

A Study to Determine the Curriculum for
the Emergency and Disaster Planning Course
at Milwaukee Area Technical College

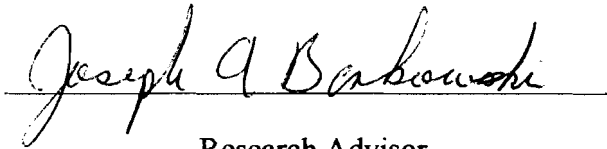
by

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A handwritten signature in cursive script, reading "Joseph A. Barbowski", is written over a horizontal line.

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ABSTRACT

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A Study to Determine the Curriculum for the Emergency and Disaster Planning Course at Milwaukee Area Technical College

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Currently, Milwaukee Area Technical College is changing the technical courses being offered in the Fire Science Associates Degree Program. There is no curriculum for the course titled Emergency and Disaster Planning. The purpose of this study is to design and develop a new curriculum for the Emergency and Disaster Planning course at Milwaukee Area Technical College. This will be accomplished by researching curriculum development and gathering data from a DACUM, made up of experts in the area of emergency and disaster planning from the Milwaukee area.

The summary of the study provides what the outcome of the DACUM was and what should be included in the curriculum for the Emergency and Disaster Planning Course. It will also have an appendix showing what the actual curriculum is in the format chosen for curriculum development.

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CHAPTER 1

Introduction

The Fire Science Program at Milwaukee Area Technical College (MATC) is a two-year associate degree program. Obtaining the degree will do two things for the graduate. First, for the student not already employed by a fire department, it assists the graduate in gaining employment in the field of firefighting. Second, for the student already employed in a fire department, it could help the employee advance their current position in the department. Meaning if the individual is looking at being promoted through the ranks, this degree will give them a formal education in the area of firefighting. The program consists of 68 credits with 33 of those being technical courses related to fire science.

The fire service is an ever-changing field (Norman, 1991). There are new problems that arise, new equipment that is developed and new ways to mitigate the problems that are occurring. The Fire Science Program at Milwaukee Area Technical College is trying to keep up with those changes. They have changed the technical courses being offered. The old curriculum had two Tactics and Strategy courses. Part one was taken one semester and part two would be taken in a second semester. Also, there were two Fire Management courses. They were taken in similar fashion as the Tactics and Strategy courses. In 2002, The National Fire Academy (NFA) in Emmitsburg, Maryland changed the curriculum for their Associate and Bachelor degree programs. Their intent was to create a national system for fire-related higher education.

MATC decided to change their curriculum to keep up with the changes made at the National Fire Academy. What they proposed was to create one Tactics and Strategy course and one Fire Management course instead of two of each. This created an opening for two new courses. With the help of the Fire Science Advisory Committee, MATC decided to add Fire Department Health and Safety and Emergency and Disaster Planning to the program.

Purpose of Study

The purpose of this study is to design and develop a new curriculum for the Emergency and Disaster Planning course at Milwaukee Area Technical College. Information from this study will be gathered through a DACUM. The DACUM will consist of experts in the area of emergency and disaster planning for the Milwaukee area.

Problem Statement

Currently, Milwaukee Area Technical College is changing the technical courses being offered in the Fire Science Associate Degree Program. There is no curriculum for the course titled Emergency and Disaster Planning. Using a DACUM, the researcher will gather information from experts on what and how the curriculum will be developed. The researcher will use the Wisconsin Instructional Design System (WIDS) to help develop the layout of the curriculum.

Research Objectives

Due to the change in courses offered in the Fire Science Program, there is a need to develop new curriculum. The research objectives for this study are to:

1. Research curriculum development
2. Identify the pre-requisites to take the course

3. Determine the competencies needed
4. Determine the course curriculum

Significance of the Study

The study will determine the curriculum for the Emergency and Disaster Planning course. This will improve the present fire-training curriculum at Milwaukee Area Technical College. The students then will be better prepared, after graduation, to set up and implement a plan for an emergency or disaster. This will allow the students enrolled in the program to be exposed to other avenues related to the fire service other than just firefighting. With the budget issues at the state and local level many fire departments are facing cuts to staffing levels. This is making it more difficult for students graduating in the program to attain firefighting jobs. A course such as Emergency and Disaster Planning will enable students to gain knowledge in an area related to fire science. This may open other career opportunities in areas such as emergency government or homeland security. This will also bring the program more in line with the curriculum being taught at the National Fire Academy.

Limitations of the Study

The curriculum is limited to the students who are enrolled at Milwaukee Area Technical College in the Fire Science Program. Also, the DACUM will be limited to subject matter experts in the area of fire science in the Milwaukee area. Gathering information to compare will also be limited to the helpfulness of the colleges whose information will be requested.

Assumptions

The students in the Fire Science Program at Milwaukee Area Technical College, at present, are not provided with the most current information available to them in the area of emergency and disaster planning. Without the study of the curriculum there will be no standard for the instructor to follow. This will allow future instructors to teach whatever they see fit. There will be no consistency in the program. Consistency is something that the students are looking for in the degree they are pursuing. In the fire service consistency is something that needs to take place at every emergency incident. A change to the curriculum will be accepted by Milwaukee Area Technical College, thereby benefiting the students. This benefit is the consistency. If one instructor teaches the course the way he thinks it should be taught and then a different instructor teaches it different the students will be wondering whom to believe. When the students pursue a job in the area of disaster planning they will have experience working with the proper way to conduct emergency and disaster planning through the information taught to them at MATC.

Definitions

Risks – “The resultant outcome of exposure to a hazard” (Angle, 1999, p. 273).

Disaster – “A calamitous event, especially one occurring suddenly and causing great loss of life, damage, or hardship, as a flood, airplane crash, or business failure” (Schneid and Collins, 2001, p. 1).

Occupational Safety and Health Administration (OSHA) – “U.S. federal agency that develops and enforces standards and regulations for safety in the workplace” (International Fire Service Training Association, 1998, p. 318).

National Fire Protection Association (NFPA) – “Non- profit educational and technical association devoted to protecting life and property from fire by developing fire protection standards and educating the public” (International Fire Protection Association, 1998, p. 317).

Department of Natural Resources (DNR) – “The Department of Natural Resources is dedicated to the preservation, protection, effective management, and maintenance of Wisconsin's natural resources” (DNR, 2004).

Environment Protection Association (EPA) – “The mission of the Environmental Protection Agency is to protect human health and the environment” (EPA, 2004).

Homeland Security – “A concerted national effort to prevent terrorist attacks within the United States, reduce America’s vulnerability to terrorism, and minimize the damage and recover from attacks that do occur” (Department of Homeland Security, 2002, p. 2).

Federal Emergency Management Agency (FEMA) – “The independent Federal agency responsible for leading America’s efforts to prepare for, prevent, respond to, and recover from disasters” (Federal Emergency Management Agency, 2003, p. 1).

Federal Bureau of Investigation (FBI) – “The mission of the FBI is to protect and defend the United States against terrorist and foreign intelligence threats, to uphold and enforce the criminal laws of the United States, and to provide leadership and criminal justice services to federal, state, municipal, and international agencies and partners” (FBI, 2004).

National Incident Management System (NIMS) – “An organization that integrates effective practices in emergency preparedness and response into a comprehensive national framework for incident management. The NIMS will enable responders at all levels to work together more effectively to manage domestic incidents no matter what the cause, size or complexity” (FEMA, 2004).

DACUM – An acronym for Developing a Curriculum. It is a process used to analyze an occupation, job, (whether skilled or semi-skilled), or function (York Technical College, 2004).

Wisconsin Instructional Design System (WIDS) – “A performance based instruction design system that answers the questions of Who, What, When and How of instruction” (Wisconsin Technical College System Foundation, 1994, p. 3).

Mitigate – “To make less severe or intense” (International Fire Service Training Association, 1998, p. 317).

Risk management – “The process of minimizing the chance, degree, or probability of damage, loss, or injury” (Dodson, 1999, p. 218).

Risk control – “A common approach to risk management where measures and processes are implemented to help control the number and the severity of losses or consequences of risk to an organization” (Angle, 1999, p. 272).

CHAPTER 2

Review of Literature

This report will utilize the following for gathering information:

1. DACUM
2. Worldwide Instructional Design System (WIDS)

Fire service periodicals will also be used to supplement the rationale for developing the curriculum.

A DACUM is an acronym for Developing A CurriculUM (Benkowski, 2004). The DACUM was originally used in Clinton, Iowa by the Job Corp program. York (2004) found the following:

In the late 60s, New Start Corporations funded by the Canadian government applied the experimental DACUM process in its early stages. The process was soon adopted in several provinces. Robert E. Adams authored the first and most complete description of the DACUM process in his 1972 report about the Nova Scotia New Start Project. (p. 2) It is a process used to analyze an occupation, job (whether skilled or semi-skilled), or function. People who use the DACUM are educators, trainers and managers. It is used because it is effective, quick and inexpensive. The DACUM starts with a facilitator who coordinates the session. They must set up a time and place for the session to take place. They then must organize a group of 8 to 12 experts from the area in question. These experts are members of the occupation, job or function being discussed. In this case the experts are members of the fire service. The facilitator leads the group through an orientation, review of the topic, and identification of the course in question. The group, because of their expertise, begins to define the duties and tasks associated with the course

(York Technical College, 2004). The duties are also known as competencies. Once the major competencies are determined by the group, they then identify the tasks associated with each. The tasks are what they need to know, and must be started with an action verb. The activities required to perform the tasks, known as steps, are not identified by the DACUM. Whoever is going to actually develop the curriculum is responsible for the steps.

WIDS stands for Worldwide Instructional Design System (Wisconsin Technical College System Foundation, 1994). It is a performance based instruction design system that answers the questions of Who, What, When and How of instruction. Performance based instruction is where the results are known before anything is taught. The design is broken down as follows:

Who: is the student (learner)

What: the goals to be met

When: the learner has a complete understanding of the what

How: the strategies used to get to those results.

These four questions can be divided into 14 steps for the course development process (Appendix A).

The WIDS model will meet the research objectives of this study. It will write and analyze course competencies, establish learning objectives, set performance standards and define core abilities. “Competencies are disciplines or occupationally specific skills taught in a specific lesson or sequence of related lessons. In contrast, core ability is a broader skill that is cross functional to many disciplines and occupations” (Neill, 1994). The researcher will use a DACUM to establish the WIDS design.

Emergency and Disaster Planning Curriculum Development

Emergencies and disasters have been occurring since the beginning of time. Nature or mankind can cause these. Naturally occurring events such as tornados, hurricanes or floods can happen without warning. In 2004 the southeastern part of the United States saw a rash of hurricanes. It started in August with hurricane Charlie, then Francis, Ivan and finally Jeanne. These hurricanes left a path of destruction throughout the southeastern part of the country. The Federal Emergency Management Agency (FEMA) provided \$4.27 billion in assistance to over 1.6 million people (FEMA, 2004). The National Climatic Data Center, part of the National Oceanic and Atmospheric Administration (NOAA), published a technical report on the number of weather and climate events (Ross and Lott, 2003). This report covers the time frame of 1980 to 2003. In the report it is said that there were 58 weather related disasters that each sustained at least 1 billion dollars in damage. The total damage for all of the disasters was over \$350 billion dollars. Natural disasters account for only a portion of the overall disaster that take place each year around the world. Man-made or mankind disasters account for them as well.

Human disasters cover a wide spectrum from the small automobile accident to the events of September 11th, 2001 (9/11). The small auto accident, at the time, is a disaster for the parties involved. They are trying to heal injuries that may have occurred and or trying to financially get back on their feet. The events of 9/11 left the country in disarray. The resources were taxed trying to cope with what just happened and continuing to try to mitigate the situation that was still continuing. The fire department was trying to not only

fight the fire, but also look for the missing members. That total wound up being 343 firefighter fatalities.

Planning for the events of a natural disaster is easier than man-made events. With the advancements in technology, it is easy for meteorologists to predict when certain activities may occur. Take for instance the hurricanes previously talked about. The national weather service is able to predict days in advance where and when the hurricane will hit land. Having this advanced warning enables residents the opportunity to prepare. This preparation includes securing their homes and evacuating if necessary. Instead of being caught in the middle of the storm they may be able to go to other areas potentially saving their lives. Having a plan in place allows activities to take place smoothly. With the storm approaching warning can be sent to residents. They can then begin to take appropriate action, which may include evacuation. After the storm has past, the clean up and rebuilding starts. In the planning stages is where things such as construction equipment, financial aid and housing are arranged. Through the Federal Emergency Management Agency (FEMA), disaster relief is handled whether it is housing, food, water, clothing or financial aid. These programs are handled with the assistance of fire departments, police departments, Red Cross, and Salvation Army. None of this would be possible were it not for pre-planning.

The man-made events are much harder to predict. Take the small auto accident. Would it not be great if you could predict when the accident was going to happen so you could avoid it in the first place? Because of this unpredictability that is why we have insurance. The plan is already in place for the accident. All you need to do is call your agent and tell them what happened and the “wheels” are set in motion. The investigation

starts with what happened and who was involved. The claims adjuster takes care of the damage assessment and things move forward from there.

The larger man-made disasters are the ones that we need to start doing a better job of preparing for. The events of September 11, 2001 have taken this preparedness to another level. Manning (2002) stated:

At first, one might feel uncomfortable in translating the 9-11 events and the FDNY response into common terms that most other fire departments could appreciate. After all, the events of 9-11, at least for a few hours overwhelmed the largest and possibly best prepared fire department the world has ever seen. Nevertheless, the fundamental implications of September 11 are no different for a smaller department than the FDNY. Although New York City is a high profile target for terrorists (and no doubt, there are “big city” lessons to be learned), the threat of terrorism is not exclusive to big cities, and any fire department that has a false sense of security in that regard is courting disaster. Moreover, history has shown- terrorism or not- that big incidents do happen in little places. (p. 10)

Following the World Trade Center Disaster on 9/11/01, the FDNY published recommendations on managing urban catastrophes in its Department Journal, With New York Firefighters. In this journal, several articles were written by staff and command chiefs as to the lessons learned and methods to prevent further tragedies. An article written by Deputy Assistant Chief of Operations Joseph Pfeifer (2002) gives many such examples of lessons learned, such as the following:

The fourth lesson concerns preparedness for future terrorist attacks and major incidents. The Fire Department will develop their own Incident Management Teams (IMT) to handle urban disasters. This will give the FDNY the capability to quickly staff and sustain the major components of the Incident Command System (ICS). Fire and EMS personnel will be trained to handle the different units in the planning section, as well as the other sections of the ICS. By preparing and reorganizing FDNY's resources, we will be better able to handle future catastrophic urban disasters. (p. 9)

Another avenue the FDNY pursued was to hire a consulting firm to study the department and determine where their deficiencies are when it comes to preparation and planning for major incidents. The report done by the firm of McKinsey and Company studied the department for 5 months (2002). They interviewed members of the department, both staff and line members, who responded to the attack. They also watched videotape of the incident, listened to dispatch tapes and other communication records and interviewed experts from throughout the country. Their goal was to try and understand what happened at the incident and make recommendations that would make the department better at handling major incidents in the future. The report contained four parts. They are:

Part I Summary of the response to the attack

Part II Recommendations in four areas

- A. Operations
- B. Planning and Management
- C. Communications and Technology
- D. Family and Member Support Services

Part III Additional issues to be addressed

Part IV Exhibits that support Part I

In Part II section B, Planning and Management, the firm recommends that the department do a better job of preparing for major disaster incidents. They recommended that a planning committee be created to continually monitor the preparedness of the department and implement plans to do that. The committee will continually analyze the risks the department may face and develop an emergency response plan that will be used in the event of another major emergency.

Fire departments throughout the country must be ready to handle such emergencies. When incidents happen and people dial the 911 system the fire department will be one of the first to respond. The 911 systems is an enhanced telephone system. When someone dials 911, a dispatcher on a computer answers their call. The computer automatically displays where the call is coming from, whether it is a landline or cell phone. This system allows for faster responses to incidents, meaning rescue personnel are on scene faster, mitigating the situation. Because of 9-11-01 communication systems have improved. Now different agencies are able to communicate with one another. Previously fire departments were not able to talk to police departments and police departments were unable to communicate with public utilities.

Planning for these types of situations now falls under the jurisdiction of the Department of Homeland Security (DHS). Created out of the Homeland Security Act of 2002, it became the Nation's 15th cabinet department (Department of Homeland Security [DHS], 2002). It combined 22 agencies such as the FBI, FEMA, and the secret service into 5 major divisions. Those divisions are:

1. Border and Transportation Security
2. Emergency Preparedness and Response
3. Science and Technology
4. Information Analysis and Infrastructure Protection
5. Management

The Department of Homeland Security has seven goals to creating a safer country:

1. Awareness
2. Prevention
3. Protection
4. Response
5. Recovery
6. Service
7. Organizational Excellence

These goals were established to protect the United States from future attacks and to make the country and its citizens safer.

The 2005 budget for the DHS is \$40.7 billion, a 6.6% increase from 2004 (DHS, 2004). The money allocated to the Emergency Preparedness and Response division is \$3.1 billion. FEMA who is responsible for the planning of emergencies and disasters is part of this division. FEMA's mission is "to reduce loss of life and property and protect our nation's critical infrastructure from all types of hazards through a comprehensive, risk-based, emergency management program of mitigation, preparedness, response and recovery."

State and local governments are responsible for developing mitigation plans in the event of a disaster. These plans are derived out of the Strategic plans. Fire departments such as Los Angeles, Milwaukee, and New York have these strategic plans in place (Los Angeles 2004, Milwaukee 2003, and Fire Department City of New York 2004). FEMA has developed a “how-to guide” to assist state and local agencies in creating the plan (Federal Emergency Management Agency 2002). This need for mitigation planning came from the Disaster Mitigation Act of 2000. The Act pertains specifically to natural disasters not man made or acts of terrorism. However, the plans created under this act could be adapted to assist in planning for those types of emergencies. Fire departments had actually started planning for emergencies prior to the Act.

The National Fire Protection Agency (NFPA) is an organization that is responsible for the safety of the fire service and the general public (NFPA, 2004). They develop codes and standards that are recognized on a worldwide scale. Fire prevention is the area they devote much of their research and development in. The organization was founded in 1896 and today has over 75,000 members worldwide. In 1991, a Disaster Management Committee was established to develop a standard on disaster preparedness (National Fire Protection Association, 2004). In 1995 the committee presented a document called NFPA 1600 “Recommended Practice for Disaster Management.” It has since been updated and the title changed to “Disaster/ Emergency Management and Business Continuity Programs.” Basically it is a standard that organizations such as the fire service need to follow when developing plans for the mitigation of disasters.

Not only is the fire service affected by the need for disaster planning, the general public must also be prepared for something to happen. A program called Community

Emergency Response Teams (CERTs) was established in 1993 by the Los Angeles City Fire Department and was then adopted by FEMA (Stilp and Bevelacqua, 2003). The program trains volunteers in the area of disaster preparedness. People are trained in how to assist the local fire and police departments during a disaster.

Departments must plan for the big incident even if it never happens. They must be prepared. In addition to creating preplans for disasters, departments also hold mock incidents to practice for the real disaster. All of the agencies involved in a real disaster come together to practice what would be taking place. Any inefficiency would come out during an incident and could be corrected so they do not occur during an actual emergency. These mock incidents can be held in a variety of ways including but not limited to PowerPoint simulations, tabletop exercises and actual hands on situations. These situations can be run by the local, state and or federal agencies. The educational system, technical colleges and universities, have also become involved in the teaching of emergency planning and preparedness.

Summary

This study will determine the curriculum for the Emergency and Disaster Planning course. It will improve the current fire-training curriculum at Milwaukee Area Technical College, by bringing it more in line with what the National Fire Academy is teaching. To accomplish this, the researcher will use the Worldwide Instructional Design System (WIDS).

CHAPTER 3

Research Methods

Introduction

Currently, Milwaukee Area Technical College is changing the technical courses being offered in the Fire Science Associate Degree Program. There is no curriculum for the course titled Emergency and Disaster Planning. Using a DACUM, the researcher will gather information from experts on what and how the curriculum will be developed. The researcher will also use information gathered from other colleges to compare how the curriculum should be developed. The researcher will use the Wisconsin Instructional Design System (WIDS) to help develop the layout of the curriculum. Due to the change in courses offered in the Fire Science Program, there is a need to develop new curriculum. The research objectives for this study are to:

1. Research curriculum development
2. Identify the pre-requisites to take the course
3. Determine the competencies needed
4. Determine the course curriculum

The organization and contents of the chapter include:

- Research design used (WIDS, DACUM)
- Population used
- Justification of participants
- Data collected
- Instrumentation

Research Design

The researcher will use the Wisconsin Instructional Design System (WIDS) to create the curriculum. WIDS stands for Worldwide Instructional Design System. It is a performance based instruction design system that answers the questions of Who, What, When and How of instruction. Performance based instruction is where the results are known before anything is taught. The design is broken down as follows:

Who: the student (learner)

What: the goals to be met

When: the learner has a complete understanding of the what

How: the strategies used to get to those results.

These four questions can be divided into 14 steps for the course development process (Appendix A)

The WIDS model will meet the research objectives of this study. It will write and analyze course competencies, establish learning objectives, set performance standards and define core abilities. “Competencies are disciplines or occupationally specific skills taught in a specific lesson or sequence of related lessons. In contrast, core ability is a broader skill that is cross functional to many disciplines and occupations” (Neill, 1994).

The researcher will use a DACUM to establish the WIDS design.

A DACUM is an acronym for Developing A CURRICULUM (Benkowski, 2004). It is a process used to analyze an occupation, job, (whether skilled or semi-skilled), or function. People who use the DACUM are educators, trainers and managers. It is used because it is effective, quick and inexpensive. The DACUM starts with a facilitator who coordinates the session. They must set up a time and place for the session to take place.

They then must organize a group of eight to twelve experts from the area in question. These experts are members of the occupation, job or function being discussed. In this case the experts are members of the fire service. The facilitator leads the group through an orientation, review of the topic, and identification of the course in question. The group, because of their expertise, begins to define the duties and tasks associated with the course. The duties are also known as competencies. Once the group determines the major competencies, they then identify the tasks associated with each. The tasks are what they need to know, and must be started with an action verb. The activities required to perform the tasks, known as steps, are not identified by the DACUM. Whoever is going to actually develop the curriculum is responsible for the steps.

Population

The researcher will use a DACUM that will consist of eight to twelve experts in the area of fire service training. These individuals will have responsibility for emergency and disaster planning within the fire departments they work for. The researcher will utilize members from fire departments within the Milwaukee Area Technical College district. The justification for utilizing these individuals is because the Milwaukee Area Technical College wants to meet the needs of the fire departments they serve. Many of these departments send employees to MATC for their fire service training. The researcher wants to make sure that the customers are being satisfied with the education their members are receiving.

Data Collected

Upon receiving the data collected from the DACUM session, the researcher will be able to develop a course outcome summary. This course outcome summary consists of the following:

- Course Description
- Core Abilities
- Course Competencies
- Learning Objectives
- Performance Standards

The data collected will provide the researcher with the course competencies and the learning objectives.

Instrumentation

The data collected will be from experts in the area of emergency and disaster planning. Because of the positions these people hold within their respective fire departments they will be able to provide update and accurate information. This information will be used to develop the curriculum. The departments involved should have a direct impact on what is being taught in the area as they are the ones dealing with the emergencies and disasters on a daily basis. The data received help justify the conclusions in Chapter 5.

CHAPTER 4

Results

Introduction

Currently, Milwaukee Area Technical College is changing the technical courses being offered in the Fire Science Associate Degree Program. There is no curriculum for the course titled Emergency and Disaster Planning. Using a DACUM, the researcher will gather information from experts on what and how the curriculum will be developed. The researcher will use the Wisconsin Instructional Design System (WIDS) to help develop the layout of the curriculum. The purpose of this study is to design and develop a new curriculum for the Emergency and Disaster Planning course at Milwaukee Area Technical College. Information from this study will be gathered through a DACUM. The DACUM will consist of experts in the area of emergency and disaster planning for the Milwaukee area.

The organization and contents of this chapter includes presenting the findings of the DACUM that was conducted by the researcher. This includes what the pre-requisites are, the competencies needed and the curriculum.

Presenting the Findings

Using the WIDS outline the DACUM started with determining what the pre-requisites for taking the class Emergency and Disaster Planning are. The experts, from fire departments in the Milwaukee Area Technical College district, determined through their knowledge of the other core courses required for the associate's degree that the following should be classes needed in order to enroll in the Emergency and Disaster Planning course. The first class should be Fire Protection Organization. In this class the student is

taught the basic components associated with the fire service. They learn that the fire service operates in a quasi-military manner; meaning they follow a strict chain of command at the scene of an emergency. Orders are given by a higher authority (i.e. chief officer) and they are carried out by the line personnel. The students learn what the difference is between an engine company and a ladder (truck) company. They become familiar with what tasks they perform at the scene of an emergency.

The second class needed as a pre-requisite is the Building Construction and Fire Ordinances class. In this class the student is taught how a building's construction type is influenced during an emergency, when a building is going to collapse and how might we prepare for that to happen. Also the student learns about fire ordinances as they relate to the fire service. They study how a building fire inspection or prefire plan may assist the fire service in dealing with an emergency before it happens. Having been in buildings prior to an incident makes it easier to operate in that building during an incident. Having knowledge of escape routes, sprinkler systems, alarm systems and standpipe operations will aid in mitigating the emergency sooner.

The third class the DACUM determined was important to have before taking the Emergency and Disaster Planning class is the Firefighting Tactics and Strategy class. In this class the student applies basic fire fighting tactics to a variety of fire scenarios. They must be able to perform in the role of Incident Commander. In this role they will develop fundamental strategies for deploying fire companies at the scene of an alarm. They learn how to size up a situation and come up with the correct tactical method for a successful outcome of the event.

These three classes are the building blocks for the rest of the classes the student will take at Milwaukee Area Technical College in the associate's degree program.

The next objective of the DACUM was to develop a course description. This description will allow study to see what will be taught in the class and what skills they will possess when they finish the course. The description the DACUM established is as follows:

The purpose of this course is to provide students with the knowledge and information to assess current programs and/or to develop, implement, and maintain a program to mitigate, prepare for, respond to, and recover from disasters and emergencies. The student identifies hazards, the likelihood of their occurrence, and the vulnerability of people, property, the environment, and the community to those hazards. Hazards to be considered at a minimum include, but are not limited to, natural events, technological events and human events.

Additional data collected from the DACUM allowed them to analyze and develop the core abilities of the Emergency and Disaster Planning course. They determined the core abilities to be the following: communicate effectively, collaborate with others, respect diversity, demonstrate responsibility, think critically, utilize technology and apply math and science.

The DACUM then analyzed the duties or competencies of the course. The group developed 12 course competencies (duties) for the Emergency and Disaster Planning course. Once the competencies were developed they then identified the tasks needed to accomplish the duties. There were a variety of tasks needed under each duty.

The first competency necessary for planning was determined to be Identify Risk. The student will need to determine potential risk, the probability of an occurrence happening, and what is the potential damage that may occur from the risk happening. The student then would need to determine what some of the emerging risks people face are.

Knowledge of disaster was then determined to be an important duty. This would be accomplished by having the student analyze and describe natural disasters. This list would include, but would not be limited to, such events as tornadoes, hurricanes, volcanoes, earthquakes and flooding. Also the class should analyze and discuss the man made incidents that can occur. This should include but not limited to fires, airplane crashes, railroad accidents and oil spills. After discussing the natural and man made disasters the DACUM felt it was necessary for the class to analyze and discuss the emerging risks talked about in competency number one. This should include workplace and school violence, cyber terrorism and other forms of terrorism. These other forms should include weapons of mass destruction, namely nuclear, chemical and biological terrorism.

Once these areas of concern are identified they should then focus their attention to the governmental regulations that need to be followed when dealing with emergencies and disasters. These should include defining and analyzing the following: the Occupational Safety and Health Administration (OSHA), the National Fire Protection Association (NFPA), the Department of Natural Resources (DNR) and the Environmental Protection Association (EPA).

After these and any other pertinent regulations the course should then identify the federal agencies that will be assisting with the preplanning for and mitigation of a

disaster, along with the rebuilding after something happens. The students should be able to define and analyze the following: the Department of Homeland Security (DHS), the Federal Emergency Management Association (FEMA) and the Federal Bureau of Investigation (FBI).

Once the student is familiar with the federal agencies and what their role in a disaster will be, the student needs to then be able to incorporate the local agencies into the situation. Interoperability between the fire department, police department, health department, public utilities and the local chapter of the Red Cross is crucial to a successful outcome of the disaster or incident. Under the direction of the local emergency management coordinator, these organizations should be familiar with what the capabilities of the others are during an incident. The newly developed National Incident Management System (NIMS) will help in ensuring that this interoperability is successful. The student should have an understanding of NIMS and how it will be helpful during an emergency. Also a system in place known as MABAS should be discussed as a resource available to jurisdiction to help mitigate situations. MABAS is an acronym for Mutual Aid Box Alarm System. This system is used around the country to help agencies deal with disasters. The student should have an understanding of the system and how it can assist a city with handling an emergency.

Developing a plan will then be what the students will need to do. This action plan should include giving detailed information such as a mission statement, potential disasters, characteristics of those disasters and recommended mitigation actions for each. This plan should be written down and given to the local agencies so they can refine them and make the organization specific.

There then needs to be some training in preparing for the potential disasters that may occur. After the plan is prepared it must then be presented to the agencies and applied to a simulated situation (mock incident). After the mock incident there should be some critique of what took place. This will let the agencies know what went right and what needs to be worked on to go better in the future.

Included in the plan should be how to minimize the damage during and after an emergency. Included in the plan should be who is going to help before, during and after an emergency. Communicating with insurance companies is a vital component to the successful mitigation of an incident. Also coordinating and working with companies to help clean up after an incident needs to be addressed.

Getting governmental assistance needs to be discussed in the course. Knowledge of determining need, gathering critical information and applying for federal disaster assistance needs to be discussed. In conjunction with applying for federal assistance, the student needs to have an understanding of grants available for emergencies. The student needs to be able to analyze available grants, determine the need to apply, gather specifications the grant is requiring, write and submit the grant.

The DACUM then discussed the possible ways to present the material to the students so they will have the most success with being able to apply the material. They felt it was important that the students be able to practically apply the information. One way was to have them interview organizations that have emergency disaster plans and write a paper on how they arrived at the document they use for handling emergencies. The possible organizations to be interviewed could be the local emergency management coordinator, the fire or police chief or a representative of the local chapter of the Red Cross. Another

suggestion was to have the students develop a disaster plan, on a smaller scale, for a fire or police department. The students would be required to present the plan to the rest of the class for review and critique. The students would then be required to take a written test at the end of the class to see how much information they have retained over the course of the semester. The instructor would then assign a grade based on how well the students performed on the test and in the presentation.

CHAPTER 5

Summary, Conclusions and Recommendations

Introduction

The Fire Science Program at Milwaukee Area Technical College (MATC) is a two-year associate degree program. Obtaining the degree will do two things for the graduate. First, for the student not already employed by a fire department, it assists the graduate in gaining employment in the field of firefighting. Second, for the student already employed in a fire department, it could help the employee advance their current position in the department. Meaning if the individual is looking at being promoted through the ranks, this degree will give them a formal education in the area of firefighting. The program consists of 68 credits with 33 of those being technical courses related to fire science.

The fire service is an ever-changing field. There are new problems that arise, new equipment that is developed and new ways to mitigate the problems that are occurring. The Fire Science Program at Milwaukee Area Technical College is trying to keep up with those changes. They have changed the technical courses being offered. The old curriculum had two Tactics and Strategy courses. Part one was taken one semester and part two would be taken in a second semester. Also, there were two Fire Management courses. They were taken in similar fashion as the Tactics and Strategy courses. In 2002, The National Fire Academy (NFA) in Emmitsburg, Maryland changed the curriculum for their Associate and Bachelor degree programs. Their intent was to create a national system for fire-related higher education. MATC decided to change their curriculum to keep up with the changes made at the National Fire Academy. What they proposed was

to create one Tactics and Strategy course and one Fire Management course instead of two of each. This created an opening for two new courses. With the help of the Fire Science Advisory Committee, MATC decided to add Fire Department Health and Safety and Emergency and Disaster Planning to the program.

The purpose of this study was to design and develop a new curriculum for the Emergency and Disaster Planning course at Milwaukee Area Technical College. Information from this study was gathered through a DACUM. The DACUM consisted of experts in the area of emergency and disaster planning for the Milwaukee area.

Currently, Milwaukee Area Technical College is changing the technical courses being offered in the Fire Science Associate Degree Program. There is no curriculum for the course titled Emergency and Disaster Planning. Using a DACUM, the researcher gathered information from experts on what and how the curriculum will be developed. The researcher will use the Wisconsin Instructional Design System (WIDS) to help develop the layout of the curriculum.

Summary of Study Procedures

The population used in this study included 10 experts in the area of fire service training from fire departments within the Milwaukee Area Technical College district. These individuals have the responsibility for emergency and disaster planning within their respective fire departments. Because of their positions within their departments they were able to provide up to date and accurate information. The 10 experts developed the DACUM that was used to develop a course outcome summary, which consisted of a course description, core abilities, course competencies, learning objectives and

performance standards. From this data the course curriculum was developed (Appendix B).

The researcher contacted all the experts involved via telephone to set a meeting place and time for the DACUM. All 10 experts participated in the DACUM. Having 10 individuals made for a diverse set of knowledge and experience. They represented three types of departments in the areas of career (full time), paid on call, and federal. This allowed for different opinions on a variety of topics. Also having experts in different ranks allowed for a different perspective from different job responsibilities. These people all deal with a variety of emergencies and disasters on a daily basis.

Conclusions and Implications

Changes made in technical courses offered in the associate degree in Fire Science at Milwaukee Area Technical College, offer no curriculum for the course Emergency and Disaster Planning. From the data collected from the DACUM the researcher was able to create the curriculum, and then established the course competencies and the learning objectives for the course. The information was used to develop a syllabus outlining the information to be taught in the course, starting with discussion of risk and analyzing its possibility and probability, then determining what the potential damage from that risk might be. Then the different types of disasters that are potential problems will be discussed. The students will give presentations on a variety of disasters in the areas of natural, man made and new emerging disasters such as terrorism.

Once the basic information is learned the students will create their own city. This is a little different method of instruction than what the DACUM determined. The students will decide how big of a city they want, what industries are located in their city, what

climate it is in, what special events are held there and what resources are available to mitigate any disaster or emergency that may occur.

From there the students will learn the competencies that the DACUM developed. They will apply these competencies to the plan they will create for their own city. This will give the students an opportunity to apply what they are learning on a weekly basis to a project they will complete by the end of the semester. The class will be broken into several small groups. Each group will work on a section of the overall plan. An example would be one group is responsible to research all the resources available to their city to handle any incident that may occur. Each group will then be responsible for getting their information to a group that will be the project managers. That group will then put each section together so that one main plan will be created. The class will then make a presentation on what their plan is and how it will be implemented.

Once the plan is presented the class will then conduct a mock incident. The researcher will develop an exercise that will entail some sort of disaster. This disaster will occur in the city they created at the beginning of the class. The students will then have to mitigate the situation using the plan they created. Once the exercise is complete we will set and critique what happened. Was their plan successful in handling the emergency, or does it need to be revised in order to handle emergencies in the future?

Finally, after the exercise has been completed and critiqued the students will have to pass one last test. They will have to apply for federal disaster aid for the disaster that happened in their city. They will need to be able to fill out the FEMA application form.

The student's grades will be based on a couple of different areas. First their presentation of a disaster will be evaluated. The score will take into consideration

elements such as media used for presentation (i.e. Power Point), substance of the matter and speaking ability. Next, as a group they will evaluate their partners in how much they contributed to the group work for their section of the emergency plan. They will also be evaluated on their participation in the mock incident. Each student will assume the role of an administrator in the emergency command center. Roles to be filled include fire chief, police chief, emergency management coordinator, Red Cross representative and public utility official. These are just a sample of some of the potential roles to be played.

Recommendations

To the members of the DACUM, the researcher presents the following recommendations. The course in emergency and disaster planning will meet the requirements the fire departments were looking for, because of the information the DACUM provided. This will allow the fire departments in the Milwaukee Area Technical College district to send members of their departments to Milwaukee Area Technical College knowing they will be getting information that will allow them to help the departments they work for be prepared for any type of emergency they may face. This training will prove invaluable when dealing with real disasters. The students will have experience in creating disaster plans, managing emergency situations and applying for assistance after a disaster happens.

References

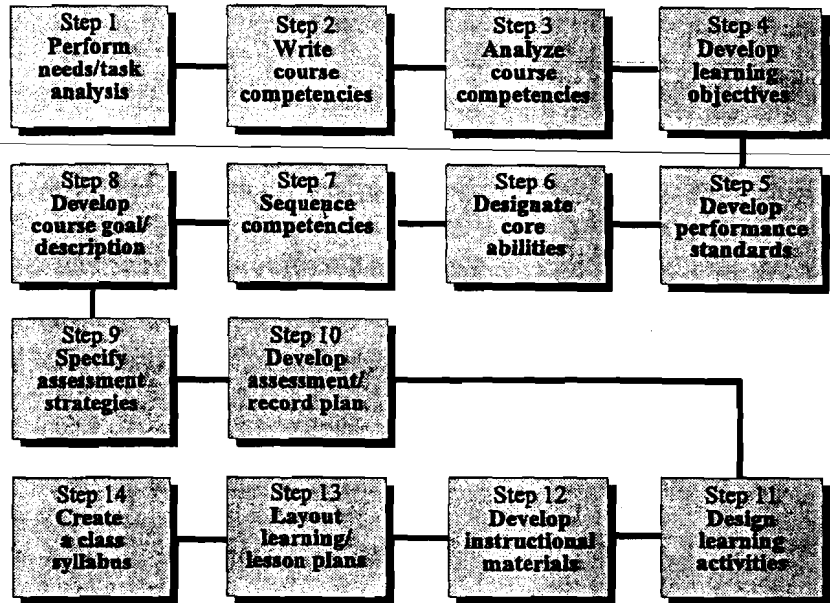
- Angle, James S. (1999) *Occupational safety and health in the emergency services*. New York: Delmar Publishers.
- Benkowski, J. (2004). Orientation to dacum. Lecture conducted at waukesha county technical college spring 2004, Waukesha, WI.
- Department of Homeland Security. (2002). *National strategy for homeland security*. Washington, DC: Author.
- Department of Homeland Security. (2004). *Securing our homeland: U.S. department of homeland security strategic plan*. Washington, DC: Author.
- Department of Homeland Security. (2004). Budget. [On-line]. 12/04/04. Available: <http://www.dhs.gov/dhspublic/display?theme=43&content=4065&print=true>
- Department of Natural Resources. (2003). About the dnr. [On-line]. 11/21/04. Available: www.dnr.state.wi.us/aboutdnr.html.
- Dobson, David W. (1999). *Fire department incident safety officer*. New York: Delmar Publishers.
- Environmental Protection Agency. (2004). About epa. [On-line]. 11/21/04. Available: www.epa.gov/epahome/aboutepa.htm.
- Federal Bureau of Investigation. (2004). FBI priorities. [On-line]. 11/21/04. Available: www.fbi.gov/priorities/priorities.htm.
- Federal Emergency Management Agency. (2002). *State and local mitigation planning: How to guides*. Emmitsburg, MD: Author.
- Federal Emergency Management Agency. (2003). *A nation prepared: Federal emergency management agency strategic plan, fiscal years 2003-2008*. Emmitsburg, MD: Author.

- Federal Emergency Management Agency. (2004). FEMA reports record aid for 2004 hurricane season response. [Online]. 12/02/04. Available: www.fema.gov/news/newsrelease_print.fema?id=15508.
- Federal Emergency Management Agency. (2004). National incident management system. [On-line]. 12/04/04. Available: www.fema.gov/nims/
- Fire Department City of New York. (2004). *Strategic plan: 2004-2005*. New York: Author.
- International Fire Service Training Association. (1998). *Fire department company officer*. Stillwater, OK: Fire Protection Publication.
- International Fire Service Training Association. (1998). *Essentials of fire fighting*. Stillwater, OK: Fire Protection Publication.
- Los Angeles County Fire Department. (2004). *Strategic plan*. Los Angeles County, CA: Author.
- Manning, Bill. (2002). World trade center disaster: Initial response. *Fire Engineering*, 155, 6-26.
- McKinsey and Company. (2002). McKinsey report. *Fire Department City of New York Official Website*. [On-line]. 11/14/04. Available: www.nyc.gov/html/fdny/html/home2.shtml.
- Milwaukee Fire Department. (2003). *Milwaukee fire department strategic plan*. Milwaukee, WI: Author.
- National Fire Protection Association. (2004). *NFPA 1600: Standard on disaster/emergency management and business continuity programs*. Quincy, MA: Author.

- National Fire Protection Association. (2004). About the nfpa. [On-line]. 11/21/04.
Available:
www.nfpa.org/categoryList.asp?categoryID=143&URL=About%20Us.
- Neill, Judith. (1994). *Instructional design and planning study guide: Core abilities, bringing the mission to the classroom*. Waunakee, WI: Wisconsin Technical College System Foundation.
- Norman, John. (1991). *Fire officers handbook of tactics*. Saddle Brook, NJ: Penn Well Publishing Company.
- Pfeifer, J. W. (2002). Managing a catastrophic urban disaster: Part II. *With new york firefighters*. 2nd 2002, 7-9.
- Ross, T. & Lott, N. (2003). *A climatology of 1980-2003: Extreme weather and climate events*. Asheville, NC: US Department of Commerce National Climatic Data Center.
- Schneid, Thomas D. & Collins, Larry (2001). *Disaster management and preparedness*. New York: Lewis Publishers.
- Stilp, R. & Bevelacqua, A. (2003). *Citizens guide to terrorism preparedness*. Clifton Park, NY: Delmar Publishers.
- Wisconsin Technical College System Foundation. (1994). *Instructional design and planning study guide*. Waunakee, WI: Wisconsin Technical College System Foundation.
- York Technical College. (2004). *Guidelines for planning and conducting a dacum*. [On-line]. Available: www.yorktech.com/departments/instructional/DACUM.html.

Appendix A
Course Development Flowchart

Course Development Flowchart



How does PBI fit into the Wisconsin Instructional Design (WIDS) models?

Course Model



Appendix B
DACUM Chart

**DACUM research Chart for the Curriculum for the Emergency and
Disaster Planning class at Milwaukee Area Technical College.**

Duty: Identify Risk

Tasks: Determine potential risk
Determine probability of occurrences
Determine potential damage
Determine emerging risks

Knowledge of Disasters

Analyze natural disasters
Analyze man-made disasters

Review Governmental Regulations

Define/ Analyze Occupational Safety and Health Association
Define/ Analyze National Fire Protection Association
Define/ Analyze Department of Natural Resources
Define/ Analyze Environmental Protection Association

Identify Federal Emergency Agencies

Define/ Analyze Department of Homeland Security
Define/ Analyze Federal Emergency Management Association
Define/ Analyze Federal Bureau of Investigation

Understand and Coordinate Local Emergency Agencies

- Fire Department
- Police Department
- Sheriff
- Public Works
- Public Utilities
- Local Red Cross

Pre-Plan for Disasters

- Develop an action plan
- Develop a written plan

Train for the Disaster

- Prepare the plan
- Present the plan
- Apply the plan
- Evaluate the plan

Minimize the Damage

- Hold critical incident stress debriefings
- Contact insurance companies
- Clean up area

Apply for Federal Assistance

- Determine need
- Gather information
- Fill out application

Apply for a Grant

- Analyze available grants
- Determine need
- Recommend specific grants
- Gather specifications
- Write grant proposal
- Submit grant proposal

Present Plan

- Choose presentation method
- Conduct presentation
- Review presentation
- Critique plan

Test Students

- Conduct written exam
- Attend mock incident
- Review incident procedures
- Assign grade

Pre-requisites needed to take the Emergency and Disaster Planning class as determined by the DACUM.

F-100 Fire Protection Organization

F-102 Fire Fighting Tactics and Strategy

F-108 Building Construction and Fire Ordinances

Appendix C
Course Outcome Summary
For
Emergency and Disaster Planning

Emergency and Disaster Planning

Course Outcome Summary

Milwaukee Area Technical College

Information

Project Type	Course
Course Number	503-109
Credits	3
Contact Hours	0
Instructional Area	Fire Technology
Instructional Level	Associate Degree
Division	Technical
Developers	Scott Lassa
Development Date	03/15/2005

Description

The purpose of this course is to provide students with the knowledge and information to assess current programs and/ or to develop, implement, and maintain a program to mitigate, prepare for, respond to, and recover from disasters and emergencies. The student identifies hazards, the likelihood of their occurrences, and the vulnerability of people, property, the environment, and the community to those hazards. Hazards to be considered at a minimum include, but are not limited to, natural events, technological events and human events.

Prerequisites

1. Student will need to have taken and passed the course titled Fire Protection Organization (FIRE- 100)
2. Student will need to have taken and passed the course titled Fire Fighting Tactics and Strategy (FIRE- 102)
3. Student will need to have taken and passed the course titled Building Construction (FIRE- 108)

Core Abilities

- * Apply appropriate reading, writing, speaking, and listening skills to express information, ideas, and opinions.

Indicators

1. Learner follows oral and/or written directions accurately
2. Learner writes clearly and concisely
3. Learner speaks clearly and concisely
4. Learner supports viewpoints/arguments with evidence and reasoning
5. Learner applies English language according to standard English principles of spelling, usage, grammar, and punctuation
6. Learner uses active* listening skills (*may include rephrasing or paraphrasing; making an appropriate response; taking notes; listening without evaluating; an attentive posture; asking questions; etc.)
7. Learner derives meaning from the written word
8. Learner communicates effectively with people from different cultures

- * Maintain positive, productive relations with others through problem solving, conflict resolution, and information sharing.

Indicators

1. Learner responds positively in stressful situations
2. Learner demonstrates/maintains respectful interpersonal skills with all people
3. Learner participates in the process of conflict resolution
4. Learner exhibits cooperative behavior
5. Learner's exhibits skill in problem-solving steps/methods

* Show respect for others' diversity of values, cultural differences, and the environment.

Indicators

1. Learner recognizes personal prejudices
2. Learner's communication is free from bias
3. Learner's communication is free from stereotypes
4. Learner displays an appreciation of diverse perspectives
5. Learner demonstrates the ability to work cooperatively in a diverse group
6. Learner's shows sensitivity to ecological issues
7. Learner demonstrates an understanding of the commonality of human experience across cultures

* Possess and apply effective work habits and attitudes within an organizational setting.

Indicators

1. Learner arrives on time and remains until the class/work shift is complete
2. Learner maintains a neat and clean appearance
3. Learner completes assigned tasks
4. Learner follows directions
5. Learner maintains tools, equipment, and work stations
6. Learner observes safety rules and regulations
7. Learner conforms to the technical standards of a profession
8. Learner takes responsibility for personal behavior
9. Learner adjusts to changes
10. Learner is self-directed and takes responsibility for his or her learning
11. Learner demonstrates civic, global, and cultural responsibility

* Apply techniques of analytical thinking and effective decision-making skills.

Indicators

1. Learner uses problem solving skills in academic and/or work place environments
2. Learner views issues from multiple perspectives (local and global)
3. Learner evaluates sources of information
4. Learner presents logical arguments
5. Learner differentiates between fact and opinion

* Use appropriate technology to access information and perform tasks effectively and productively.

Indicators

1. Learner selects and uses technology appropriate to the task
2. Learner uses technology to evaluate information from multiple sources
3. Learner uses technology to manage information
4. Learner uses technology to communicate
5. Learner uses technology to solve problems
6. Learner uses technology to develop products and/or services

7. Learner appreciates the impact of technology

* **Demonstrate mathematical and scientific competence**

Indicators

1. Learner applies mathematical principles and concepts (computation and measurement)
2. Learner expresses relationships with mathematical and scientific symbols, expressions, and graphs
3. Learner applies the scientific method and demonstrates scientific literacy
4. Learner extracts meaning from quantitative and scientific data

Competencies, Linked Exit Learning Outcomes, and Performance Standards

1. Identify potential risk

Properties

Domain: Cognitive

Level: Knowledge

Performance Standards

You will demonstrate your competence:

- o with the completion of a hazards assessment matrix
- o on a written exam

Your performance will be successful when:

- o you determine the potential risk
- o you determine the probability of occurrences
- o you determine potential damage from said risk
- o you determine emerging risks

Learning objectives

What you will learn as you master the competency:

- a. Define terminology associated with risk
- b. Identify possible risks in an urban setting
- c. Identify possible risks in a rural setting
- d. Identify possible risks in a suburban area
- e. Identify possible risks on government property
- f. Explain the risk management process

2. Analyze potential disasters

Properties

Domain: Cognitive

Level: Analysis

Performance Standards

You will demonstrate your competence:

- o by giving a 8 to 12 minute presentation on a particular disaster
- o on a written exam

Your performance will be successful when:

- o you describe the characteristics of the following natural disasters: tornadoes, volcanoes, floods, hurricanes, earthquakes, wild land fires.

- o you describe the characteristics of the following man made disasters: aircraft crashes, mining accidents, school/ workplace violence, railroad accidents, oil spills.
- o you describe the characteristics of the following terrorist incidents: biological attacks [anthrax, SARS, small pox], chemical attacks, nuclear attacks, cyber-terrorism, world trade center bombing.
- o you will list maior occurrences of the previously mentioned disasters.

Learning objectives

What you will learn as you master the competency:

- a. Describe the characteristics of natural disasters to include tornadoes, volcanoes, floods, hurricanes, earthquakes, and wildfires.
- b. Describe the actions to mitigate the natural disasters
- c. List major occurrences of the natural disasters
- d. Describe the characteristics of man made disasters to include aircraft crashes, mining accidents, school and workplace violence, railroad accidents and oil spills.
- e. Describe the actions to mitigate the man made disasters.
- f. List major occurrences of the man made disasters.
- g. Describe the characteristics of terrorist actions to include biological, chemical and nuclear attacks, cyber terrorism and the world trade center bombing.
- h. Describe the actions to mitigate the terrorist actions
- i. List major occurrences of the terrorist actions.

3. Identify Governmental regulations related to disaster planning

Properties

Domain: Cognitive

Level: Analysis

Performance Standards

You will demonstrate your competence:

- o on a written exam by distinguishing between agencies and what each agency is responsible for.

Your performance will be successful when:

- o you define and analyze the Occupational Safety and Health Association
- o you define and analyze the National Fire Protection Association
- o you define and analyze the Department of Natural Resources
- o you define and analyze the Environmental Protection Association

Learning objectives

What you will learn as you master the competency:

- a. Define the following governmental agencies: Occupational Safety and Health Association, National Fire Protection Association, Department of Natural Resources and the Environmental Protection Association.
- b. Analyze the purpose of, mission of, and organization of each agency.

4. Identify Federal Emergency agencies

Properties

Domain: Cognitive

Level: Analysis

Performance Standards

You will demonstrate your competence:

- o on a written exam by distinguishing between agencies and what each is responsible for.

Your performance will be successful when:

- o you define and analyze the Department of Homeland Security
- o you define and analyze the Federal Emergency Management Association
- o you define and analyze the Federal Bureau of Investigation

Learning objectives

What you will learn as you master the competency:

- a. Define the following Federal Emergency agencies: Department of Homeland Security, Federal Emergency Management Association and Federal Bureau of Investigation.
- b. Analyze the purpose of, mission of, and organization of each agency.

5. Coordinate Local emergency agencies

Properties

Domain: Cognitive

Level: Application

Performance Standards

You will demonstrate your competence:

- o on a written exam by distinguishing between the agencies and what each is responsible for, during an emergency.
- o by role playing in the capacity of that agency during a mock incident

Your performance will be successful when:

- o you explain and outline interagency operability and how it applies to the fire and police departments, sheriff, public works, utilities and red Cross
- o you describe the role Mutual Aid Box Alarm System (MABAS) plays in the handling of emergencies
- o you apply the responsibilities of the different agencies.

Learning objectives

What you will learn as you master the competency:

- a. Define the following local emergency agencies: fire department, police department, sheriff, public works, utilities, and Red Cross.
- b. Analyze the purpose of, mission of, and organization of each agency.
- c. Describe the role the Mutual Aid Box Alarm System plays in emergencies.
- d. Apply the responsibilities of each agency to an emergency situation.

6. Plan for a disaster

Properties

Domain: Cognitive

Level: Synthesis

Performance Standards

You will demonstrate your competence:

- o as part of an emergency and disaster plan for a city created by the class as part of a final project.
- o during a written and oral assessment.

Your performance will be successful when:

- o you develop an action plan

- o you develop a written plan
- o you understand National Incident Management System (NIMS) and the role it plays in emergency and disaster planning
- o you develop a presentation
- o you conduct a presentation for the class
- o you review the outcome of the presentation
- o you conduct a critique of the plan

Learning objectives

What you will learn as you master the competency:

- a. Define who will be involved with the developing of an action plan
- b. Develop a vision and mission of the plan
- c. Analyze the steps in strategic planning
- d. Establish what the plan must include.
- e. Develop what the plan should look like
- f. Create a presentation for the plan
- g. Conduct the presentation
- h. Critique the plan that was presented.
- i. Implement the National Incident Management system to an emergency situation.

7. Utilize strategies for a disaster situation

Properties

Domain: Cognitive
Level: Application

Performance Standards

You will demonstrate your competence:

- o as part of a final class project to include both a written document and a mock incident exercise.

Your performance will be successful when:

- o you develop an incident action plan
- o you present the plan by utilizing a Power Point presentation
- o you apply the plan during a mock incident
- o you evaluate the plan and how it worked in mitigating the mock disaster.

Learning objectives

What you will learn as you master the competency:

- a. Develop an incident action plan
- b. Apply the plan to a mock emergency disaster.
- c. Evaluate the effectiveness of the incident action plan

8. Determine the effects of damage/ potential damage

Properties

Domain: Cognitive
Level: Application

Performance Standards

You will demonstrate your competence:

- o on a written exam

Your performance will be successful when:

- o you define critical incident stress debriefing
- o you apply the concepts of minimizing damage.
- o you identify the role insurance companies play in emergencies and disasters
- o you explain what needs to be accomplished in the area of restoration as it applies to emergencies and disasters

Learning objectives

What you will learn as you master the competency:

- a. Define critical incident stress debriefing
- b. Apply concepts of "minimizing damage"
- c. Identify the role insurance companies play in emergencies and disasters
- d. Explain what needs to be accomplished in the area of restoration during a disaster.

9. Analyze need for federal assistance

Properties

Domain: Cognitive

Level: Analysis

Performance Standards

You will demonstrate your competence:

- o by properly filling out the State of Wisconsin Guidelines for Assessing and Documenting Disaster Damage report.
- o by properly filling out the Federal Emergency Management Agencies Preliminary Damage Assessment Site Estimate report.

Your performance will be successful when:

- o you prove the need for federal assistance based on the information gathered from the mock incident.
- o you fill out the application for federal assistance utilizing the information from the mock incident.

Learning objectives

What you will learn as you master the competency:

- a. Prove the need for federal assistance for a disaster
- b. File an application for federal assistance based on information gathered during the mock incident

10. Analyze the need for a federal grant

Properties

Domain: Cognitive

Level: Analysis

Performance Standards

You will demonstrate your competence:

- o by researching different grants and working as a team to fill out the Federal Governments Assistance to Firefighters (FIRE Act) Grant application.

Your performance will be successful when:

- o you analyze available grants
- o you determine the need to apply for a grant
- o you recommend specific grants.

- o you gather specific information pertinent to the grant
- o you write the grant proposal
- o you submit the grant proposal

Learning objectives

What you will learn as you master the competency:

- a. Analyze available grants
- b. Determine the need for a grant
- c. Acquire information pertinent to the grant
- d. Write a grant proposal