

DEVELOPMENTAL 2012 Mississippi Curriculum Framework

Postsecondary Emergency Management & Communication Technology

(Program CIP: 43.9999 – Security and Protective Services, Other)

Direct inquiries to

LaNell Kellum, PhD
Director for Career and Technical Education
Mississippi Community College Board
3825 Ridgewood Road
Jackson, MS 39211
601.432.6518
lkellum@mscjc.edu

Instructional Design Specialist
Research and Curriculum Unit
P.O. Drawer DX
Mississippi State, MS 39762
662.325.2510

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Acknowledgments

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| Writing Team | Ben Warren – Meridian Community College, Meridian, MS |
| RCU Staff | |
| Professional Curriculum Advisory Team | Advisory team at Meridian Community College, Meridian, MS |

Standards in this document are based on information from the following organizations:

| | |
|---|--|
| Standards for Mississippi Postsecondary Fire Protection Technology | Emergency Management & Communications Technology students will be assessed using certifications offered at the certifications from the professional qualification standards referenced by the U.S. Department of Homeland Security, FEMA Emergency Management Institute. For more information consult http://training.fema.gov/EMICourses/ . |
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Preface

Emergency Management & Communications Technology Research Synopsis

The **Emergency Management & Communications Technology** program provides training and knowledge to individuals interested in emergency management area and in public safety communications. Individuals completing the **ECT** courses will be an integral part of local, state, and national response teams providing skills and knowledge in a variety of emergency situations.

Needs of the Future Workforce

Emergency Management & Communications Technology occupations are projected faster than average growth in the United States, 15%, and the growth rate will be the same in Mississippi, 15% (EMSI, 2011).

Emergency Management & Communications Technology Projections and Earnings

| Region | 2011 Jobs | 2021 Jobs | Change | % Change | Openings | 2010 Median Hourly Earnings |
|----------------|-----------|-----------|--------|----------|----------|-----------------------------|
| MS Total | 705 | 810 | 105 | 15% | 370 | \$12.96 |
| National Total | 67,366 | 77,743 | 10,377 | 15% | 35,090 | \$17.61 |

Curriculum

The following national standards were referenced in each course of the curriculum:
CTB/McGraw-Hill LLC *Tests of Adult Basic Education, forms 9 and 10* Academic Standards

- *21st Century Skills*

Industry and instructor comments, along with current research, were considered by the curriculum revision team during the revision process, and changes were made as needed and appropriate. Many of the skills and topics noted in the research were already included in the curriculum framework. Specific changes made to the curriculum at the December 1-3, 2011.

Program Exceptions

None at this time.

Assessment

Emergency Management & Communications Technology students will be assessed using certifications offered at the certifications from the professional qualification standards referenced by the U.S. Department of Homeland Security, FEMA Emergency Management Institute. For more information consult <http://training.fema.gov/EMICourses/>.

If there are questions regarding assessment of this program, please contact the Instructional Design Specialist at the Research and Curriculum Unit at 662.325.2510.

Professional Learning

It is suggested that instructors participate in professional learning related to the following concepts:

- How to use the program Blackboard site

- Differentiated instruction – To learn more about differentiated instruction, please go to http://www.paec.org/teacher2teacher/additional_subjects.html and click on Differentiated Instruction. Work through this online course and review the additional resources.
- 21st Century Skills – To learn more about 21st Century Skills, please go to <http://www.p21.org/> and click on Overview – 21st Skills Framework.
- Related Academics – To learn more about Related Academics, please go to <http://www.ctb.com/ctb.com/control/main?p=home> and click on the TABE logo and learn about the most updated standards of the TABE exam.

Articulation

Articulation credit for **Emergency Management & Communications Technology** does not exist at this time.

| Articulated Secondary Course | Articulated Postsecondary Course |
|------------------------------|----------------------------------|
| NONE AT THIS TIME | NONE AT THIS TIME |

Statewide Guidelines on Articulated Credit

Eligibility

- To be eligible for articulated credit, a student must do the following:
 - Complete the articulated Secondary Vocational Program.
 - Score 80% or higher on the Mississippi Career Planning and Assessment System (MS-CPAS) in his or her secondary program of study.
- To be awarded articulated credit, a student must do the following:
 - Complete application for articulated credit at the community or junior college.
 - Enroll in the community or junior college within 18 months of graduation.
 - Successfully complete 12 non-developmental career–technical or academic credit hours in the corresponding articulated postsecondary career–technical program of study.

How MS-CPAS will be documented

- The Research and Curriculum Unit of Mississippi State University will provide the SBCJC a list of all secondary CTE students scoring at or above the 80 percentile for the articulated programs.
- The SBCJC will forward the list of students eligible for articulated credit to the colleges.

Transcription of Articulated Credit

- Students must complete 12 non-developmental career–technical or academic credit hours in the articulated postsecondary career–technical program of study before the articulated credit is transcribed.
- No grade will be given on the transcript for articulated courses; only hours granted will be transcribed (thus resulting in no change in quality points).

Time Limit

- MS-CPAS2 scores will be accepted to demonstrate competencies for up to 18 months after high school graduation.

Cost

No costs will be assessed on hours earned through articulated credit.

Foreword

As the world economy continues to evolve, businesses and industries must adopt new practices and processes in order to survive. Quality and cost control, work teams and participatory management, and an infusion of technology are transforming the way people work and do business. Employees are now expected to read, write, and communicate effectively; think creatively, solve problems, and make decisions; and interact with each other and the technologies in the workplace. Career–technical programs must also adopt these practices in order to provide graduates who can enter and advance in the changing work world.

The curriculum framework in this document reflects these changes in the workplace and a number of other factors that impact local career–technical programs. Federal and state legislation calls for articulation between high school and community college programs, integration of academic and career skills, and the development of sequential courses of study that provide students with the optimum educational path for achieving successful employment. National skills standards, developed by industry groups and sponsored by the U.S. Department of Education and Labor, provide career and technical educators with the expectations of employers across the United States. All of these factors are reflected in the framework found in this document.

Referenced throughout the courses of the curriculum are the 21st Century Skills, which were developed by the Partnership for 21st Century Skills, a group of business and education organizations concerned about the gap between the knowledge and skills learned in school and those needed in communities and the workplace. A portion of the 21st Century Skills addresses learning skills needed in the 21st century, including information and communication skills, thinking and problem-solving skills, and interpersonal and self-directional skills. Another important aspect of learning and working in the 21st century involves technology skills. The International Society for Technology in Education, developer of the National Educational Technology Standards (NETS), was a strategic partner in the Partnership for 21st Century Skills.

Each postsecondary program of instruction consists of a program description and a suggested sequence of courses that focus on the development of occupational competencies. Each career–technical course in this sequence has been written using a common format, which includes the following components:

- Course Name – A common name that will be used by all community and junior colleges in reporting students
- Course Abbreviation – A common abbreviation that will be used by all community and junior colleges in reporting students
- Classification – Courses may be classified as the following:
 - Career–technical core – A required career–technical course for all students

- Area of concentration (AOC) core – A course required in an area of concentration of a cluster of programs
 - Career–technical elective – An elective career–technical course
 - Related academic course – An academic course that provides academic skills and knowledge directly related to the program area
 - Academic core – An academic course that is required as part of the requirements for an associate’s degree
- Description – A short narrative that includes the major purpose(s) of the course and the recommended number of hours of lecture and laboratory activities to be conducted each week during a regular semester
- Prerequisites – A listing of any courses that must be taken prior to or on enrollment in the course
- Corequisites – A listing of courses that may be taken while enrolled in the course
- Competencies and Suggested Objectives – A listing of the competencies (major concepts and performances) and the suggested student objectives that will enable students to demonstrate mastery of these competencies

The following guidelines were used in developing the program(s) in this document and should be considered in compiling and revising course syllabi and daily lesson plans at the local level:

- The content of the courses in this document reflects approximately 75% of the time allocated to each course. The remaining 25% of each course should be developed at the local district level and may reflect the following:
 - Additional competencies and objectives within the course related to topics not found in the state framework, including activities related to specific needs of industries in the community college district
 - Activities that develop a higher level of mastery on the existing competencies and suggested objectives
 - Activities and instruction related to new technologies and concepts that were not prevalent at the time the current framework was developed or revised
 - Activities that include integration of academic and career–technical skills and course work, school-to-work transition activities, and articulation of secondary and postsecondary career–technical programs
 - Individualized learning activities, including work-site learning activities, to better prepare individuals in the courses for their chosen occupational areas
- Sequencing of the course within a program is left to the discretion of the local district. Naturally, foundation courses related to topics such as safety, tool and equipment usage, and other fundamental skills should be taught first. Other courses related to specific skill areas and related academics, however, may be sequenced to take advantage of seasonal and climatic conditions, resources located outside of the school, and other factors.

- Programs that offer an Associate of Applied Science degree must include a minimum 15-semester-credit-hour academic core. Specific courses to be taken within this core are to be determined by the local district. Minimum academic core courses are as follows:
 - 3 semester credit hours (sch) Math/Science Elective
 - 3 semester credit hours Written Communications Elective
 - 3 semester credit hours Oral Communications Elective
 - 3 semester credit hours Humanities/Fine Arts Elective
 - 3 semester credit hours Social/Behavioral Science Elective

It is recommended that courses in the academic core be spaced out over the entire length of the program, so that students complete some academic and career–technical courses each semester. Each community or junior college has the discretion to select the actual courses that are required to meet this academic core requirement.

- Career–technical elective courses have been included to allow community colleges and students to customize programs to meet the needs of industries and employers in their area.

In order to provide flexibility within the districts, individual courses within a framework may be customized by doing the following:

- Adding new competencies and suggested objectives
- Revising or extending the suggested objectives for individual competencies
- Adjusting the semester credit hours of a course to be up 1 hour or down 1 hour (after informing the Mississippi Community College Board [MCCB] of the change)

In addition, the curriculum framework as a whole may be customized by doing the following:

- Resequencing courses within the suggested course sequence
- Developing and adding a new course that meets specific needs of industries and other clients in the community or junior college district (with MCCB approval)
- Utilizing the career technical elective options in many of the curricula to customize programs

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Program Description

Emergency Management & Communications Technology is an instructional program that prepares individuals to provide skill and training in the emergency management area and in public safety communications. Individuals completing the ECT courses will be an integral part of local, state, and national response teams providing skills and knowledge in a variety of emergency situations. Emergency Management & Communications Technology may be taught can complete ??? a one year Technical Certificate and a two year Associate of Applied Science degree. Courses taken as part of the one year Technical Certificate can be transferred to the AAS degree program. Students who complete the program are eligible to take FEMA certifications (100, 200, 700 and 800).

The certifications are based on professional qualification standards referenced by the U.S. Department of Homeland Security, FEMA Emergency Management Institute.

For more information consult <http://training.fema.gov/EMICourses/>.

Suggested Course Sequence

Emergency Management and Communications Technology **One Year Technical Certificate**

Emergency Management Core

| | |
|--|---|
| ECT 1113 Prin. of Emergency Mgt. | 3 |
| ECT 1123 Fire Service Operations | 3 |
| ECT 1213 Law Enforcement Operations | 3 |
| ECT 1223 Principles of Public Safety Communications | 3 |
| ECT 2313 Hazardous Materials | 3 |
| ECT 2323 Incident Management Systems | 3 |
| ECT 2333 Emergency Planning | 3 |
| ECT 2413 Emergency Personnel Supervision | 3 |
| ECT 2423 Disaster Response & Recovery | 3 |
| ECT 2433 Public Info. & Awareness | 3 |
| ECT 2513 Financial Management | 3 |

Emergency Management Core Hours 33

Emergency Management and Communications Technology

Applied Associate of Science Degree

| General Education | Hours |
|---|---------------|
| Written Communication Elective | 3 |
| Oral Communications Elective | 3 |
| Computer Elective | 3 |
| Humanities/Fine Arts Elective | 3 |
| Social/Behavioral Science Elective | 3 |
| Math/Laboratory Science Elective | 3 (4) |
| Electives | 6 |
| Semester Hours | 24(25) |
| | |
| Emergency Management Core | |
| ECT 1113 Prin. of Emergency Mgt. | 3 |
| ECT 1123 Fire Service Operations | 3 |
| ECT 1213 Law Enforcement Operations | 3 |
| ECT 1223 Principles of Public Safety Communications | 3 |
| ECT 2313 Hazardous Materials | 3 |
| ECT 2323 Incident Management Systems | 3 |
| ECT 2333 Emergency Planning | 3 |
| ECT 2413 Emergency Personnel Supervision | 3 |
| ECT 2423 Disaster Response & Recovery | 3 |
| ECT 2433 Public Info. & Awareness | 3 |
| ECT 2513 Financial Management | 3 |
| Semester Hours | 33 |

Students will select from either the Emergency Management or Homeland Security Specialty Area

Emergency Management Specialty Area

(Select nine hours from the courses)

- ECT 1613 Mass Casualty Incident Management.
 - ECT 2613 Hazardous Weather Operations
 - ECT 2623 Special Problems in Emergency Management
 - ECT 2713 Emergency Management (3 hours) Technical Practicum
- OR
- EMS1118 Emergency Medical Technician

(OR)

Homeland Security Specialty Area

ECT 1813 Dynamics of Homeland Security

ECT 2813 Response to Incidents of Terrorism

ECT 2833 Principles of Transportation Security

| | |
|-----------------------------|--------------|
| Specialty Hours | 9(14) |
| Total Semester Hours | 66-71 |

Emergency Management and Communications Technology

ECT 1113, Principles of Emergency Management, 3 cr.

This course provides an overview of the characteristics, functions, and resources of an integrated system and how various emergency management services work together to maximize their capabilities. Emphasis will be placed on how this system is applied to all hazards for all government levels, and across the four phases of a disaster. 3 hours lecture.

ECT 1123 Fire Service Operations, 3 cr.

An orientation to the fire service, this course explores department structure and organization, operations and responsibility, and the history of the fire service. Also included are changes that impact how traditional fire department services are currently delivered. 3 hours lecture.

ECT 1213 Law Enforcement Operations, 3 cr.

Line activities of law enforcement organizations are discussed with emphasis on organization and management. This course provides a guide to the responsibilities assigned to patrol, traffic, investigation, and other specialized police units. 3 hours lecture.

ECT 1223 Principles of Public Safety Communications, 3 cr.

This course is a study of the systems used to facilitate emergency communications between the public, field units, and dispatch centers. Information is centered on the methods used by telecommunicators to rapidly process, react to and broadcast critical information. 3 hours lecture.

ECT 2313 Hazardous Materials, 3 cr.

Identification and recognition of hazardous materials are stressed in this class. Various types and classes of hazardous materials are discussed as well as various methods of transportation and storage. 3 hours lecture.

ECT 2323 Incident Management Systems, 3 cr.

This course is a study of incident management systems used for handling situations from relatively small incidents to the largest disasters. A variety of methods are discussed with emphasis placed on the National Incident Management System. 3 hours lecture.

ECT 2333 Emergency Planning, 3 cr.

The development of emergency operation plans and the process used to update existing plans that conform to current federal guidelines is covered in this course. Additional focus is placed on the interaction between public safety personnel that occurs during the planning process. 3 hours lecture.

ECT 2413 Emergency Personnel Supervision, 3 cr.

Focusing on supervising and managing personnel involved with emergency management, this course provides students with information on developing effective administrative techniques. Attention is given to exploring the role of the supervisor, dealing with problem situations, and issues related to leadership. 3 hours lecture.

ECT 2423 Disaster Response and Recovery, 3 cr.

This course discusses the role emergency managers have in responding to situations and the operations necessary to begin recovery efforts. Emphasis is placed on responsibilities assumed by local, state, and federal government agencies as well as the associated coordination requirements. 3 hours lecture.

ECT 2433 Public Information and Awareness, 3 cr.

This course provides an overview of the basic skills needed to perform the duties of a public information officer (PIO) as the job relates to emergency management. The course focuses on the various methods used to disseminate public information during the time surrounding an emergency. 3 hours lecture.

ECT 2513 Financial Management, 3 cr.

Budgeting and financial management are the primary concerns of this course. Various methods of budgeting are discussed as well as budgetary tracking methods and evaluation procedures. The application of these methods is demonstrated at different levels of personnel responsibility. 3 hours lecture.

ECT 1613 Mass Casualty Incident Management, 3 cr.

During a disaster, few things are more taxing on a community's response resources than multiple casualty incidents. This course uses components of the Incident Command System to coordinate the efforts of triage, treatment, and transport of the sick and injured. Additional focus is placed on identifying key incident factors that impact the decision-making process. 3 hours lecture.

ECT 2613 Hazardous Weather Operation, 3 cr.

This course provides detailed information on weather-related hazards and the necessary coordination and communication of warning information. Additional focus is given towards the relationship between forecasters and emergency management when issuing appropriate warnings for such events. 3 hours lecture.

ECT 2623 Special Problems in Emergency Management, 3 cr.

(Prerequisite: Consent of program coordinator and prior or concurrent enrollment in ECT courses) This course provides selected problems that deal with local emergency management needs. Students utilize critical thinking skills and perform the necessary research to develop effective solutions. 3 hours lecture.

ECT 2713 Emergency Management Technical Practicum, 3 cr.

(Prerequisite: Consent of program coordinator and prior or concurrent enrollment in ECT courses) This course allows emergency management personnel to implement knowledge and experience by functioning in the career field. The experience is designed to integrate the student's academic and technical skills into a real-world work environment. 3 hours lecture.

ECT 1813 Dynamics of Homeland Security, 3 cr.

The primary intent of this course involves information gathering, including the analysis and assessment of local threats and response capabilities. Students will develop procedures for preparing and responding to terrorist attacks. In addition, the practices for restoring and maintaining critical government operations are discussed in this course. 3 hours lecture.

ECT 2813 Response to Incidents of Terrorism, 3 cr.

This course addresses the special concerns and hazards encountered at incidents resulting from acts of terrorism or other criminal intent. Specific issues include responder safety, incident management, and weapons of mass destruction. Additional emphasis is placed on developing working relationships between response agencies involved with terrorism incidents. 3 hours lecture.

ECT 2833 Principles of Transportation Security, 3 cr.

History demonstrates that transportation plays an important role in the outcome of a terrorist attack. Likewise, the various modes of commercial transportation provide multiple methods for the concealment and delivery of weapons of mass destruction. This course focuses on the methods and procedures used to safeguard our transportation system and the steps local governments can take to improve the security of transportation facilities. 3 hours lecture.

ECT 1113 Principles of Emergency Management

1. Describe the components of the history and philosophy of the modern day field of emergency management.
2. Describe the differences between emergency management training and education; certificate programs and degree programs; and explain the value of education in emergency management.
3. Identify and describe the major organizations that provide emergency preparedness, mitigation, response, and recovery services and illustrate how they interrelate.
4. Identify the various emergency management careers available in both the public and in the private sector.
5. Describe the role of national, state and local support organizations in emergency management.
6. Identify and describe the scope, purpose, and organizational structure common to emergency management.
7. Describe the common types emergency management facilities, equipment, and communication systems.
8. Compare and contrast effective management concepts for various emergency situations.
9. Explain the importance of preparedness, public information, and evacuation to emergency managers
10. Identify a specific problem related to an emergency management concept and apply research information toward the development of a proposed solution.

Books

Haddow, G. (2010). *Introduction to Emergency Management* (4th ed.): Butterworth Heinemann

Web Sites

Federal Emergency Management Agency (2012) FEMA Entry Portal. Retrieved May 8, 2012, from <http://www.fema.gov>

Emergency Management Institute (2012) FEMA-EMI Entry Portal. Retrieved May 8, 2012, from <http://training.fema.gov/emi>

Department of Homeland Security (2012) DHS Entry Portal. Retrieved May 8, 2012, from <http://www.dhs.gov>

ECT 1123 Fire Service Operations

1. Describe the components of the history and philosophy of the modern day fire service.
2. Analyze the basic components of fire as a chemical reaction, the major phases of fire, and examine the main factors that influence fire spread and fire behavior.
3. Describe the differences between fire service training and education; fire protection certificate program and a fire service degree program; and explain the value of education in the fire service.
4. Identify and describe the major organizations that provide emergency response service and illustrate how they interrelate.
5. Identify fire protection and emergency-service careers in both the public and in the private sector.
6. Describe the role of national, state and local support organizations in fire protection and emergency services.
7. Identify and describe the scope, purpose, and organizational structure common to the fire and emergency services.
8. Describe the common types of fire and emergency services facilities, equipment, and apparatus.
9. Compare and contrast effective management concepts for various emergency situations.
10. Identify and explain the components of fire prevention including code enforcement, public information, and public and private fire protection systems.
11. Identify a specific problem related to an emergency management concept involving fire and rescue services and apply research information toward the development of a proposed solution.

Books

Klinoff, R. (2011) *Introduction to Fire Protection* (4th ed.): Delmar-Thomson Learning

Web Sites

Federal Emergency Management Agency (2012) FEMA Entry Portal. Retrieved May 8, 2012, from <http://www.fema.gov>

Emergency Management Institute (2012) FEMA-EMI Entry Portal. Retrieved May 8, 2012, from <http://training.fema.gov/emi>

Department of Homeland Security (2012) DHS Entry Portal. Retrieved May 8, 2012, from <http://www.dhs.gov>

ECT 1213 Law Enforcement Operations

1. Describe the components of the history and philosophy of modern day law enforcement agencies.
2. Explain the basic components of a law enforcement agency including patrol, investigations, support services, and special operations.
3. Describe the differences between law enforcement training and education; officer certificate program and a criminal justice degree program; and explain the value of education in law enforcement.
4. Identify and describe the major organizations that support law enforcement functions and illustrate how they interrelate.
5. Identify and describe both sworn and non-sworn careers in law enforcement.
6. Describe the role of national, state and local support organizations in law enforcement.
7. Identify and describe the scope, purpose, and organizational structure common to municipal, county, and state law enforcement agencies.
8. Describe the common types of law enforcement and emergency services facilities, equipment, and vehicles.
9. Compare and contrast effective management concepts used to direct law enforcement resources during emergency and non-emergency situations.
10. Identify and explain the components of crime prevention including public intervention, and public and private alarm systems.
11. Identify a specific problem related to an emergency management concept involving law enforcement services and apply research information toward the development of a proposed solution.

Books

Conser, Russell, Paynich, and Gingerich (2005) *Law Enforcement in the United States* (2nd ed.): Jones and Bartlett

Web Sites

Federal Emergency Management Agency (2012) FEMA Entry Portal. Retrieved May 8, 2012, from <http://www.fema.gov>

Emergency Management Institute (2012) FEMA-EMI Entry Portal. Retrieved May 8, 2012, from <http://training.fema.gov/emi>

Department of Homeland Security (2012) DHS Entry Portal. Retrieved May 8, 2012, from <http://www.dhs.gov>

ECT 1223 Principles of Public Safety Communications

1. Develop an understanding of the training, education, and skills needed to be an effective telecommunicator.
2. Explain the history of public safety communications in America including the availability and use of 911.
3. Develop an understanding of the systems used to provide public safety communications.
4. Describe current trends that are changing the way public safety communication systems function.
5. Develop an understanding of the interaction between telecommunicators, field units, and the public.
6. Explain the benefits of new communication technologies including the use of computer aided dispatching and location determination software.
7. Develop an understanding of the information resources needed to maintain effective public safety communication services.
8. Describe the common types of facility enhancements and equipment used to secure public safety communication systems and telecommunicators.
9. Explain the use of back up systems to maintain the public safety communication network (phones and radios) when traditional technology fails.
10. Identify a specific problem related to an emergency management concept involving public safety communication services and apply research information toward the development of a proposed solution.

Books

IFSTA (2001) *Telecommunicator* (1st ed.) Stillwater, OK: IFSTA Fire Protection Publications

Web Sites

Federal Emergency Management Agency (2012) FEMA Entry Portal. Retrieved May 8, 2012, from <http://www.fema.gov>

Emergency Management Institute (2012) FEMA-EMI Entry Portal. Retrieved May 8, 2012, from <http://training.fema.gov/emi>

Department of Homeland Security (2012) DHS Entry Portal. Retrieved May 8, 2012, from <http://www.dhs.gov>

ECT 2313 Hazardous Materials

1. Understand the laws regulating training requirements for the hazardous materials responder
2. Analyze a hazardous materials incident to determine the products involved and the magnitude of the problem
3. Interpret hazard and response information from printed resources, technical resources, computer databases, and monitoring equipment
4. Identify the steps in an analysis process for identifying unknown materials and describe the steps for determining emergency response objectives
5. Identify how occupancy, container, and location can assist in determining the presence of hazardous materials
6. Identify the various types of chemical protection devices and determine the appropriate personal protective equipment needed for a specific response action
7. Identify the steps for determining the extent of physical, health, and safety hazards within the endangered area of a hazardous materials release
8. Identify the various types and limitations of chemical detection and monitoring equipment
9. Describe how differences in chemical and physical properties can affect a hazardous materials incident.
10. Explain the importance of a local emergency response plan and standard operating guidelines to responders during a hazardous material incident.
11. Describe the functions and responsibilities of the various positions within the incident command system for a hazardous materials incident
12. Identify a specific problem related to an emergency management concept involving hazardous materials and apply research information toward the development of a proposed solution.

Books

Lesak, D. (1998) *Hazardous Materials Strategies and Tactics* (1st ed.): Brady, Prentice Hall

Web Sites

Federal Emergency Management Agency (2012) FEMA Entry Portal. Retrieved May 8, 2012, from <http://www.fema.gov>

Emergency Management Institute (2012) FEMA-EMI Entry Portal. Retrieved May 8, 2012, from <http://training.fema.gov/emi>

Department of Homeland Security (2012) DHS Entry Portal. Retrieved May 8, 2012, from <http://www.dhs.gov>

ECT 2323 Incident Management Systems

1. Identify and define the main functions within the ICS system and how they interrelate during an incident.
2. Explain the relationship between effective ICS and the used of incident objectives (life safety, incident stabilization, and property conservation).
3. Describe how the fire service uses ICS to maintain safe and effective communication channels during emergency and non-emergency incidents.
4. Explain the ICS concept known as “span of control” and describe how it can influence personnel accountability.
5. Explain the ICS concept known as “unified command” and describe how it can be adapted to work in multi-jurisdictional and multi-agency situations.
6. Describe the process of sectoring and how it provides a uniform method of geographical identification for specific points within an incident area.
7. Explain how ICS can be modified to deal with immediate threats to response personnel and other on-scene emergency procedures.
8. Given case studies of large-scale disasters, identify the short-range and long-range planning methods used to forecast logistical needs.
9. Describe the process of staging and how to effectively manage and deploy incoming resources.
10. Explain the importance of responder rehabilitation and the ICS procedures for providing on-scene rehabilitation services.
11. Explain the use of resource typing and common terminology within ICS to improve interoperability and communications.
12. Describe the process of demobilization and how ICS is used to effectively reduce the number of on-scene resources.

13. Identify a specific problem related to the effective management of incident resources and apply research information toward the development of a proposed solution.

Books

Walsh, Christen, Miller, Callsen, Cilluffo, and Maniscalco (2010) *National Incident Management System: Principles and Practice* (2nd ed.): Jones and Bartlett

Web Sites

Federal Emergency Management Agency (2012) FEMA Entry Portal. Retrieved May 8, 2012, from <http://www.fema.gov>

Emergency Management Institute (2012) FEMA-EMI Entry Portal. Retrieved May 8, 2012, from <http://training.fema.gov/emi>

Department of Homeland Security (2012) DHS Entry Portal. Retrieved May 8, 2012, from <http://www.dhs.gov>

ECT 2333 Emergency Planning

1. Explain how a fire and emergency service organization articulates a vision and defines its mission.
2. Describe the components of project planning and identify the steps of the planning cycle.
3. Describe how a cultural assessment works to determine potential strategic issues and the direction of an organization.
4. Assess the organizational relationship between budgeting, operational plans, and strategic plans.
5. Describe the purpose, function, and current and future security concerns of working document publication, storage, and integrity.
6. Assess the impact that training and education can have on the organization's ability to carry out its stated mission.
7. Describe common methods used to collect local response data and how such information can be analyzed to improve organizational capabilities.
8. Demonstrate the ability to write fire related research objectives
9. Research, evaluate and discuss various sources from which external, fire-related research information is available.
10. Identify a specific problem related to planning for emergency management and apply research information toward the development of a proposed solution.

Books

ICMA (2010) *Emergency Management: Principles and Practice for Local Governments* (2nd ed.): International City Management Association

Web Sites

Federal Emergency Management Agency (2012) FEMA Entry Portal. Retrieved May 8, 2012, from <http://www.fema.gov>

Emergency Management Institute (2012) FEMA-EMI Entry Portal. Retrieved May 8, 2012, from <http://training.fema.gov/emi>

Department of Homeland Security (2012) DHS Entry Portal. Retrieved May 8, 2012, from <http://www.dhs.gov>

ECT 2413 Emergency Personnel Supervision

1. Identify and explain contemporary management issues that occur due to variations in fire department demographics.
2. Explain the collective rules, procedures, laws, and policies that impact personnel management issues.
3. Describe the most common personnel management issues that affect the recruitment of emergency service personnel.
4. Compare and contrast the traits of effective versus ineffective supervision and management styles.
5. Discuss the components and styles of leadership.
6. Explain the principles associated with organizational development and the leadership structures commonly seen throughout the fire service.
7. Describe the managerial relationships that exist between financial, human, facilities, equipment, and information resources.
8. Explain the importance of public access to government and fire department operations.
9. Describe the key elements of successful communication to meet both internal and external customer needs.
10. Explain the need for effective personnel evaluation procedures and how such data can be applied towards organizational improvement.
11. Identify a specific problem related to the supervision of emergency service personnel and apply research information toward the development of a proposed solution.

Books

ICMA (2005) *Effective Supervisory Practices* (4th ed.): International City/County Management Association

Web Sites

Federal Emergency Management Agency (2012) FEMA Entry Portal. Retrieved May 8, 2012, from <http://www.fema.gov>

Emergency Management Institute (2012) FEMA-EMI Entry Portal. Retrieved May 8, 2012, from <http://training.fema.gov/emi>

Department of Homeland Security (2012) DHS Entry Portal. Retrieved May 8, 2012, from <http://www.dhs.gov>

ECT 2423 Disaster Response and Recovery

1. Define the phases of a disaster and explain the common tasks associated with preparation, mitigation, response, and recovery.
2. Describe the fire department's role in responding to a community disaster and explain the concepts of mutual aid and automatic aid.
3. Differentiate the availability of disaster resources from local, state, Federal, and private agencies or organizations.
4. Identify communications issues that commonly occur among the various levels of government that respond in times of disaster.
5. Explain how public communication systems can fail during times of disaster and any alternate/redundant methods used to limit the impact of such failures.
6. Explain the stages of the damage assessment process and the reporting requirements following a local disaster.
7. Describe the various Federal, state, and local assistance programs available to disaster victims during the recovery phase.
8. Evaluate the roles and responsibilities of key state and Federal personnel in responding to a declared major disaster.
9. Determine some typical responses that may be anticipated in disaster survivors and responders.
10. Explain the importance of crisis counseling and stress management programs during disaster response and recovery operations.
11. Describe the various types of public sheltering systems and their common limitations during times of disaster.
12. Identify a specific problem related to disaster management and apply research information toward the development of a proposed solution.

Books

ICMA (2007) *Emergency Management: Principles and Practice for Local Government* (2nd ed.): International City/County Management Association

Web Sites

Federal Emergency Management Agency (2012) FEMA Entry Portal. Retrieved May 8, 2012, from <http://www.fema.gov>

Emergency Management Institute (2012) FEMA-EMI Entry Portal. Retrieved May 8, 2012, from <http://training.fema.gov/emi>

Department of Homeland Security (2012) DHS Entry Portal. Retrieved May 8, 2012, from <http://www.dhs.gov>

ECT 2433 Public Information and Awareness

1. Define the national fire problem and main issues relating to the accidental causes of fire.
2. Describe the need, responsibilities, and importance of fire prevention as part of an overall mix of fire protection.
3. Describe the need, responsibilities, and importance of fire prevention organizations.
4. Determine the minimum professional qualifications at the state and national level for Fire Inspector, Fire Investigator, and Fire and Life Safety Educator.
5. Define the purpose and elements of an effective plan review program.
6. Identify the laws, rules, codes, and other regulations relevant to fire protection of the authority having jurisdiction.
7. Define the purpose and elements of an effective fire and life safety education program.
8. Define the purpose and elements of an effective media campaign used to promote fire prevention.
9. Discuss the major programs for public education.
10. Identify a specific problem related to emergency management involving public awareness and apply research information toward the development of a proposed solution.

Books

Politano, P. (2008) *Public Information Officer* (1st ed.): Prentice Hall

Web Sites

Federal Emergency Management Agency (2012) FEMA Entry Portal. Retrieved May 8, 2012, from <http://www.fema.gov>

Emergency Management Institute (2012) FEMA-EMI Entry Portal. Retrieved May 8, 2012, from <http://training.fema.gov/emi>

Department of Homeland Security (2012) DHS Entry Portal. Retrieved May 8, 2012, from <http://www.dhs.gov>

ECT Financial Management

1. Describe the typical sources of income used to fund fire department operations.
2. Explain the purpose and need for an effective budgeting process.
3. Identify and define the types of budgets commonly used to guide fire department financial management.
4. Describe the use of regular budget analysis and its potential influence on setting fire department spending priorities.
5. Explain the impact personnel costs can have on the overall fire department budget.
6. Describe how funds can be divided to accommodate different training needs and resources
7. Explain the typical interaction between the fire department and other governmental departments as it relates to the budgeting process
8. Identify the laws and regulations common to purchasing vehicles, equipment, supplies, and services with public funds
9. Explain the process of predicting and budgeting for capital needs to meet fire department objectives.
10. Identify the common sources of grant funding and how grants can impact fire department operations.
11. Describe the most common procedures for auditing the use of public funds and how chief fire executives can be held accountable for spending decisions
12. Explain the options available to chief fire executives for managing a reduction in funding
13. Identify a specific problem related to the funding of emergency management activities and apply research information toward the development of a proposed solution

Books

Bland, R. and Rubin, I (1997) *Budgeting - A Guide for Local Governments* (1st ed.) International City/County Management Association

Web Sites

Federal Emergency Management Agency (2012) FEMA Entry Portal. Retrieved May 8, 2012, from <http://www.fema.gov>

Emergency Management Institute (2012) FEMA-EMI Entry Portal. Retrieved May 8, 2012, from <http://training.fema.gov/emi>

Department of Homeland Security (2012) DHS Entry Portal. Retrieved May 8, 2012, from <http://www.dhs.gov>

ECT 1613 Mass Casualty Incident Management

1. Define the criteria used by emergency responders to declare a mass casualty incident or situation
2. Explain the concept of rapid triage and the role it has in managing a mass casualty incident.
3. Develop an understanding of the systems used to organize and command emergency medical resources.
4. Describe the various methods used to identify multiple patients and track their movement through the medical care system.
5. Explain the importance of effective mortuary services during a mass casualty incident.
6. Develop an understanding of the tactical considerations that must be considered managing a multi-casualty incident
7. Explain the concept of a medical surge and the interrelation that occurs between responders and hospital care providers during a mass casualty incident.
8. Describe the concept of a state-wide trauma system and how it can impact the distribution of mass casualty patients.
9. Develop an understanding of the equipment and supplies available to manage a multi-casualty incident
10. Identify a specific problem related to an emergency management concept involving mass casualty incident management and apply research information toward the development of a proposed solution.

Books

Christen, H. and Maniscalco, P. (1998) *The EMS Incident Management System – EMS Operations for Mass Casualty and High Impact Incidents* (1st ed.): Brady

Web Sites

Federal Emergency Management Agency (2012) FEMA Entry Portal. Retrieved May 8, 2012, from <http://www.fema.gov>

Emergency Management Institute (2012) FEMA-EMI Entry Portal. Retrieved May 8, 2012, from <http://training.fema.gov/emi>

Department of Homeland Security (2012) DHS Entry Portal. Retrieved May 8, 2012, from <http://www.dhs.gov>

ECT 2613 Hazardous Weather Operations

1. Develop an understanding of the systems used to detect and measure the severity of weather conditions
2. Develop an understanding of the tactical considerations that must be considered when issuing weather warnings
3. Describe the various ways the general public responds to information and warnings regarding hazardous weather events.
4. Explain the role the media plays in maintaining public awareness during a hazardous weather event.
5. Describe the impact a hazardous weather event can have on the various modes of transportation.
6. Develop an understanding of the communication systems used to link weather forecasting services with emergency management providers
7. Describe the use of forecast models in predicting hazardous weather events and their expected level of severity.
8. Define the term “threshold event” and explain how it can impact the delivery of local emergency services.
9. Explain the use of community based shelters as a component of hazardous weather operations.
10. Identify a specific problem related to an emergency management concept involving a hazardous weather operation and apply research information toward the development of a proposed solution.

Books

Ahrens, C. (1998) *Meteorology Today – An Introduction to Weather, Climate, and the Environment* (8th ed.):Thompson – Brooks/Cole

Web Sites

Federal Emergency Management Agency (2012) FEMA Entry Portal. Retrieved May 8, 2012, from <http://www.fema.gov>

Emergency Management Institute (2012) FEMA-EMI Entry Portal. Retrieved May 8, 2012, from <http://training.fema.gov/emi>

Department of Homeland Security (2012) DHS Entry Portal. Retrieved May 8, 2012, from <http://www.dhs.gov>

ECT 2623 Special Problems in Emergency Management

1. Identify and investigate various issues that pose a special concern or unique threat to the delivery of fire and emergency services.
2. Identify areas of ongoing fire related research and the organizations or programs that have developed applications to reduce hazardous situations.
3. Investigate, evaluate and interpret research in the areas of fire service operations, fire dynamics, and fire prevention.
4. Investigate, evaluate and interpret research in the area of fire test standards and code development.
5. Explain current trends that indicate future developments in fire related research.
6. Demonstrate the ability to utilize various informational and media resources to collect data related to a specific fire or emergency service problem.
7. Complete a formal research proposal on a problematic emergency management topic and apply a recognized method of investigation, organization, and presentation.

Books

Haddow, G. (2010). *Introduction to Emergency Management* (4th ed.): Butterworth Heinemann

Web Sites

Federal Emergency Management Agency (2012) FEMA Entry Portal. Retrieved May 8, 2012, from <http://www.fema.gov>

Emergency Management Institute (2012) FEMA-EMI Entry Portal. Retrieved May 8, 2012, from <http://training.fema.gov/emi>

Department of Homeland Security (2012) DHS Entry Portal. Retrieved May 8, 2012, from <http://www.dhs.gov>

ECT 2713 Technical Practicum

1. Develop an understanding of how emergency managers function under realistic conditions.
2. Identify the various laws and regulations that mandate the appointment of an emergency manager and direct the functions associated with the position.
3. Develop an understanding of the financial considerations necessary to administer an emergency management agency.
4. Develop an understanding of how emergency managers prepare on a daily basis for potential hazards.
5. Describe the sources of funding used to provide emergency management services.
6. Explain the political environment and structure that supports local emergency management functions.
7. Describe the various non-emergent functions that are often assigned to the local emergency management agency.
8. Identify a specific problem related to an emergency management concept involving the practicum experience and apply research information toward the development of a proposed solution.

Books

Haddow, G. (2010). *Introduction to Emergency Management* (4th ed.): Butterworth Heinemann

Web Sites

Federal Emergency Management Agency (2012) FEMA Entry Portal. Retrieved May 8, 2012, from <http://www.fema.gov>

Emergency Management Institute (2012) FEMA-EMI Entry Portal. Retrieved May 8, 2012, from <http://training.fema.gov/emi>

Department of Homeland Security (2012) DHS Entry Portal. Retrieved May 8, 2012, from <http://www.dhs.gov>

ECT 1813 Dynamics of Homeland Security

1. Identify and analyze various threat avenues, organizations, and methods that pose a hazard to local and national security
2. Identify and analyze the agencies and systems in place to meet local and national homeland security missions
3. Explain the role that law enforcement plays in administering an effective homeland security program.
4. Describe the balance that government homeland security systems must achieve between meeting the need for public protection and maintaining constitutional rights
5. Explain the various funding mechanisms used to support homeland security initiatives in the United States.
6. Describe the role the “Patriot Act” has played in the government’s attempt to enhance national homeland security.
7. Identify a specific problem related to an emergency management concept involving homeland security and apply research information toward the development of a proposed solution.

Books

Howard, R., Forest, J., and Moore, J. (2005) *Homeland Security and Terrorism* (1st ed.): McGraw Hill

Web Sites

Federal Emergency Management Agency (2012) FEMA Entry Portal. Retrieved May 8, 2012, from <http://www.fema.gov>

Emergency Management Institute (2012) FEMA-EMI Entry Portal. Retrieved May 8, 2012, from <http://training.fema.gov/emi>

Department of Homeland Security (2012) DHS Entry Portal. Retrieved May 8, 2012, from <http://www.dhs.gov>

ECT 2813 Response to Incidents of Terrorism

1. Identify and analyze the nature of terrorism and its intended purpose and goals
2. Identify and analyze the types of terrorism and the targets used by terrorist to achieve certain goals
3. Describe the tools, methods, and tactics used by terrorist to achieve certain goals
4. Explain the government's role in preparing for a terrorist attack including the investigation of possible threats and the use of preemptive strikes against such threats.
5. Describe the need for a coordinated response among all emergency service disciplines and all levels of government when managing the effects of a terrorist attack.
6. Identify public safety resources that are vulnerable to terrorist activity and any attempt to degrade emergency response capabilities.
7. Evaluate the impact of terrorism against a population and the community's response to defend against such acts
8. Identify a specific problem related to an emergency management concept involving terrorism and apply research information toward the development of a proposed solution.

Books

Martin, G. (2009) *Understanding Terrorism* (3rd ed.): Sage Publications

Web Sites

Federal Emergency Management Agency (2012) FEMA Entry Portal. Retrieved May 8, 2012, from <http://www.fema.gov>

Emergency Management Institute (2012) FEMA-EMI Entry Portal. Retrieved May 8, 2012, from <http://training.fema.gov/emi>

Department of Homeland Security (2012) DHS Entry Portal. Retrieved May 8, 2012, from <http://www.dhs.gov>

ECT 2833 Principles of Transportation Security

1. Identify and analyze various acts that pose a threat to all transportation modes and infrastructure
2. Identify and analyze the challenges faced by security systems to provide adequate protection
3. Analyze both local and regional conditions to develop an understanding of how community transportation systems are planned, implemented, and managed
4. Describe the methods, and tactics used by security forces to protect transportation modes and infrastructure
5. Explain how various transportation systems interact across multiple modes to deliver the goods and cargo that fuel economic growth.
6. Identify critical surface transportation assets, their potential vulnerabilities for attack, and the development of countermeasures to prevent or minimize such threats.
7. Explain the technical security measures that are necessary to reduce system vulnerabilities, prevent unauthorized access, and mitigate terrorist attacks
8. Describe how and why transportation security threats change due to regional, political, and ideological conditions
9. Evaluate the impact and cost of developing and maintaining an effective transportation security system
10. Identify a specific problem related to an emergency management concept involving transportation security and apply research information toward the development of a proposed solution.

Green, G. and Fischer, R. (2008) *Introduction to Security* (8th ed): Elsevier Butterworth-Heinemann

Web Sites

Federal Emergency Management Agency (2012) FEMA Entry Portal. Retrieved May 8, 2012, from <http://www.fema.gov>

Emergency Management Institute (2012) FEMA-EMI Entry Portal. Retrieved May 8, 2012, from <http://training.fema.gov/emi>

Department of Homeland Security (2012) DHS Entry Portal. Retrieved May 8, 2012, from

<http://www.dhs.gov>

ELECTIVES

Computer Elective - (CPT 1113 Fundamentals of Microcomputer Applications or other computer elective approved by the Instructor)

Any other Instructor Approved Electives that directly relate to content

Appendix A: Standards ¹

The certifications are based on professional qualification standards referenced by the U.S. Department of Homeland Security, FEMA Emergency Management Institute.

For more information consult <http://training.fema.gov/EMICourses/>.