Masters of Science in Applied Health Science with a Concentration in Safety Management

Culminating Experience Comprehensive Examination Description & Procedure

The Safety Unit’s comprehensive examination is an assessment of the student’s ability to integrate the knowledge of the area, show critical and independent thinking and demonstrate mastery of the safety and emergency management and disaster preparedness exit competencies. The comprehensive examination will consist of questions from each of the four required core courses. Since the program has rolling admission, the comprehensive examination will be offered every Spring, Summer and Fall semesters.

Eligibility for the culminating experience requires the completion of 30-35 graduate semester hours in the Safety Management degree program. An application is not required for the culminating experience. Once a student has completed 30-35 hours of their program, students are required to meet with their advisor to review the culminating experience requirements and schedule the exam.

Procedure: The Safety Unit Coordinator and or designated faculty member will administer the examination. The student will be given a folder containing exam questions. Each section (four sections) of the exam will be graded separately. Students will be expected to complete each section separately and return it before receiving the next section. The student may take up to seven hours to complete the exam. The comprehensive exam is an in class exam and each student will be allowed to complete the exam on a lap top computer provided by the department.

A passing score of a 70% or higher on each section is required to pass. If a student fails a section, they will be permitted to retake exam the following semester. Upon completion of each section, the student will turn the responses to questions in on a USB storage device or print them out and submit answers to the Safety Unit Coordinator. Students will be permitted to eat, drink or use the restroom between sections.

The instructor submitting the questions for each section will be responsible for grading the questions and reporting the results back to the Safety Unit Coordinator within four business days. It is recommended that students keep copies of coursework from all master's program of study classes in preparation for the culminating experience comprehensive examination. A record of the examination questions and responses shall be maintained in accordance with the records retention policy of the Department of Applied Health Science.
1. A local company asks if you will facilitate their safety training. You decide to take the job because the pay is good, and you want the experience and opportunity to improve your facilitation skills.

   - What are three specific things you will do to prepare yourself for the training prior to conducting the actual training? Describe each point and how it will help participants learn better.
   - What are some methods of training delivery you will use to ensure the training is effective?

2. A) Explain what it means to be a Facilitator as a Trainer. B) List three (3) things that Facilitators do that are more effective than a straight lecture method and explain why each method you list can be highly effective.

3. A) Describe how to use stories (and case studies) effectively in training. B) What are some criteria and techniques that make stories have an impact on participants? C) List three (3) benefits expected from the effective use of stories in training & education.

4. A) List and Explain four (4) specific ways to measure training results with an example for each one.

   B) Some organizations click training off their checklist after the delivery of the training is completed. Describe 1) why it is important to follow up after the training sessions are complete and 2) how an organization can ensure application of the new knowledge and skills over time.
From S513 Safety Management for Business & Industry:

1. Choose two Risk Assessment Techniques from the following list and A) describe the method, B) how it is used and C) provide a specific example for its use: FMEA, HAZOP, FTA, MORT, or PHA

2. From the BP Texas City 2005 Disaster:
   A) List 3 specific causes that contributed to the explosion of the isomer unit
   B) Regarding the 3 specific causes you listed, what recommendations would you make as a Safety Professional if you were located at the BP site prior to the explosion that would be proactive and most likely have prevented this event? (with hindsight now of course)

3. A) List 2 of ASSE’s 4 Functions of a Safety Professional. B) Give two specific examples of how a safety professional can fulfill each function you listed.

4. A) Describe the ANSI Z10 Hierarchy of Controls. B) Explain why the first three levels are more effective than the next three. C) Discuss how safety professionals can use the Hierarchy of Controls to make effective safety decisions.

From S552 Behavioral Aspects of Safety Management:

1. Discuss specific roles and responsibilities for management in supporting behavioral safety processes. What explicit ways can managers ensure success in improving behavioral performance?
2. Describe A) how data is generally collected and analyzed in Behavioral Safety, and B) give 2 ways the collected data can be used to continually improve an organization’s safety process.

3. Reflect about the Behavior Based Safety Debate; in general, what do you think are the A) two greatest strengths and B) two biggest weaknesses of BBS, and C) why? D) describe a strategy that could potentially overcome each weakness you listed?

4. Explain Cooper’s Behavioral Maturity Matrix and describe the levels of progression, pointing out the differences with higher evolved levels and with special emphasis on Level 5 concerning ownership, sampling tools, training, observation approach & quality, contact rate, feedback and sustainability.
Emergency Management and Disaster Preparedness Section for Comprehensive Exam

Select and answer 4 out of the 5 questions listed below. Please rewrite the entire question you select and then answer each of the four questions you selected completely.

Question 1

A. List and describe the **three levels of emergency**. B. Include the department or departments that should have major responsibility at each level. C. State who should be responsible for public relations at each level. D. State the additional two actions discussed in class that typically occur when a level 3 emergency occurs. You may use either a county or city as your level of government when describing the three levels of emergency and the key personnel involved.

Question 2

A. List and define the **4 categories** of disasters based on cause. B. Then select three of the four categories you listed and name and describe at least two examples of specific disasters that would fall under each of the three categories of disasters. C. For each of these six examples describe a mitigation strategy that would apply to that specific disaster.

Question 3

A. **List, and define two** ways of describing the severity and or magnitude of an earthquake. B. Following this description give the name of each scale and describe the difference in what these two scales measure. C. **State why** it is important to use both scales by stating what each scale can provide to responders and those planning a recovery following an earthquake event and how this information is different depending on the scale. D. **Describe which scale is measured using a logarithmic scale and & state why it is important to know the scale is a logarithmic scale** when reading the actual measurement.
Question 4
A. List, and define each of the four phases of emergency management. Define each phase or step using the definitions provided in reference materials and discussed in class. B. Following each of the four phase descriptions give at least two examples of specific actions that could be taken within the specific phase you have listed for a specific natural or technological disaster while describing the action.

Question 5.
A. List and describe the four phases of hazard mitigation planning. B. Name and describe a specific example of an effective mitigation practice discussed in your book for each of the following three natural hazards 1) Flooding 2) Hurricanes 3) Tornadoes (Note: be sure you describe when asked)