anatomy, physiology, pathophysiology, assessment, and management of emergencies related to

- epiglottitis
- spontaneous pneumothorax
- pulmonary edema
- asthma
- chronic obstructive pulmonary disease (COPD)
- environmental/industrial exposure to harmful substances in the air
- toxic gas
- pertussis
- cystic fibrosis
- pulmonary embolus
- pneumonia
- viral respiratory infections.

Demonstration should also include using respiratory medications, pulse oximetry, capnography/end-tidal CO₂, and CPAP.

- How does an EMT assess and manage a patient in respiratory distress?
- What are some of the reasons a patient may experience a respiratory emergency?

• Why is it critically important to frequently monitor a COPD patient's response to supplemental oxygen?

HOSA Competitive Events (High School)

Emergency Preparedness Events

- o CPR/First Aid
- o Emergency Medical Technician

Task Number 49

Describe the assessment and management of patients with hematological disorders.

Definition

Description should include the anatomy, physiology, pathophysiology, assessment, and management of sickle cell disease (SCD) and clotting disorders.

Process/Skill Questions

- What complications can arise from SCD?
- What are the risk factors for the two main types of clotting disorders?

HOSA Competitive Events (High School)

Emergency Preparedness Events

- CPR/First Aid
- o Emergency Medical Technician

Task Number 50

Describe the assessment and management of patients with genitourinary/renal disorders.

Definition

Description should include the anatomy, physiology, pathophysiology, assessment, and management of

- a blood pressure assessment of a hemodialysis patient
- the complications related to renal dialysis
- the complications related to urinary catheter management (not insertion)
- kidney stones.

Process/Skill Questions

- What is the function of the kidneys?
- What are kidney stones?
- What are some adverse effects of dialysis?

HOSA Competitive Events (High School)

Emergency Preparedness Events

Emergency Medical Technician

Task Number 51

Describe the emergency medical care of patients with gynecological emergencies.

Definition

Description should include the anatomy, physiology, pathophysiology, assessment, and management of emergencies related to

- vaginal bleeding
- sexual assault, including provisions for appropriate emotional support
- gynecological infections (e.g., pelvic inflammatory disease [PID]).

Process/Skill Questions

- How does an EMT assess a gynecological emergency? What steps does an EMT take?
- What are the signs and symptoms of a patient with PID?
- What additional issues does an EMT face when treating a victim of sexual assault?

HOSA Competitive Events (High School)

Emergency Preparedness Events

Emergency Medical Technician

Task Number 52

Describe the assessment and management of patients with nontraumatic musculoskeletal disorders.

Definition

Description should include the anatomy, physiology, pathophysiology, assessment, and management of nontraumatic fractures caused by things such as osteoporosis, brittle bone syndrome, arthritis, or cancer.

Process/Skill Questions

- What other considerations exist in the treatment of nontraumatic fractures?
- What steps are involved in splinting?
- What are some indications of a fracture?

HOSA Competitive Events (High School)

Health Professions Events

Physical Therapy

Emergency Preparedness Events

Emergency Medical Technician

Task Number 53

Describe the identification, assessment, and management of patients with disorders of the eyes, ears, nose, and throat.

Definition

Description should include

- how to manage a nosebleed
- use of the Morgan Lens
- ocular irrigation.

- What is one of the most common causes of nosebleed?
- What is subcutaneous emphysema?
- What type of injury would unequal pupils indicate?

HOSA Competitive Events (High School)

Emergency Preparedness Events

o Emergency Medical Technician

Managing Special Patient Populations

Task Number 54

Describe the assessment and management of obstetric patients.

Definition

Description should include

- the anatomy and physiology of normal pregnancy
- the pathophysiology of pregnancy complications
- how to assess a pregnant patient
- management of a normal delivery
- management of abnormal deliveries (e.g., nuchal cord, prolapsed cord, breech)
- management of third-trimester bleeding (e.g., placenta previa, placental abruption)
- management of spontaneous abortion or miscarriage
- management of ectopic pregnancy
- management of preeclampsia or eclampsia.

- How does an EMT determine whether an obstetric patient is ready to deliver or whether there is time to transport the patient to a hospital?
- What are the three stages of labor?
- What are some of the causes of third-trimester bleeding?

HOSA Competitive Events (High School)

Emergency Preparedness Events

Emergency Medical Technician

Task Number 55

Describe the care of neonatal patients.

Definition

Description should include

- assessment and management of a newborn (e.g., calculation of the Apgar score)
- neonatal resuscitation.

Process/Skill Questions

- When should the Apgar score be calculated?
- What is the correct way to stimulate a neonatal patient to breathe?
- What are the procedures for neonatal resuscitation?

HOSA Competitive Events (High School)

Emergency Preparedness Events

Emergency Medical Technician

Task Number 56

Describe the care of pediatric patients.

Definition

Description should include

- age-related assessment and management techniques
- the developmental stages of pediatric patients
- treatment modifications for pediatric patients with emergencies or disorders such as upper airway obstruction, lower airway disease, respiratory distress/failure/arrest, shock, seizure, or gastrointestinal disease
- sudden infant death syndrome (SIDS)
- equipment modifications needed for pediatric patients.

Process/Skill Questions

- How are age-related assessment and management important in the care of a pediatric patient?
- Why are the developmental stages of a pediatric patient important in treatment decisions?
- What is the most common cause of dehydration in children?
- What is SIDS?

HOSA Competitive Events (High School)

Emergency Preparedness Events

Emergency Medical Technician

Task Number 57

Demonstrate the assessment and management of geriatric patients.

Definition

Demonstration should include

- explaining common physiological changes associated with geriatric patients
- showing ways to assess and manage the psychosocial aspects of aging
- modifying assessment and treatment procedures to suit the age of the patient
- handling patients with major common geriatric diseases or emergencies (e.g., cardiovascular, respiratory, neurologic, endocrine, Alzheimer's, dementia).

- What are the most frequently occurring conditions in geriatric patients?
- Why is it important for EMTs to understand the physiologic and psychosocial changes in geriatric patients?
- How does dementia differ from delirium?
- What factors may commonly affect a geriatric patient's vital signs?

HOSA Competitive Events (High School)

Emergency Preparedness Events

Emergency Medical Technician

Task Number 58

Describe the assessment and management of patients with special challenges.

Definition

Description should include the healthcare implications of the following factors that present patients with special challenges:

- Abuse and neglect
- Homelessness
- Poverty
- Bariatrics
- Terminal illness/hospice care
- Tracheostomy care and dysfunction
- Sensory deficit and loss
- Technology assisted or dependent
- Developmental disability
- Home-care dependent

- How does an EMT correctly and appropriately assess and manage a patient with special challenges?
- What clues would indicate that a patient is hearing impaired?
- Why would airway management be more difficult in a patient with Down syndrome?
- What is the best approach to take when interacting with a patient who has special challenges?

HOSA Competitive Events (High School)

Emergency Preparedness Events

Emergency Medical Technician

Understanding EMS Operations

Task Number 59

Describe the risks and responsibilities of emergency response.

Definition

Description should include

- operational roles and responsibilities to ensure patient, public, and personal safety
- common risks and responsibilities encountered by an EMT when performing emergency response, including those related to transporting a patient.

Process/Skill Questions

- What steps can an EMT take to reduce the risks of performing emergency response?
- How can an EMT manage the responsibilities of performing emergency response, particularly the responsibility to provide emotional comfort to a patient?
- What are some ways for an EMT to answer a patient who asks whether he or she has a serious injury?

HOSA Competitive Events (High School)

Emergency Preparedness Events

Emergency Medical Technician

Task Number 60

Demonstrate establishment of incident command.

Definition

Demonstration should include

- explaining the roles and responsibilities in the incident management system
- initiating incident command
- working within the incident management system.

Teacher resource: <u>ICS 100, 200, 700, 800 requirements from the Federal Emergency Management Agency</u>

Process/Skill Questions

- What are three questions to ask when first arriving at a mass-casualty incident?
- Who establishes incident command?
- How does an EMT initiate incident command?

Task Number 61

Evaluate the role of an EMT in a multiple-casualty situation.

Definition

Evaluation should include the role of an EMT in the following processes:

- Performing triage and re-triage
- Making destination decisions
- Relieving post-traumatic and cumulative stress
- Managing resources

Process/Skill Questions

- What is an EMT's role during a multiple-casualty situation?
- How does an EMT perform triage and re-triage?
- What is post-traumatic stress? What is cumulative stress?
- What is resource management? How does an EMT apply it?

HOSA Competitive Events (High School)

Emergency Preparedness Events

- CERT (Community Emergency Response Team) Skills
- o Emergency Medical Technician

Task Number 62

Describe the use of air medical transport.

Definition

Description should include

- safety factors and procedures related to air medical operations
- criteria for using air medical transport
- the role of an EMT in air medical transport
- landing zones
- procedures for safe approach.

Process/Skill Questions

- What factors must be considered to justify the use of air medical transport?
- What are the two types of air medical transport?
- How can an EMT help to assure safety of self, the patient, and others during air medical transport?

HOSA Competitive Events (High School)

Emergency Preparedness Events

o CERT (Community Emergency Response Team) Skills

Task Number 63

Describe the fundamental concepts of extrication.

Definition

Description should include

- safety factors or procedures related to vehicle extrication
- use of simple hand tools to perform extrication.

- What is extrication?
- What steps must be taken to safely and effectively extricate a patient?
- What tools are used during extrication?

HOSA Competitive Events (High School)

Emergency Preparedness Events

Emergency Medical Technician

Task Number 64

Explain the EMT's role during a call involving hazardous materials.

Definition

Explanation should include the risks, standard operating procedures, and responsibilities of operating in a cold zone.

Teacher resources: <u>Virginia Department of Emergency Management Hazardous Materials</u> and <u>U.S. Department of Labor's Occupational Health and Safety Administration (OSHA) Hazardous Waste Operations and Emergency Response (HAZWOPER)</u>

Process/Skill Questions

- What is a cold zone?
- How can an EMT manage the risks of entering a cold zone?
- How can an EMT manage the responsibilities of operating in a cold zone?
- How can an EMT be sure of following all standard procedures for operating in a cold zone?

HOSA Competitive Events (High School)

Emergency Preparedness Events

o Emergency Medical Technician

Task Number 65

Evaluate the role of the EMT in a mass-casualty situation due to terrorism or disaster.

Definition

Evaluation should include the risks, standard operating procedures, and responsibilities of operating at the scene of a natural or man-made disaster.

Process/Skill Questions

- What is the role of an EMT during a mass-casualty situation?
- How can an EMT manage the risks associated with operating at the scene of a natural or man-made disaster?
- How can an EMT manage the responsibilities of operating at the scene of a natural or man-made disaster?
- What is the difference between a disaster and a mass-casualty incident?

HOSA Competitive Events (High School)

Emergency Preparedness Events

- o CERT (Community Emergency Response Team) Skills
- o Emergency Medical Technician

Examining Requirements for Certification

Task Number 66

Research certification requirements for the EMT.

Definition

Research should include

- determining the fees to be paid
- reviewing end-of-class paperwork
- reviewing the national certification requirements from the <u>National Registry of Emergency Medical Technicians (NREMT)</u>
- reviewing the state certification requirements (see the <u>Virginia Department of Health's OEMS</u>)
- reviewing the Virginia Emergency Medical Services (EMS) regulations
- completing a State Authorization for NREMT Test Eligibility
- taking practice examinations, if available.

- What is the cost of the NREMT exam and national registration?
- Where will one need to register for psychomotor and cognitive testing?
- What is the process for psychomotor and cognitive retesting?
- What paperwork is needed the day/night of psychomotor and cognitive testing?

Task Number 67

Participate in a supervised EMT clinical rotation.

Definition

Participation should consist of a minimum of 10 clinical or field patient contacts and include

- observation of emergency department operations for a period of time sufficient to gain an appreciation for the continuum of care
- at least five live clinical or field patient contacts in a hospital, clinic, nursing home, doctor's office, or with local EMS agencies
- no more than five clinical or field patient contacts via simulation

per the Code of Virginia.

- How many live and simulated clinical experiences are necessary to meet state requirements?
- Where can clinical rotations be done?
- Where will one find local EMS agencies to join and further assist with supervised EMT clinical rotations?
- What skills are required to participate in supervised clinical rotations?
- When can one begin supervised clinical rotations?

Task Number 68

Research recertification requirements for the EMT.

Definition

Research should include

- determining the fees to be paid
- reviewing the <u>Virginia Department of Health's OEMS education, certification, and continuing education requirements</u>
- reviewing the NREMT Recertification Guide
- exploring local and national continuing education opportunities.

Process/Skill Questions

- What are recertification requirements in Virginia and for the NREMT?
- Where can EMT continuing education requirements in Virginia be located?
- When does an EMT have to recertify? What are the fees associated with recertification?
- How soon after certification can an EMT begin obtaining recertification credit?
- What is the process for recertification once all EMS recertification requirements have been met?
- What is the process for recertification if an EMT's certification expires before meeting recertification requirements?

Describing the Opioid Crisis

Task Number 69

Describe the history and current state of the opioid crisis in the United States.

Definition

Description should include

 the relationship between opioid prescribing and illicit opioid use to overall opioid overdose deaths

- the prevalence of co-occurring mental health disorders
- the shift in attitudes in the 1990s toward pain management and use of opioids, including the role of pharmaceutical marketing
- the stigma associated with addiction and the changing view of addiction from a moral failing to a chronic, relapsing disease
- statistics, trends, and demographics surrounding the crisis
- population health and other public health aspects of the crisis, including its effects on family and neonates, as well as overall health costs.

- How are opioids created?
- Can opioids be safely prescribed to patients taking psychotropic drugs?
- How does society stereotype individuals with a history of drug addiction?
- What are the current trends that have contributed to the nationwide opioid crisis?
- How has the opioid epidemic affected emergency rooms and the first responder system?

HOSA Competitive Events (High School)

Health Science Events

- Medical Spelling
- o Medical Terminology

Teamwork Events

- Creative Problem Solving
- o HOSA Bowl
- o Public Service Announcement

Task Number 70

Describe the history and current state of the opioid crisis in Virginia.

Definition

Description should include

- the relationship between opioid prescribing and illicit opioid use to overall opioid overdose deaths
- the prevalence of co-occurring mental health disorders

- the shift in attitudes in the 1990s toward pain management and use of opioids, including the role of pharmaceutical marketing
- the stigma associated with addiction and the changing view of addiction from a moral failing to a chronic, relapsing disease
- statistics, trends, and demographics surrounding the crisis
- population health and other public health aspects of the crisis, including its effects on family and neonates, as well as overall health costs
- the Virginia Department of Health's <u>Declaration of a Public Health Emergency</u> on November 21, 2016
- proposed legislation to address the crisis in Virginia (i.e., <u>House Bill 2161</u> and <u>Senate Bill 1179</u>, which require the secretary of health and human resources to convene a workgroup to establish educational guidelines for training healthcare providers in the safe prescribing and appropriate use of opioids)
- the development of curricula and educational standards regarding opioid addiction.

Resource: The Opioid Crisis Among Virginia Medicaid Beneficiaries

Process/Skill Questions

- What agencies participated in the governor's task meeting on the opioid crisis?
- What educational organizations will be tasked with providing opioid training to their students?
- What is the benefit of educating future medical professionals about opioid addiction?
- What is the current attitude in society about opioid use and addiction?
- How is the local community affected by the opioid epidemic?

HOSA Competitive Events (High School)

Health Science Events

- Medical Spelling
- Medical Terminology

Teamwork Events

- Creative Problem Solving
- HOSA Bowl
- Public Service Announcement

Task Number 71

Define the pharmacological components and common uses of opioids.

Definition

Definition should include

- plant-based opioids (e.g., opium from poppy seeds)
- names of legal and illegal opioids
- heroin
- names of the most common opioids
- fentanyl
- · medical diagnoses and injuries associated with opioid prescriptions
- commonly used terms.

Resource: Prescription Pain Medications, National Institute on Drug Abuse for Teens

Process/Skill Questions

- For what illnesses are opioids commonly prescribed?
- What is the current medical protocol when opioids are prescribed?

HOSA Competitive Events (High School)

Health Science Events

- o Medical Spelling
- Medical Terminology
- Knowledge Test: Pharmacology

Health Professions Events

Clinical Nursing

Examining the Key Factors of Drug Addiction

Task Number 72

Examine the science of addiction.

Definition

Examination should include

- biopsychosocial aspects of addiction
- the role of endorphins and dopamine
- the role of religious beliefs
- behavioral aspects of addiction
- life cycle of addiction
- misuse of opioids.

Process/Skill Questions

- How will understanding the physiological absorption of opioids in the body provide a holistic assessment?
- What spiritual characteristics might be observed in the science of addiction?
- What are some genetic explanations for some family members being more prone to addiction?

Task Number 73

Explain prevention and early intervention strategies.

Definition

Explanation should include

- risk and protective factors in opioid addiction
- specific populations at risk of addiction
- motivational interviewing and other communication strategies
- naloxone co-prescribing
- roles of family and social institutions in prevention and early intervention.

Resources:

- Prevention Tip Card, Office of the Attorney General of Virginia
- <u>Prescription Opioids: Even When Prescribed by a Doctor</u> (video), Centers for Disease Control and Prevention (CDC)

- What are the physiological characteristics of opioid addiction?
- What demographic is most affected by the opioid epidemic? What are some explanations for this?
- How can provision of naloxone and training in its use be sustained financially?
- What obligations do families and society as a whole have in preventing and providing early intervention related to drug addiction?

Task Number 74

Identify addiction and its behavioral elements, as defined by the Diagnostic and Statistical Manual of Mental Disorders (DSM-5).

Definition

Identification should include

- DSM-5 Criteria for Substance Use Disorders
- American Society of Addiction Medicine (ASAM) Criteria (i.e., The Six Dimensions of Multidimensional Assessment)
- CONTINUUM, The ASAM Criteria Decision Engine
- clinical and behavioral aspects of addiction
- practice-appropriate screening tools, including co-morbidity screening.

Process/Skill Questions

- What are DSM-5 and ASAM and what information do they provide to healthcare professionals?
- What are clinical and behavioral elements of addiction that should be recognized by healthcare professionals?
- Who is responsible for providing the necessary screening tools and training?

HOSA Competitive Events (High School)

Health Science Events

- Medical Spelling
- Medical Terminology
- o Knowledge Test: Behavioral Health

Health Professions Events

Clinical Nursing

Task Number 75

Describe the treatment models of addiction therapy.

Definition

Description should include

- a recognition that addiction is a chronic disease
- evidence-based treatment models for addiction in general and opioid addiction in particular
- medication-assisted treatment
- the continuum of care in opioid addiction treatment
- how and when to make a referral for treatment
- the roles in an interdisciplinary addiction team
- the role of peers in the treatment of addiction
- the difference between a drug culture and recovery culture
- the management of patients in recovery, including factors contributing to relapse.

Process/Skill Questions

- How many treatment models exist for addiction therapy? Why is one model better than the other?
- What are the advantages of evidence-based treatments and models?
- What medication-assisted treatment programs are available? Who provides them?

HOSA Competitive Events (High School)

Health Science Events

- Medical Spelling
- Medical Terminology
- o Knowledge Test: Behavioral Health

Health Professions Events

Clinical Nursing

Task Number 76

Describe the medication management antidote used to prevent fatal opioid overdoses.

Definition

Description should include

- availability and use of naloxone
- naloxone training (e.g., REVIVE!)
- naloxone training agencies
- monitoring of concurrent prescriptions.

Resources:

- Frequently Asked Questions about Naloxone, Virginia Department of Health
- How to administer Narcan nasal spray, Adapt Pharma
- How to prepare naloxone for administration, Virginia Department of Behavioral Health and Developmental Services

Process/Skill Questions

- What is naloxone?
- How much does naloxone cost with health insurance? How much does naloxone cost without health insurance?
- Who should receive naloxone training?

HOSA Competitive Events (High School)

Health Science Events

Knowledge Test: Pharmacology

Understanding Pain Management Protocols

Task Number 77

Explain the science of physiological and mental pain.

Definition

Explanation should include

- definition of pain from the International Association for the Study of Pain (IASP)
- neurobiological basis of pain
- biopsychosocial model of pain
- types of pain (e.g., neuropathic)
- acute, sub-acute, and chronic pain, including pain generation

- spinal and brain modulation, behavioral adaptation and maladaptation, and the continuum from acute to chronic disabling pain
- the underlying science of pain relief.

- What is the IASP definition of pain?
- How can a medical professional get a patient to describe physiological pain?
- What assessment tools can be used to help patients describe physiological pain? How do tools differ for describing mental pain?
- How are pain and levels of pain categorized?

HOSA Competitive Events (High School)

Health Science Events

- Knowledge Test: Nutrition
- o Knowledge Test: Transcultural Health Care

Teamwork Events

- Community Awareness
- Creative Problem Solving
- o HOSA Bowl

Task Number 78

Describe the diagnostic tools used in developing pain management plans.

Definition

Description should include

- pain-related health history and examination
- understanding the role of family in supporting individuals in need of pain management
- practice-appropriate screening tools that include aspects such as mood and function
- the use and limitations of pain scales
- differential diagnosis of pain and its placement on the pain continuum.

Resource: Promoting Safer and More Effective Pain Management, CDC

- What are the Wong-Baker, LEGO, and Hospice assessment tools?
- How do pain assessment tools vary across the life span?
- When completing an assessment, is pain considered subjective or objective?

HOSA Competitive Events (High School)

Health Science Events

- Knowledge Test: Nutrition
- o Knowledge Test: Transcultural Health Care

Teamwork Events

- Community Awareness
- o Creative Problem Solving
- HOSA Bowl

Task Number 79

Describe pain treatment options available to various populations of patients.

Definition

Description should include

- special populations in pain management, such as palliative/end-of-life care patients, patients with cancer, pediatric patients, and geriatric populations
- non-pharmacologic treatment of pain, including active care and self-care, evidence- and non-evidence-based approaches, and multimodal pain management
- non-opioid pharmacologic management of pain
- the challenges in discussing the psychological aspects of pain and the role of the central nervous system
- adverse drug event prevention for all pain medications
- the roles in an interdisciplinary pain management team
- the significance of issues such as anxiety, depression, and sleep deprivation in pain management
- the placebo effect
- goals and expectations in the treatment of pain, based on diagnosis and pain continuum
- when to make a pain referral and to whom.

Resources:

- CDC Fact Sheet for Prescribing Opioids for Chronic Pain
- CDC Guidelines for Prescribing Opioids for Chronic Pain

Process/Skill Questions

- What pain management resources are available for special populations?
- What are alternative forms of pain management?
- What role does the mind play in pain management?

HOSA Competitive Events (High School)

Health Science Events

- Knowledge Test: Nutrition
- Knowledge Test: Transcultural Health Care

Teamwork Events

- Community Awareness
- o Creative Problem Solving
- o HOSA Bowl

Task Number 80

Describe the effects of opioid dependency on the human body systems.

Definition

Description should include the short- and long-term effects of opioids on the following:

- Nervous system
- Respiratory system
- Circulatory system
- Digestive system
- Skeletal system

Resource: <u>Drugs and Your Body</u>, Scholastic

- How does the misuse of opioids affect nutrition and weight loss?
- How might opioid misuse be evident in a person's vital signs?
- How do opioids affect the brain as the control center for homeostasis?

HOSA Competitive Events (High School)

Health Science Events

- Medical Spelling
- o Medical Terminology

Teamwork Events

HOSA Bowl

Task Number 81

Explain the mechanism and physical effects of opioids on the human body.

Definition

Explanation should include the following:

- Mechanism of action and metabolism of opioids
- Development of tolerance, dependence, and addiction
- Health consequences of drug misuse
 - o HIV, hepatitis, and other infectious diseases
 - o Cancer
 - Cardiovascular effects
 - Respiratory effects
 - Gastrointestinal effects
 - Musculoskeletal effects
 - Kidney damage
 - Liver damage
 - Neurological effects
 - Hormonal effects
 - Prenatal effects
 - Other health effects
 - o Mental health effects
 - Death
- Withdrawal
 - Causes

- o Timeframe (i.e., peaks of withdrawal symptoms)
- o Physical signs (e.g., nausea, diarrhea, vomiting, cold flashes)

Process/Skill Questions

- What are the short- and long-term effects of withdrawal dependence symptoms?
- How long can the human body function while exhibiting the symptoms of withdrawal?
- What are other medical conditions that may arise because of the symptoms of physical dependence?

HOSA Competitive Events (High School)

Health Science Events

- Medical Spelling
- Medical Terminology

Teamwork Events

HOSA Bowl

Task Number 82

Explain the use of opioids in practice settings, the role of opioids in pain management, and risk factors associated with the use of the medication.

Definition

Explanation should include

- appropriate use of different opioids in various practice settings
- the interactions, risks, and intolerance of prescription opioids
- the role and effectiveness of opioids in acute, sub-acute, and chronic pain
- a reassessment of opioid use based on stage of pain
- contemporary treatment guidelines, best practices, health policies, and government regulations related to opioid use
- use of opioids in pain management of patients with substance abuse disorders, in recovery, and in palliative/end-of-life care.

Process/Skill Questions

- When should risk factors regarding opioids be reviewed with the patient?
- What are the options when treating patients with a history of substance abuse?
- What government regulations and policies are in place to improve the safe administration of opioids?

HOSA Competitive Events (High School)

Health Science Events

- Medical Spelling
- Medical Terminology

Teamwork Events

- Creative Problem Solving
- o HOSA Bowl

Task Number 83

Describe the withdrawal and tapering side effects of opioid use.

Definition

Description should include

- characteristics of acute and protracted withdrawal from opioid dependence or addiction
- tapering
- pain contracts or agreements.

Process/Skill Questions

- What are the stages of withdrawal in opioid abuse transition?
- What medications might be needed in the withdrawal stage?
- What information should be included in the pain management contract?

HOSA Competitive Events (High School)

Health Science Events

Knowledge Test: Pharmacology

Health Professions Events

Clinical Nursing

Task Number 84

Describe storage and disposal options for opioids.

Definition

Description should include

- medicine take-back options (e.g., National Drug Take Back Day)
- disposal in the household trash and flushing certain potentially dangerous medicines down the toilet.

Resources:

- <u>Disposal of Unused Medicines: What You Should Know,</u> Food and Drug Administration (FDA)
- <u>Prescription Drug Abuse and Tips for Proper Disposal</u>, Office of the Attorney General of Virginia

Process/Skill Questions

- How should medications be stored in the house?
- What is National Prescription Drug Take Back Initiative?
- What is the *black box*?

HOSA Competitive Events (High School)

Health Science Events

Knowledge Test: Pharmacology

Health Professions Events

Clinical Nursing

Task Number 85

Explain community resources for education about opioid use.

Definition

Explanation should include key components of and resources for patient education in the use of opioids, including

- risks
- benefits
- side effects
- tolerance
- signs of sedation or overdose
- naloxone, including its storage and disposal.

Process/Skill Questions

- What resources for opioid education are available locally, statewide, and nationally?
- Where should the patient first be informed about the resources available?
- How does social media aid in patient education on opioid addiction?

HOSA Competitive Events (High School)

Health Science Events

Knowledge Test: Pharmacology

Health Professions Events

Clinical Nursing

Working with Patients and Caregivers

Task Number 86

Describe key communication topics involving opioids for patients.

Definition

Description should include

- benefits and risks of opioids
- opioid risk screening (i.e., taking a social, medical, and financial history)
- risk mitigation (e.g., naloxone, safe storage, pain contracts)
- medication tapers and/or discontinuation of therapy.

Process/Skill Questions

- What are the benefits of using opioids in medicine?
- What is the relationship between demographics and risk of opioid addiction?
- How does culture influence risk factors in opioid abuse?

HOSA Competitive Events (High School)

Health Science Events

- Medical Spelling
- Medical Terminology

Health Professions Events

Clinical Nursing

Task Number 87

Describe communication topics for caregivers and family members.

Definition

Description should include

- basic knowledge about opioids
- signs of addiction
- treatment options for addiction
- naloxone training for caregivers
- legal issues related to misuse.

Process/Skill Questions

- What rights do caregivers have in regard to medical information of the abuser?
- What legal steps might the caregiver or family have to take for treatment?
- Where can the caregiver or family members receive naloxone training? Are children of opioid abusers eligible for training?

HOSA Competitive Events (High School)

Health Science Events

- o Medical Spelling
- Medical Terminology

Health Professions Events

Clinical Nursing

SOL Correlation by Task

39	Describe the assessment and management of an acutely ill	English: 10.5, 11.5,
	patient.	12.5
40	Demonstrate the assessment and management of patients	
	experiencing neurological emergencies.	
41	Describe the assessment and management of patients with	English: 10.5, 11.5,
	abdominal or gastrointestinal disorders.	12.5
42	Demonstrate the assessment and management of patients with	
	hypersensitivity disorders or emergencies.	
43	Demonstrate body substance isolation and the use of personal	History and Social
	protective equipment (PPE) needed for protection from exposure	Science: WHII.4
	to communicable or infectious diseases.	
44	Describe the assessment and management of patients with	English: 10.5, 11.5,
	diabetic emergencies.	12.5
45	Describe the assessment and management of patients displaying	English: 10.5, 11.5,
	psychotic behaviors or signs of other psychiatric disorders.	12.5
46	Demonstrate the assessment and management of patients	
	experiencing cardiac emergencies.	
47	Demonstrate the assessment and management of patients	
	suspected of suffering from poisoning.	
48	Demonstrate the assessment and management of patients with	
	respiratory emergencies.	
49	Describe the assessment and management of patients with	English: 10.5, 11.5,
	hematological disorders.	12.5
50	Describe the assessment and management of patients with	English: 10.5, 11.5,
	genitourinary/renal disorders.	12.5

51	Describe the emergency medical care of patients with gynecological emergencies.	English: 10.5, 11.5, 12.5
52	Describe the assessment and management of patients with nontraumatic musculoskeletal disorders.	English: 10.5, 11.5, 12.5
53	Describe the identification, assessment, and management of	English: 10.5, 11.5,
	patients with disorders of the eyes, ears, nose, and throat.	12.5
54	Describe the assessment and management of obstetric patients.	English: 10.5, 11.5, 12.5
55	Describe the care of neonatal patients.	English: 10.5, 11.5, 12.5
56	Describe the care of pediatric patients.	English: 10.5, 11.5, 12.5
57	Demonstrate the assessment and management of geriatric patients.	English: 10.5, 10.8, 11.5, 11.8, 12.5, 12.8
58	Describe the assessment and management of patients with special challenges.	English: 10.5, 10.8, 11.5, 11.8, 12.5, 12.8 History and Social
		Science: VUS.14, WG.17, WHII.14
59	Describe the risks and responsibilities of emergency response.	English: 10.5, 11.5, 12.5
60	Demonstrate establishment of incident command.	
61	Evaluate the role of an EMT in a multiple-casualty situation.	History and Social Science: VUS.14, WG.17, WHII.14
62	Describe the use of air medical transport.	English: 10.5, 11.5, 12.5
63	Describe the fundamental concepts of extrication.	English: 10.5, 11.5, 12.5
64	Explain the EMT's role during a call involving hazardous materials.	English: 10.5, 11.5, 12.5
65	Evaluate the role of the EMT in a mass-casualty situation due to terrorism or disaster.	History and Social Science: VUS.14, WG.17, WHII.14
66	Research certification requirements for the EMT.	English: 10.8, 11.8, 12.8
		History and Social Science: GOVT.8
67	Participate in a supervised EMT clinical rotation.	
68	Research recertification requirements for the EMT.	English: 10.8, 11.8, 12.8
		History and Social Science: GOVT.8

Describe the history and current state of the opioid crisis in the United States. Describe the history and current state of the opioid crisis in Virginia. Define the pharmacological components and common uses of opioids. English: 11.5, 11.8, 12.5, 12.8 English: 11.3, 11.8, 12.3, 12.8 English: 11.5, 12.5 English: 11.5, 12.5			
Describe the history and current state of the opioid crisis in Virginia. English: 11.5, 11.8, 12.5, 12.8	69	•	English: 11.5, 12.5
71Define the pharmacological components and common uses of opioids.English: 11.3, 11.8, 12.3, 12.872Examine the science of addiction.English: 11.5, 12.573Explain prevention and early intervention strategies.English: 11.5, 12.574Identify addiction and its behavioral elements, as defined by the Diagnostic and Statistical Manual of Mental Disorders (DSM-5).English: 11.5, 12.575Describe the treatment models of addiction therapy.English: 11.5, 12.576Describe the medication management antidote used to prevent fatal opioid overdoses.English: 11.5, 11.8, 12.577Explain the science of physiological and mental pain.English: 11.3, 11.5, 12.378Describe the diagnostic tools used in developing pain management plans.English: 11.5, 12.579Describe pain treatment options available to various populations of patients.English: 11.5, 12.580Describe the effects of opioid dependency on the human body systems.English: 11.5, 12.581Explain the mechanism and physical effects of opioids on the human body.English: 11.5, 12.582Explain the use of opioids in practice settings, the role of opioids in pain management, and risk factors associated with the use of the medication.English: 11.5, 12.583Describe the withdrawal and tapering side effects of opioid use.English: 11.5, 12.584Describe storage and disposal options for opioids.English: 11.5, 12.585Explain community resources for education about opioid use.English: 11.5, 12.586Describe key communication topics involving opioids for patients.	70		English: 11.5, 11.8,
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Teacher Resources

- Virginia Department of Health, Office of Emergency Medical Services (OEMS)
- <u>High-School-Based Emergency Medical Services (EMS) Educational Programs Guide</u> (2019)
- <u>Initial BLS Training Programs: First Class Paperwork, Virginia OEMS</u> (as of 2019; to access the most recent version of this document, please visit the <u>Virginia OEMS website</u>)
- <u>Initial BLS Training Programs: Last Class Paperwork, Virginia OEMS</u> (as of 2019; to access the most recent version of this document, please visit the <u>Virginia OEMS website</u>)

Opioid Abuse Prevention Education

This <u>Opioid Abuse Prevention</u> document includes resources for opioid abuse prevention education from kindergarten to 12th grade.

Other Opioid Resources

Virginia Department of Behavioral Health and Developmental Services. Revive! Opioid Overdose and Naloxone Education for Virginia. Naloxone Fact Sheet (PDF).

Virginia Department of Behavioral Health and Developmental Services. <u>Revive! Opioid</u> Overdose and Naloxone Education for Virginia (Website).

Office of National Drug Control Policy, White House. <u>Fentanyl: Safety Recommendations for First Responders (PDF)</u>.

National Institute on Drug Abuse, National Institutes of Health. <u>Easy to Read Drug Facts:</u> Alcohol (Website; PDF available)

National Institute on Drug Abuse, National Institutes of Health. <u>Easy to Read Drug Facts: Bath Salts</u> (Website; PDF available)

National Institute on Drug Abuse, National Institutes of Health. <u>Easy to Read Drug Facts:</u> Cocaine (Website; PDF available)

National Institute on Drug Abuse, National Institutes of Health. <u>Easy to Read Drug Facts: E-Cigarette</u> (Website; PDF available)

National Institute on Drug Abuse, National Institutes of Health. <u>Easy to Read Drug Facts: Heroin</u> (Website; PDF available)

National Institute on Drug Abuse, National Institutes of Health. <u>Easy to Read Drug Facts:</u> <u>Marijuana</u> (Website; PDF available)

National Institute on Drug Abuse, National Institutes of Health. <u>Easy to Read Drug Facts:</u> MDMA (Website; PDF available)

National Institute on Drug Abuse, National Institutes of Health. <u>Easy to Read Drug Facts: Meth</u> (Website; PDF available)

National Institute on Drug Abuse, National Institutes of Health. <u>Easy to Read Drug Facts: Pain Medicine</u> (Website; PDF available)

National Institute on Drug Abuse, National Institutes of Health. <u>Easy to Read Drug Facts: Spice</u> (K2) (Website; PDF available)

National Institute on Drug Abuse, National Institutes of Health. <u>Easy to Read Drug Facts:</u> <u>Tobacco and Nicotine</u> (Website; PDF available)

National Institute on Drug Abuse, National Institutes of Health. <u>Easy to Read Drug Facts: Other Drugs People Use and Misuse</u> (Website; PDF available)

Appendix: Credentials, Course Sequences, and Career Cluster Information

Industry Credentials: Only apply to 36-week courses

- Certified EKG Technician (CET) Examination (AAH)
- Certified EKG Technician (CET) Examination (NHA)
- College and Work Readiness Assessment (CWRA+)
- Emergency and Fire Management Services Assessment
- National Career Readiness Certificate Assessment
- Nationally Registered Certified EKG Technician (NRCEKGT) Examination
- Workplace Readiness Skills for the Commonwealth Examination

Concentration sequences: A combination of this course and those below, equivalent to two 36-week courses, is a concentration sequence. Students wishing to complete a specialization may take additional courses based on their career pathways. A program completer is a student who has met the requirements for a CTE concentration sequence and all other requirements for high school graduation or an approved alternative education program.

- Emergency Medical Technician I (8333/36 weeks)
- Emergency Medical Technician III (8335/36 weeks)

Career Cluster: Health Science				
Pathway	Occupations			
Therapeutic Services	Emergency Medical Technician, Paramedic			