

*Equipping the safety professional with emergency management
knowledge and skills: The emergency management
certificate program*

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INTRODUCTION

As one of the regional campuses of the Purdue University system, Purdue University Calumet develops its undergraduate programs with a great degree of academic autonomy within the Purdue system. Thus, Purdue Calumet is able to offer programs specifically designed to meet the special needs of the citizens it serves in northwest Indiana and the southern suburbs of Chicago. In 1999, it was determined that one course in emergency management would be developed as an elective in the Organizational Leadership and Supervision (OLS) safety curriculum.

The OLS curriculum included an associate's degree in safety and a certificate program in safety management. The emergency management course was planned as an elective for those undergraduate students who were pursuing the Certificate in Safety Management as part of their undergraduate degree in OLS or as part of the associate's degree. The OLS curriculum offered three certificate programs: one in safety management, one in human resources, and a third in professional supervision. The certificate programs were introduced for students who wanted to achieve a milestone before completing the requirements for an associate's or baccalaureate degree. For other students, the certificate was the final goal, often as a means of professional development required by their employers.

BACKGROUND

Northwest Indiana is characterized by a heavy but changing industrial presence. In the 1990s, drastic changes in the North American steel industry were

taking place. Twenty-four steel companies filed for bankruptcy protection and many ceased operations. Northwest Indiana was strongly affected by these changes and witnessed the closing of Acme, LTV, and Bethlehem Steel Corporations. Later, these three companies would be acquired by ISG Corporation and resume operations under its aegis. National Steel was acquired by US Steel, which continued to operate the Midwest plant under the USS banner as part of the Gary Works complex.

Cost-cutting was critical to the survival of companies in the area, and the entire northwest Indiana industrial complex underwent significant and, in some cases, severe cuts in manpower. In the not-too-distant past, industrial plants had the luxury of large safety departments, in-plant fire and rescue squads, and in-house security forces. Today, it is not unusual to find a safety professional with responsibilities for fire, security, and safety.

To be competitive in the job market, graduates must acquire the knowledge and skills necessary to meet the current challenges as well as those in the foreseeable future. Emergency management skills are required by any organization for its survival in the event of a catastrophe.

As the face of industry in the area changed, the pace of transportation continued to grow. Much of the transportation moving from the northeastern quadrant of the United States westward passes through the state of Indiana. The major transportation corridors are either through the central portion of the state and the city of Indianapolis or the northwestern part of the state around the southern tip of Lake Michigan.

The geography and business trends in the area necessitate a trained, informed citizenry and industrial managers who comprehend the need for emergency management programming in mitigation, preparedness, response, and recovery. The Certificate in Emergency Management was developed to address these needs.

The course designer, strongly influenced by his experience as a safety and industrial hygiene manager in a local integrated steel plant, advocated for university courses in emergency management to meet the demands specific to northwest Indiana.

Though courses in fire science existed at a local technical college, university courses were required in the same curriculum to train managers in safety responsibilities. Students would not necessarily seek out training in emergency management-related subject matter in a technical college in place of pursuing an undergraduate degree from a university with an excellent reputation. Thus, a course in emergency management belonged in the curriculum of Purdue Calumet.

When the course designer/developer assumed his position as Safety & IH Manager, he observed that the safety engineers and industrial hygiene managers (IH) responded promptly to the scene of emergencies, but upon arriving on the scene, these professionals had no defined role in the emergency response efforts of the Fire and Security Department. To resolve this deficiency, the manager of the Fire and Security Department agreed that the best role for the safety and IH staff would be to serve as Incident Safety Officers, part of the HAZMAT team. Furthermore, safety and IH provided valuable input in the integrated planning for emergency management. Together with the manager of Security and Fire Protection and the manager of Environmental Compliance, the course developer served as the planning team for the plant. The Integrated Contingency Plan was the result of the synergy of the three disciplines involved in the planning initiative. In either the operational role or planning roles, university courses can fill a need to prepare managers.

INITIAL COURSE OFFERING

The course was designed as an introduction to the five aspects of integrated emergency management:

prevention, mitigation, preparedness, response, and recovery. The course designer was a guest lecturer and the Manager of Safety and Industrial Hygiene from a local integrated steel plant. The county Local Emergency Planning Committee endorsed the concept of emergency management training on the university level and validated the need for such course offerings in the northwest Indiana area.

To ensure that the designer included the various aspects of emergency management as it relates to customers of Purdue Calumet, the designer recruited knowledgeable, experienced professionals in the field of emergency management to be part of the first course presentation in the spring of 2000. A retired municipal fire chief, an industrial fire chief, a county emergency management director, and an industrial safety engineer were among the students in the course. These students were able to offer relevant feedback about the course content and delivery methods for future course improvements. The other students were adult learners employed in various occupations in diverse industries and businesses throughout northwest Indiana.

The first course offering used three text books for the course. One of the books used in the course was a commercial emergency management text, a second book came from the FEMA Independent Study program, and the third was the National Fire Protection Association (NFPA) 1600 text. By special arrangement with the staff of the Emergency Management Institute (EMI), the final exam from the independent study program was administered as the midterm exam. Thus, the students received three credit hours from Purdue Calumet and a course completion certificate from EMI. The EMI course could then be converted to one undergraduate credit hour from the junior college working with EMI at that time.

The *NFPA 1600—Standard on Disaster, Emergency Management and Business Continuity Programs*¹ was used each of the three times the Fundamentals of Emergency Management course was offered. Student and instructor feedback on the textbook has been relayed to the NFPA Technical Committee on Disaster Management and Business continuity by the course designer, a member of the committee. The *NFPA 1600* is an excellent text for an introductory emergency management

course because it provides the collective input of many professionals in the field of emergency and disaster management as well as business continuity programming.

The link between emergency management and business continuity programming is critical for the manager. These are not two distinct subjects, although many experts in the field will argue the point. John Laye's excellent book, *Avoiding Disaster: How to Keep Your Business Going When Disaster Strikes*,² is used as the companion text to *NFPA 1600* because it provides the link between emergency management and business continuity programming.

The students in the first course were divided into two-person teams with the students making their own selections. The student teams were required to jointly prepare a formal presentation not less than 15 minutes in length. Students made their presentations on the last two scheduled class sessions. The list of potential presentation topics was provided by the instructor, one team per topic. The topics included the NFPA, Incident Command System, earthquake preparedness in Indiana, and other topics directly related to emergency management.

In addition, the students agreed to an open-book, team approach to taking the midterm. The team members would prepare one test and both would receive the same grade. This decision was reached after discussion that included the instructor pointing out the pitfalls of open-book exams. The average time required to take the exam was two hours and 20 minutes.

The following week the exams were returned, the correct answers reviewed, and student reactions to their experiences were discussed. The consensus was that it was the toughest test the students had ever taken because they individually had to convince the other teammate that the answer selected was correct. Furthermore, the students unanimously agreed that it was a very useful learning experience because each exam question was discussed with the teammate. Much to the surprise of the instructor, the same text format was requested for the final exam.

DEVELOPMENT OF THE CERTIFICATE PROGRAM

Due to the success of the first emergency management course, three decisions were made: 1) the new

course, entitled Introduction to Emergency Management, would be repeated the following spring in 2001 in an online (Internet) format; 2) a second course, entitled Emergency Planning and Practice, would be added as a follow-up; and 3) a five-course certificate in emergency management, using two of the existing safety classes along with the three newly developed emergency management classes, would be developed and application would be made for approval of this new certificate program.

The second course in the sequence, Emergency Planning and Practice, focuses on writing a plan for an organization, real or fictional, using the text from Richard T. Vulpitta's *On-Site Emergency Response Planning Guide: For Office, Manufacturing and Industrial Operations*. This text provided a template format to guide the student in gathering the appropriate information to create a working emergency response plan. The emphasis was on realistic planning for an existing organization. (During subsequent presentations of this course, only actual organizations could be used for the plan development.)

The second major project in the second course was the creation of an exercise plan using the format described in D.R. Larson's *Doing It Right When the Time Comes: Planning & Conducting Emergency Preparedness Exercises*.⁴ This text was written by one of the authors when a search for a companion text to the Vulpitta text could not be found. This second course, as well as the initial course, Introduction to Emergency Management, is being offered exclusively in a distance learning format at the present time.

The decision to expand the emergency management related courses into a five-course certificate program nicely supplemented the decision to build an undergraduate degree program in safety, health, and environmental management. The various certificate programs were designed to build an entire undergraduate degree while preserving the interim goal of attaining a certificate, either as notable milestone along the degree path or a terminal goal for some students.

Borrowing from existing courses in the safety management course offerings, the initial course in the certificate program is OLS 331 Fundamentals of

Occupational Safety and Health. This first course provides the foundation needed to ensure that students comprehend that emergency management as a loss-control and loss-prevention program in managing the safety and health environments of the employee.

Ideally, the next course would be OLS 337 Introduction to Emergency Management, which would provide the foundations for the follow-up course. OLS 387 Emergency Planning and Practice, OLS 389 Emergency Programs, and OLS 334 Fire Protection Systems can be taken in any order. (In the future, a HAZMAT course will be offered as an alternative to the Fire Protection Systems course.)

CONTINUED SUPPORT FROM THE EMERGENCY MANAGEMENT COMMUNITY

The Purdue Calumet Certificate Program in Emergency Management, the first complete emergency management program in the state of Indiana, continues to receive the support and endorsement of the Lake County, Indiana, Local Emergency Planning Committee (LEPC). The LEPC has earned a national reputation for excellence in programming and innovation. The best example of the support received from the LEPC is the contribution of the chair and the secretary to the program: the LEPC

chair developed and teaches OLS 389 Emergency Programs, and the secretary developed and teaches OLS 337 and OLS 387.

SUMMARY

As the commercial business and industry changes to meet the demands of global competition, universities need to train their students to prepare for the foreseeable events that range from off-normal to catastrophe. Furthermore, these same educated graduates must comprehend that the resources for preparing for the unforeseen are limited, and improvisation is expected. Leaner organizations, regardless of their size, need managers who can effectively and efficiently respond to emergencies.

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REFERENCES

1. National Fire Protection Association: *NFPA 1600—Standard on Disaster, Emergency Management and Business Continuity Programs*. Quincy, MA: National Fire Protection Agency, 2004.
2. Laye J: *Avoiding Disaster: How to Keep Your Business Going When Disaster Strikes*. Hoboken, NJ: Wiley, 2002.
3. Vulpitta RT: *On-Site Emergency Response Planning Guide: For Office, Manufacturing and Industrial Operations*. Washington, DC: National Safety Council, 1999.
4. Larson DR: *Doing It Right When the Time Comes: Planning & Conducting Emergency Preparedness Exercises* (unpublished).

FACTS

in BRIEF

COMMUNITY EMERGENCY RESPONSE TEAM (CERT)

The Community Emergency Response Team (CERT) program trains people to respond more effectively to emergency situations in their workplaces and communities. CERT participants have a better understanding of potential threats and can take the right steps to lessen the effects of these hazards on themselves, their homes, or on the job. If a disaster happens that overwhelms local response capability, CERT members can apply their training to give critical support to their family, coworkers, neighbors or associates until help arrives. When help does arrive, team members can provide useful information to responders and support their efforts at the disaster site.

CERT conducts Train-the-Trainer sessions throughout the United States and its territories. For more information, visit the CERT Web site at <http://training.fema.gov/emiweb/CERT/>.