

# PROGRAM CONCENTRATION: CAREER PATHWAY:

Public Safety Homeland Security and Emergency Services Homeland Security

#### **COURSE TITLE:**

Course Description: This course examines homeland security and terrorism – domestically and internationally. The development of the U.S. Department of Homeland Security will be examined in the context of the global terrorist threat and the more general concept of homeland security. Emphasis is on the identification and understanding of appropriate definitions and concepts so that students may critically evaluate the threats present and the range of responses available in our democratic society. A basic overview of historical foundations will be examined. The relationship of homeland security to preparation and response and recovery mechanisms for terrorism, including goals, objectives, and strategies, will be explored. The importance of coordinating various plans and strategies among local, state, and federal government response organizations will be stressed. Great emphasis will be placed on contemporary case studies and interactive discussions. Students will review the roles and responsibilities of government agencies, non-government organizations, and individual citizens in homeland security.

### **CAREERS IN HOMELAND SECURITY:**

Students will learn about the broad range of occupations offered in the related fields of Homeland Security. Students will explore personal preferences and abilities to identify an occupational path. Students will evaluate requirements for their preferred career path as well as necessary post-secondary education.

# PS-HS-1. Students will explore the different careers available in the field of Homeland Security.

- a. Identify major career options within the Homeland Security field.
- b. Compare educational requirements.
- c. Investigate personal preferences for careers.
- d. Demonstrate understanding of a personal secondary and post-secondary plan.

#### Academic Standards:

ELA12LSV1 The student participates in student-to-teacher, student-to-student, and group verbal interactions.

ELA10RC2 The student participates in discussions related to curricular learning in all subject areas.

ELA10RC3 The student acquires new vocabulary in each content area and uses it correctly.

SSCG21 The student will demonstrate knowledge of criminal activity.



SSCG22 The student will demonstrate knowledge of the criminal justice process.

SB2 Students will analyze how biological traits are passed on to successive generations.

### HOMELAND SECURITY STRUCTURE, ORGANIZATION, AND JURISDICTION

Students will learn about the structure and organization of Homeland Security agencies and departments at the federal, state, and local levels. Students will explore the various methods of organization of these agencies at the different levels of government and study diverse options available to jurisdictions to structure and organize their individual Homeland Security departments to best serve the needs of the jurisdiction. Students will evaluate diverse management and organizational styles of existing organizations.

# PS-HS-2. Students will explore the various Homeland Security agencies and departments for their structure and organization at each level of government.

- a. Identify structural and organizational styles and methods of diverse Homeland Security organizations.
- b. Compare the effectiveness and efficiencies of different organizations at the federal, state, and local levels of government.
- c. Evaluate various organizational styles and management of existing Homeland Security departments and agencies at different levels of government.
- d. Assess the role of private organizations within the Homeland Security system.

#### Academic Standards:

SSCG17 The student will demonstrate knowledge of the organization and powers of state and local government described in the Georgia Constitution.

SSCG15 The student will explain the functions of the departments and agencies of the federal bureaucracy.

SSCG4 The student will demonstrate knowledge of the organization and powers of the national government.

SSUSH25 The student will describe changes in national politics since 1968.

SSWH21 The student will analyze globalization in the contemporary world.

SSCG5 The student will demonstrate knowledge of the federal system of government described in the United States Constitution.

## **COMMUNITY EMERGENCY RESPONSE TEAM (CERT) TRAINING**

Students will learn how to respond to emergencies in their community. This content follows the CERT certification program. CERT certification may be available for



students. Cardiopulmonary resuscitation instruction may provide certification where available. Disaster medical training may provide first aid certification where available.

PS-HS-3. Students will discuss the history and basic overview of the following disaster preparedness/emergency management agencies, including but not limited to: Department of Homeland Security, Federal Emergency Management Agency (FEMA), Citizens Corps, and Georgia Emergency Management Agency (GEMA).

- a. Identify and briefly discuss the history of the most common national, regional, state, and local disaster preparedness/emergency management agencies.
- b. Discuss the primary focus of the Citizens Corps as identified by FEMA.
- c. Differentiate between the basic responsibilities of each in an emergency/disaster situation: Citizens Emergency Response Team Member, Medical Reserve Corps Representative, First Responders, and Emergency Medical Technicians.

### Academic Standards:

SSCG4 The student will demonstrate knowledge of the organization and powers of the national government.

SSCG5 The student will demonstrate knowledge of the federal system of government described in the United States Constitution.

SSCG15 The student will explain the functions of the departments and agencies of the federal bureaucracy.

## PS-HS-4. Students will demonstrate the steps of Basic Life Support (BLS).

- a. Demonstrate cardiopulmonary resuscitation on an infant, a child, and an adult (simulate using manikins).
- b. Utilize personal protective devices and the use of standard precautions for disease prevention.
- c. Identify when cardiopulmonary resuscitation may be discontinued once it has been initiated.
- d. Demonstrate the application, operation, and maintenance of an automated external defibrillator trainer.

### Academic Standards:

SAP1 Students will analyze anatomical structures in relationship to their physiological functions.

SAP2 Students will analyze the interdependence of the integumentary, skeletal, and muscular systems as these relate to the protection, support and movement of the human body.

SAP3 Students will assess the integration and coordination of body functions and their



dependence on the endocrine and nervous systems to regulate physiological activities.

SAP4 Students will analyze the physical, chemical, and biological properties of process systems as these relate to transportation, absorption and excretion, including the cardiovascular, respiratory, digestive, excretory and immune systems.

# PS-HS-5. Students will identify the types of hazards most likely to affect his/her home and community and describe steps to prepare for emergencies.

- a. Define a disaster and who makes up the response workforce.
- Analyze the potential effect of extreme emergencies and disasters on infrastructures, including but not limited to: transportation, electrical service, telephone communication, fuel, food, water, shelter, and emergency services.
- c. Identify potentially hazardous conditions in the various types of structures and their contents during a disaster.
- d. Evaluate the steps to reduce the risk of damage from hazards that threaten your area.
- e. Demonstrate preparing the home, school, workplace, and community in advance to minimize disaster repercussions, including but not limited to: assembling a disaster supply kit, developing a disaster plan, and designating a safe room.
- f. Understand the difference between evacuation versus sheltering in place.
- g. Understand the laws that protect disaster workers from liability.

#### Academic Standards:

SAP1 Students will analyze anatomical structures in relationship to their physiological functions.

SAP2 Students will analyze the interdependence of the integumentary, skeletal, and muscular systems as these relate to the protection, support and movement of the human body.

SAP3 Students will assess the integration and coordination of body functions and their dependence on the endocrine and nervous systems to regulate physiological activities.

SAP4 Students will analyze the physical, chemical, and biological properties of process systems as these relate to transportation, absorption and excretion, including the cardiovascular, respiratory, digestive, excretory and immune systems.

MM4P1 Students will solve problems (using appropriate technology).

MM4P4 Students will make connections among mathematical ideas and to other disciplines.

PS-HS-6. Students will understand the various origins of fires and classes of fires and the correct means to extinguish each type of fire.



- a. Explain the role that individuals play in fire safety.
- b. Identify and reduce potential fire risks in the home, school, and workplace.
- c. Conduct a basic size-up for a fire emergency.
- d. Understand minimum safety precautions including safety equipment and utility control.
- e. Identify locations of hazardous materials in the home and reduce the risk from hazardous materials in the home.
- f. Extinguish small fires using a fire extinguisher.

#### Academic Standards:

SC5 Students will understand that the rate at which a chemical reaction occurs can be affected by changing concentration, temperature, or pressure and the addition of a catalyst.

MM4P1 Students will solve problems (using appropriate technology).

MM4P4. Students will make connections among mathematical ideas and to other disciplines.

# PS-HS-7. Students will demonstrate the ability to identify and treat injuries of victims in a disaster or emergency situation.

- a. Identify the "killers" (airway obstruction, bleeding, and shock).
- Apply techniques for opening the airway, controlling bleeding, and treating for shock.
- c. Conduct triage under simulated disaster conditions.
- d. Take appropriate sanitation measures to protect the public health.
- e. Perform head-to-toe patient assessments.
- f. Apply splints to suspected fractures and sprains and employ basic treatments for other wounds.

#### Academic Standards:

SAP1 Students will analyze anatomical structures in relationship to their physiological functions.

SAP2 Students will analyze the interdependence of the integumentary, skeletal, and muscular systems as these relate to the protection, support and movement of the human body.

SAP3 Students will assess the integration and coordination of body functions and their dependence on the endocrine and nervous systems to regulate physiological activities.

SAP4 Students will analyze the physical, chemical, and biological properties of process systems as these relate to transportation, absorption and excretion, including the cardiovascular, respiratory, digestive, excretory and immune systems.



PS-HS-8. Students will analyze the components of an effective search and rescue operation (size-up, search, and rescue) including the methods/techniques that rescuers can use to locate and safely remove victims.

- a. Identify size-up requirements for potential search and rescue situations.
- b. Describe the most common techniques for searching a structure.
- c. Distinguish between simple and complex access.
- d. Demonstrate the use of safe techniques for debris removal and victim extrication, including but not limited to: the use fulcrums and leverage, cribbing techniques, and victim transportation maneuvers.
- e. Describe methods to protect rescuers during search and rescue operations.
- f. Understand the role that maps and Global Positioning Systems (GPS) play in search and rescue operations.
- g. Demonstrate proper communication with both emergency dispatch (911) and other rescuers.

#### Academic Standards:

MM2P1 Students will solve problems using appropriate technology.

MM2P4 Students will make connections among mathematical ideas and to other disciplines.

MM2P5 Students will represent mathematics in multiple ways.

PS-HS-9. Students will evaluate techniques for managing intra-personal reactions to emergency/disaster situations to assist in effectively meeting the needs of the victims and rescuers.

- a. Describe the disaster and post-disaster emotional environment.
- Describe the steps that rescuers can take to relieve personal stress and the stress of disaster survivors.

#### Academic Standards:

ELA10RC2 The student participates in discussions related to curricular learning in all subject areas.

ELA10RC3 The student acquires new vocabulary in each content area and uses it correctly.

ELA12LSV1 The student participates in student-to-teacher, student-to-student, and group verbal interactions.

### PS-HS-10. Students will define terrorism and identify common terrorist goals.

- a. Identify potential targets in the community.
- b. Discuss operating procedures for a terrorist incident.



- c. Identify the most commonly used terrorist weapons.
- d. Discuss the B-NICE indicators and the cues that help to identify when a terrorist attack has occurred.
- e. Describe the actions to take following a suspected terrorist incident.

#### Academic Standards:

MM4P1 Students will solve problems (using appropriate technology).

MM4P2 Students will reason and evaluate mathematical arguments.

SAP3 Students will assess the integration and coordination of body functions and their dependence on the endocrine and nervous systems to regulate physiological activities.

SAP4 Students will analyze the physical, chemical, and biological properties of process systems as these relate to transportation, absorption and excretion, including the cardiovascular, respiratory, digestive, excretory and immune systems.

SC5 Students will understand that the rate at which a chemical reaction occurs can be affected by changing concentration, temperature, or pressure and the addition of a catalyst.

SPS3 Students will distinguish the characteristics and components of radioactivity.

SP3 Students will evaluate the forms and transformations of energy.

SP4 Students will analyze the properties and applications of waves.

### INTERNATIONAL TERRORISM

Students will become familiar with the ideals and ideologies of various known international terrorist organizations. Students will distinguish and identify traits and modus operendi of various organizations and discuss differences and commonalities of these organizations.

### PS-HS-11. Students will describe international terrorist organizations.

- a. Define terrorism and how it differs from common criminal acts.
- b. Identify major international terrorist organizations and their respective ideologies.
- c. Explore the historical context of current terrorist organizations and historical events of terrorism on the international scene.
- d. Explain the role of religion in terrorist groups.

#### Academic Standards:

ELA12LSV1 The student participates in student-to-teacher, student-to-student, and group verbal interactions.

ELA10RC2 The student participates in discussions related to curricular learning in all



subject areas.

SSEMI3 The student will explain how markets, prices, and competition influence economic behavior.

SSUSH23 The student will describe and assess the impact of political developments between 1945 and 1970.

SSUSH24 The student will analyze the impact of social change movements and organizations of the 1960s.

SSUSH25 The student will describe changes in national politics since 1968.

## PS-HS-12. Students will identify techniques used in terrorist investigations.

- a. Define methods used in terrorist and terrorism investigations.
- b. Assess and debate inappropriate investigative techniques.
- c. Discuss appropriate use of surveillance and confidential informants.
- d. Identify appropriate undercover investigations and organizational structure.
- e. Discuss technical investigative techniques and the use of wiretaps.
- f. Identify methods used to locate fugitive terrorists.

#### Academic Standards:

ELA10RC3 The student acquires new vocabulary in each content area and uses it correctly.

SSCG16 The student will demonstrate knowledge of the operation of the federal judiciary.

SSCG20 The student will describe the tools used to carry out United States foreign policy (diplomacy; economic, military, and humanitarian aid; treaties; sanctions and military intervention).

SSCG21 The student will demonstrate knowledge of criminal activity.

SSCG22 The student will demonstrate knowledge of the criminal justice process.

### **DOMESTIC TERRORISM**

Students will explore various domestic terrorist organizations within the continental United States and examine terrorist acts that have taken place in the United States.

## PS-HS-13. Students will describe domestic terrorist organizations.

- a. Define terrorism and how it differs from common criminal acts in the United States.
- b. Analyze the FBI definition of terrorism.



- c. Identify major domestic terrorist organizations and their respective goals and ideologies.
- d. Explore the historical context of current terrorist organizations and historical events of terrorism in the United States.

#### Academic Standards:

SSCG16 The student will demonstrate knowledge of the operation of the federal judiciary.

SSCG17 The student will demonstrate knowledge of the organization and powers of state and local government described in the Georgia Constitution.

SSCG15 The student will explain the functions of the departments and agencies of the federal bureaucracy.

SSCG18 The student will demonstrate knowledge of the powers of Georgia's state and local governments.

SSWH20 The student will examine change and continuity in the world since the 1960s.

### PS-HS-14. Students will identify domestic counter terrorism measures.

- a. Define censorship issues and the use of the media to combat domestic terrorism.
- b. Review and discuss past investigations of terrorist actions in the U.S.
- c. Identify the means to locate potential targets of domestic terrorism.
- d. Identify the means to collect, interpret, and disseminate terrorist background information.
- e. Research federal laws for the prevention and intervention of domestic terrorism planning.

#### Academic Standards:

ELA10RC3 The student acquires new vocabulary in each content area and uses it correctly.

SSCG16 The student will demonstrate knowledge of the operation of the federal judiciary.

SSCG20 The student will describe the tools used to carry out United States foreign policy (diplomacy; economic, military, and humanitarian aid; treaties; sanctions and military intervention).

SSCG21 The student will demonstrate knowledge of criminal activity.

SSCG22 The student will demonstrate knowledge of the criminal justice process.

# **TERRORIST TACTICS**



Students will compare various known terrorist organizations and investigate the similarities and differences in tactics employed by these organizations. Students will identify and categorize numerous acts of terrorism with the intent of defining tactics employed and the relative effectiveness of these events in achieving the stated goals of each.

# PS-HS-15. Students will identify methods used by terrorist organizations to accomplish their objectives.

- a. Contrast the various tactics of known terrorist organizations.
- b. Analyze the effects and efficiencies of the various tactics studied and explain the differences in tactics by category or organization.
- Contrast the differences in tactics and explain the reason for the tactical methods employed by the organizations studied.
- d. Discuss several case studies of terrorist acts with regard to historical context and tactics employed in each case.

### Academic Standards:

ELA12LSV1 The student participates in student-to-teacher, student-to-student, and group verbal interactions.

SSCG16 The student will demonstrate knowledge of the operation of the federal judiciary.

SSCG15 The student will explain the functions of the departments and agencies of the federal bureaucracy.

SSWH20 The student will examine change and continuity in the world since the 1960s.

### **COMMUNITY PREPARATION FOR TERRORISM**

Students will collect and analyze various documents, brochures, and informational sources, both government and private, highlighting community preparations for terrorism. Students will compose and publish a brochure as a class project specifically addressing one form of community preparedness for terrorism, i.e. biological, chemical, radiological, or conventional explosive.

# PS-HS-16. Students will create a terrorism preparation awareness plan for their community.

- a. Identify credible sources for terrorism preparedness information.
- b. Describe methods of information dissemination to the public and to corporate and government organizations.
- Judge the effectiveness of various channels for information and training dissemination.
- d. Recommend improvements in current methods of information collection and dissemination of terrorism preparedness information.



e. Compare and differentiate between community preparation for natural emergencies and disasters with community preparation for terrorism.

### Academic Standards:

ELA12LSV1 The student participates in student-to-teacher, student-to-student, and group verbal interactions.

ELA10RC2 The student participates in discussions related to curricular learning in all subject areas.

ELA10RC3 The student acquires new vocabulary in each content area and uses it correctly.

SSCG17 The student will demonstrate knowledge of the organization and powers of state and local government described in the Georgia Constitution.

SSCG18 The student will demonstrate knowledge of the powers of Georgia's state and local governments.

## **CONSTITUTIONAL LAW, CRIMINAL LAW, AND THE PATRIOT ACT**

Students will overview constitutional and criminal law with emphasis on current developments with regard to the Patriot Act. Students will review and analyze Presidential Directives (PD) 5 and 8 and define its effects on current case law. Students will conduct case studies of legal precedent cases pertaining to PD 5 and 8.

# PS-HS-17. Students will apply constitutional law, criminal law, Presidential Directives, and other relevant laws to given legal scenarios.

- a. Define and discuss the fourth amendment and associated case law.
- b. Define and discuss the fifth amendment and associated case law.
- c. Define and discuss the sixth amendment and associated case law.
- d. Identify general constitutional limitations in preventing or prohibiting terrorism.
- e. Identify specific legal restraints and limitations on search and seizure during terrorism investigations.
- Identify specific legal restraints and limitations on detention and arrests of a suspected terrorist.
- g. Analyze the investigation, apprehension, interrogation methods, and prosecution of terrorists.
- h. Examine the need for Presidential Directives and Executive Orders in addressing current terrorist activities.
- i. Interpret case studies of suicide bomber scenarios and the need for legislative actions to address this emerging threat.
- j. Describe the command and control authority allowed under current federal and state laws given to individual agencies and departments.

#### Academic Standards:



SSCG18 The student will demonstrate knowledge of the powers of Georgia's state and local governments.

SSCG16 The student will demonstrate knowledge of the operation of the federal judiciary.

SSCG15 The student will explain the functions of the departments and agencies of the federal bureaucracy.

SSCG12 The student will analyze the various roles played by the President of the United States; include Commander-in-Chief of the Armed Forces, chief executive, chief agenda setter, representative of the nation, chief of state, foreign policy leader, and party leader.

### **COMMUNICATIONS AND DISPATCH**

Students will explore current and future technologies addressing interoperability of existing communications and dispatch infrastructure. Additionally, students may prepare themselves for a career and certification as a 911 communications dispatcher.

# PS-HS-18. Students will explain the various technologies that exist for the operations of public safety communications centers.

- a. Define the "Three P's (policy, procedure, and protocol).
- b. Explain the need for confidentiality in pubic safety communication.
- c. Explain the role of the emergency dispatcher.

### Academic Standards:

ELA12LSV1 The student participates in student-to-teacher, student-to-student, and group verbal interactions.

ELA10RC2 The student participates in discussions related to curricular learning in all subject areas.

SSCG21 The student will demonstrate knowledge of criminal activity.

SSCG22 The student will demonstrate knowledge of the criminal justice process.

# PS-HS-19. Students will demonstrate professional communication skills in a variety of situations.

- a. Demonstrate the use of active and passive listening skills.
- b. Use proper verbal and non verbal communication.
- c. Discuss the role of cultural diversity as it applies to public safety communication.
- d. Explain problems and solutions when processing calls from people with hearing and speech impairments.



### Academic Standards:

ELA12LSV1 The student participates in student-to-teacher, student-to-student, and group verbal interactions.

ELA10RC2 The student participates in discussions related to curricular learning in all subject areas.

SAP1 Students will analyze anatomical structures in relationship to their physiological functions.

SSCG6 The student will demonstrate knowledge of civil liberties and civil rights.

SSCG21 The student will demonstrate knowledge of criminal activity.

## PS-HS-20. Students will process an emergency call through role playing.

- a. Describe procedures and protocols utilized when processing calls.
- b. Explain processes used with various types of callers.
- c. Describe techniques used to process high-risk calls for service.

#### Academic Standards:

ELA12LSV1 The student participates in student-to-teacher, student-to-student, and group verbal interactions.

ELA10RC2 The student participates in discussions related to curricular learning in all subject areas.

SSCG21 The student will demonstrate knowledge of criminal activity.

SSCG22 The student will demonstrate knowledge of the criminal justice process.

# PS-HS-21. Students will explain various types of calls that dispatchers might receive.

- a. List and explain the three general types of calls (police, fire, and medical).
- b. Explain the procedure used for most police calls for service.
- c. Explain the procedure used for most fire calls for service.
- d. Explain the procedure used for most medical calls for service.

### Academic Standards:

ELA12LSV1 The student participates in student-to-teacher, student-to-student, and group verbal interactions.

ELA10RC2 The student participates in discussions related to curricular learning in all subject areas.



SSCG21 The student will demonstrate knowledge of criminal activity.

SSCG22 The student will demonstrate knowledge of the criminal justice process.

## PS-HS-22. Students will study civil liability of a communications dispatcher.

- a. Explain the four elements of a tort that are required to prove negligence.
- b. Describe the relationship between risk management and liability.
- c. Explain how the public safety dispatcher might conform his actions for the purpose of protection from civil liability.

#### Academic Standards:

SSCG15 The student will explain the functions of the departments and agencies of the federal bureaucracy.

SSCG18 The student will demonstrate knowledge of the powers of Georgia's state and local governments.

ELA12C1 The student demonstrates understanding and control of the rules of the English language, realizing that usage involves the appropriate application of conventions and grammar in both written and spoken formats.

# PS-HS-23. Students will understand stress and the effect it has on the human body.

- Identify the signs of stress and burnout.
- b. Explain the effect of stress on the human body.
- c. Identify unique stressors to public safety dispatchers.

#### Academic Standard:

SAP3. Students will assess the integration and coordination of body functions and their dependence on the endocrine and nervous systems to regulate physiological activities.

### **Reading Across the Curriculum**

#### **Reading Standard Comment**

After the elementary years, students engage in reading for learning. This process sweeps across all disciplinary domains, extending even to the area of personal learning. Students encounter a variety of informational as well as fictional texts, and they experience text in all genres and modes of discourse. In the study of various disciplines of learning (language arts, mathematics, science, social studies), students must learn through reading the communities of discourse of each of those disciplines. Each subject has its own specific vocabulary, and for students to excel in all subjects, they must learn the specific vocabulary of those subject areas in *context*.



Beginning with the middle grades years, students begin to self-select reading materials based on personal interests established through classroom learning. Students become curious about science, mathematics, history, and literature as they form contexts for those subjects related to their personal and classroom experiences. As students explore academic areas through reading, they develop favorite subjects and become confident in their verbal discourse about those subjects.

Reading across curriculum content develops both academic and personal interests in students. As students read, they develop both content and contextual vocabulary. They also build good habits for reading, researching, and learning. The Reading Across the Curriculum standard focuses on the academic and personal skills students acquire as they read in all areas of learning.

# CTAE-RC-1 Students will enhance reading in all curriculum areas by: Reading in All Curriculum Areas

- -Read a minimum of 25 grade-level appropriate books per year from a variety of subject disciplines and participate in discussions related to curricular learning in all areas.
- -Read both informational and fictional texts in a variety of genres and modes of discourse.
- -Read technical texts related to various subject areas.

## **Discussing Books**

- -Discuss messages and themes from books in all subject areas.
- -Respond to a variety of texts in multiple modes of discourse.
- -Relate messages and themes from one subject area to messages and themes in another area.
- -Evaluate the merit of texts in every subject discipline.
- -Examine author's purpose in writing.
- -Recognize the features of disciplinary texts.

### **Building Vocabulary Knowledge**

- -Demonstrate an understanding of contextual vocabulary in various subjects.
- -Use content vocabulary in writing and speaking.
- -Explore understanding of new words found in subject area texts.

### **Establishing Context**

- -Explore life experiences related to subject area content.
- -Discuss in both writing and speaking how certain words are subject area related.
- -Determine strategies for finding content and contextual meaning for unknown words.

### **CTAE Foundation Skills**

The Foundation Skills for Career, Technical and Agricultural Education (CTAE) are critical competencies that students pursuing any career pathway should exhibit to be successful. As core standards for all career pathways in all program concentrations,



these skills link career, technical and agricultural education to the state's academic performance standards.

The CTAE Foundation Skills are aligned to the foundation of the U. S. Department of Education's 16 Career Clusters. Endorsed by the National Career Technical Education Foundation (NCTEF) and the National Association of State Directors of Career Technical Education Consortium (NASDCTEc), the foundation skills were developed from an analysis of all pathways in the sixteen occupational areas. These standards were identified and validated by a national advisory group of employers, secondary and postsecondary educators, labor associations, and other stakeholders. The Knowledge and Skills provide learners a broad foundation for managing lifelong learning and career transitions in a rapidly changing economy.

- CTAE-FS-1 Technical Skills: Learners achieve technical content skills necessary to pursue the full range of careers for all pathways in the program concentration.
- CTAE-FS-2 Academic Foundations: Learners achieve state academic standards at or above grade level.
- **CTAE-FS-3 Communications:** Learners use various communication skills in expressing and interpreting information.
- CTAE-FS-4 Problem Solving and Critical Thinking: Learners define and solve problems, and use problem-solving and improvement methods and tools.
- CTAE-FS-5 Information Technology Applications: Learners use multiple information technology devices to access, organize, process, transmit, and communicate information.
- **CTAE-FS-6 Systems:** Learners understand a variety of organizational structures and functions.
- CTAE-FS-7 Safety, Health and Environment: Learners employ safety, health and environmental management systems in corporations and comprehend their importance to organizational performance and regulatory compliance.
- CTAE-FS-8 Leadership and Teamwork: Learners apply leadership and teamwork skills in collaborating with others to accomplish organizational goals and objectives.
- CTAE-FS-9 Ethics and Legal Responsibilities: Learners commit to work ethics, behavior, and legal responsibilities in the



workplace.

CTAE-FS-10 Career Development: Learners plan and manage academic-career plans and employment relations.

CTAE-FS-11 Entrepreneurship: Learners demonstrate understanding of concepts, processes, and behaviors associated with successful entrepreneurial performance.