

Occupational Safety, Health, and Environment (OSH&E) Program Department of Computer Science and Industrial Technology Southeastern Louisiana University SLU 10847 Hammond, LA 70402

June 19, 2012

Dear OSH&E Advisory Committee Member,

On behalf of Southeastern Occupational Safety, Health, and Environment (OSH&E) Program, we would like to give our sincere appreciation for your involvement in the OSH&E Advisory Committee as well as your participation in the meetings and discussion.

Enclosed please find the report of the OSH&E Advisory Committee meeting that was held on April 27, 2012. Please feel free to let us know should you have any questions and comments!

Our first meeting for the upcoming 2012-2013 academic year will be held as part of the Annual Departmental Advisory Committee Meeting. The meeting is usually scheduled sometime in October on the Hammond campus. A formal invitation will be sent to you when the meeting date and venue are confirmed.

Thank you very much for your consistent contribution to the program!

Sincerely,

Mr. Lawrence Mauerman

Coordinator, OSH&E

Ms. Dorinda Folse

OSH&E AC Chairperson

Dr. Lu Yuan

Assistant Professor

Mr. Lance Roux

OSH&E AC Co-Chairperson

OSH&E Advisory Committee April 27, 2012 Meeting Report by Dr. Lu Yuan

The last Occupational Safety, Health, and Environment (OSH&E) Advisory Committee meeting was held from 9:30 AM to 2:00 PM on April 27, 2012 in Anzalone Hall 214 on the Hammond campus. (Please see the attached example photos!) The attendees include eleven of the twenty-three OSH&E Advisory Committee members (**Appendix A** with update-to-date contact information). Mr. Lawrence Mauerman and Dr. Lu Yuan were co-hosts of the meeting. Two OSH&E students, Ethan Reames and Joshua Sarran, were present. Absent were Richard Matherne, Wayne LaCombe, Beth Inbau, Dawn Bahm, Lance Roux, Alan Rovira, Don Steadman, Buddy Mincey Jr., Alex Appeaning, Michael Gautreaux, Owens O'Quinn, and Dale Towle.

Appendix B contains the agenda of the meeting, which started with the welcoming from Mr. Lawrence Mauerman. Self introductions were followed. Ms. Dorinda Folse then briefed the members with the OSHA update. In particular, she called silence for Workers' Memorial Day which is on April 28, 2012.

OLD BUSINESS

Dr. Yuan presented an update on hiring of the new full-time instructor for OSH&E. We received five applications for the position, conducted three telephone interviews, and completed one oncampus interview, by the time when the meeting was held. Another on-campus interview was scheduled in early May as well. We had the confidence to find a quality instructor.

Next, Dr. Yuan presented the results of OSH&E Advisory Committee Questionnaire that was distributed through SurveyMonkey.com in November 2011. We received a total of 13 responses, which meant a response rate of 13/23 = 56.5%. The complete results are available in **Appendix C**. A summary of key findings is as follows:

- 1) The competencies of OSH&E gradates are excellent or good.
- 2) The top two areas that OSH&E students need to strengthen are Communication skills and practice-oriented knowledge and skills.
- 3) Most members agreed that our OSH&E program meets each of the four educational objectives.
- 4) The majority of ratings on both the importance of and students' competency for each OSH&E program student outcome are high.
- 5) The majority of ratings on the importance of OSH&E major courses are high, except for OSHE 441 *Industrial Toxicology* which is a professional elective.
- 6) The other courses or concepts that the members have suggested to be incorporated in the curriculum include: Industrial Psychology (which has been covered in OSHE 322 Behavior Aspects of Safety and PSYC 101 General Psychology); Technical Writing (which has been covered in ENGL 322 Introduction to Professional and Technical Writing) and Specific instruction in using government forms (OSHA 300, Tier II, SARA Title III, RMP, etc.); Soft skills, leadership, influence, time management, effective conflict resolution; Microbiology, chemistry, statistics; Principals in risk management and workers' compensation.

- 7) The ratings on the qualifications and competencies and size of full-time OSH&E faculty are good or excellent.
- 8) Members have suggested to add the following equipment/instruments into the current inventory: Some equipment to be used by safety professionals -- electrical meters like Fluke, AC sensors, the meters used to test the GFCIs and reverse polarity, air pressure gauges to measure compressed air; Force Meter (Ergonomics application); Port a count Machine (PFT Testing); Pitot tubes & manometer along with facility to demonstrate ventilation assessments; New gas detectors and noise meters.
- 9) The ratings on the institutional and industrial support for the OSH&E program are good or excellent.

Mr. Mauerman then presented the recent internship and employment opportunities for OSH&E students, which include: Barriere Construction - Summer 2012 Safety Intern; Georgia Gulf Chemicals & Vinyls - 3 Summer 2012 EHS Interns; Performance Contractors - 2 Summer 2012 EHS Interns; and Level-1 Safety Coordinator in Houma Louisiana. It was great to see the local companies were starting or continuing to hire our students.

Dr. Yuan reported to the committee that ABET had approved our request to extend the accreditation start date from October 1, 2009 to October 1, 2008. This means that any graduate after October 1, 2008 should be considered to have a degree from an ASAC of ABET-accredited program (**Appendix D**). Dr. Yuan also shared with the committee that Mr. Richard Matherne has been awarded the AIHA Fellow Award and asked the members to congratulate him. He also told the members that Mr. Mauerman would officially retire from the University after Spring 2012. The meeting attendees gave him another long round of applause for what he has done for the program. Some members including Mr. Don Jones, Mr. James Kerr, and Mr. Steven Pereira shared their memories of when and how the program was established with Mr. Mauerman's dedication.

NEW BUSINESS

The first and foremost item under new business is OSHE course syllabus examination (**Appendix E**). The course examination request letter, instruction, and all OSHE course syllabi have been sent to all committee members on March 5, 2012. Members were asked to present their findings at this meeting or send them to us before the meeting if they could not attend. The following is a summary of findings as well as discussions at the meeting:

OSHE 111: No discussion

OSHE 112: No discussion

OSHE 121: No comment

OSHE 141: Mr. Charles Leonard commented that there should be hands-on components for the class. Dr. Yuan explained that those components are included in OSHE 341.

OSHE 231:

1) Mr. Don Jones commented that "There is a great deal of focus on OSHA 1910 General Industry. While there are similarities, there should be some focus on OSHA 1926 Construction as graduates often have their first assignment and there are many safety related opportunities in the construction industry. In addition, in industry there is a fine

- line between maintenance and construction." Dr. Yuan explained that OSHA 1926 is covered in OSHE 382 *Construction Safety*.
- 2) Ms. Dorinda Folse made the following comments:
 - A. The class title could be revised to "Safety Laws, Regulations, and General Industry Standards."
 - B. One of the course objectives states that "List the major pieces of the OSH Act (law) that affect industrial health, safety, and the environment." She questioned the impact on the environment.
 - C. She suggested adding another course objective: "Demonstrate knowledge of researching compliance directives, letters of interpretations, and/or other agency guidance documents."
 - D. There might be a need to add a discussion on electrical hazards.
- OSHE 242: Mr. James Kerr suggested reviewing the syllabus for grammatical, syntax, and tense errors.
- OSHE 251: No comment
- OSHE 261: Mr. Steve Pereira asked the audience about a good book that might be used as the textbook. Mr. Michael Page suggested referring to other Universities that have similar ABET-accredited programs (e.g., Murray State University) for guidance.
- OSHE 311: Mr. Don Jones made the following comments:
 - A. Would VPP and Other Sustainable Programs fit better at the end of the course as outstanding examples/templates of Safety and Health Program Development?
 - B. Introduction is repeated in 1 and 2. Maybe just Management Commitment for 2 and leave 1 as is.
 - C. Use 4 Hazard Inventories instead of the current.
 - D. Under 6 c. list Online Training. CBT (Computer Based Training) is used heavily in the safety environment today.
- OSHE 322: Mr. Michael Page commented that it seemed that the class concentrated too much on the approach of just one person. Mr. Mauerman explained that we use the text written by E. Scott Gellar, *The Psychology of Safety Handbook*, (which is very good), but it was recommended that we take a look at some other sources.
- OSHE 323: No comment
- OSHE 341: Mr. Charles Leonard emphasized on the importance of hands-on activities to practice sampling and measurement skills.
- OSHE 381: Mr. James Kerr made revisions on the course description: "This course provides the fundamental concepts associated with industrial process industry. It includes a review of applicable federal regulatory requirements; the major hazards inherent in the operations of chemical plants and petroleum refineries; and the methods used to identify, assess and control those hazards. Chemical process safety is discussed in the context of case studies, providing students with the opportunity to examine and understand the underlying principles of real-life industry safety practices." He also suggested revising the first course objective: "Discuss the provisions of the federal Process Safety Management (PSM) regulations and describe how they are applied at typical applicable facilities."
- OSHE 382: Mr. Steve Pereira commented that the class should cover how to read blue prints. Mr. Paul Higdon questioned if the class covered the job planning and job safety

analysis. He also offered assistance in instruction particularly on those two topics in the future. Dr. Yuan appreciated the help and would contact Mr. Higdon accordingly.

OSHE 421: Mr. Rick Saizan made the following comments:

- A. There is no course outline in the syllabus.
- B. Revise the first item of course content: "Capturing, tracking, and interpreting the various indicators that describe an organization's performance in the areas of safety and health."
- C. Revise the fourth item of course content: "Useful investigation methodologies and techniques that can be used to reveal the causes of accidents and incidents so that corrections can be implemented to prevent a recurrence."
- D. Add the following two course objectives:
 - 6. Create a project based on instructor guidelines that measures safety performance of a hypothetical organization.
 - 7. Investigate a hypothetical accident and draw conclusions about how to prevent recurrence.

OSHE 424:

- 1) Mr. Glenn Young questioned the class' heavy coverage on Fault Tree Analysis (FTA) as such a technique has not been used significantly in the chemical and process industries. Instead, the class should talk about Layers of Protection Analysis (LOPA), Event Tree Analysis (ETA), and Safety Instrumented System (SIS), which are all more commonly used. Dr. Yuan argued that the course title is *System Safety Methodologies* and FTA is one of the first methods in the system safety arena. It might be more appropriate to add those other techniques if the course title were changed to something else like *Risk Assessment Methodologies*. Mr. Steve Pereira mentioned that he had a document comparing all the risk assessment techniques and would email that to Dr. Yuan. Dr. Yuan also proposed to have a separate meeting with Mr. Glenn Young and Mr. Risk Saizan to further discuss the course content.
- 2) Mr. Rick Saizan made the following comments:
 - A. Change the course title to "PSM Methodologies" or "Risk and Hazard Identification Techniques."
 - B. Revise the third course objective: "Perform a simple hazard analysis using one or more of the methods studied in the class."
 - C. Add the following two course objectives:
 - 4. Prepare information for and perform Hazard and Operability Study. Make recommendations based on federal and industry regulations and best practices to control identified hazards.
 - 5. Prepare information for and perform Faulty Tree Analysis. Make recommendations based on federal and industry regulations and best practices to control identified hazards.

OSHE 441: No discussion OSHE 451: No discussion OSHE 452: No comment OSHE 471: No discussion

The meeting attendees then discussed means to encourage OSH&E students to apply for the ASSE Greater Baton Rouge Chapter Don Jones Excellence in Safety Scholarship. Unfortunately

no students from the OSH&E program applied last year so the scholarship had to be awarded to a student of the nearby school, even though the scholarship gives the OSH&E students the priority consideration. Dr. Yuan told the audience that several things would be done next year to promote the applications, including:

- 1. OSH&E faculty members will create a list of qualified students and strongly "push" them to apply.
- 2. The ASSE Student Section will conduct a workshop to instruct students on the application process.
- 3. The ASSE Greater Baton Rouge Chapter might consider revising the scholarship criteria, especially on the requirement of class levels.

Mr. Mauerman then announced that the OSH&E program was in a process of preparing an application for becoming an OSHA Training Institute Education Center. He explained that OSHA considers the Greater New Orleans area a priority to establish such a center. He was working with the pertinent University Administrative Departments/Offices to gather materials and the deadline of submission was June 15, 2012. As of today (June 19, 2012), our application has been submitted.

The meeting adjourned at 2 PM. We cordially appreciate Glenn Young & Associates LLC for sponsoring the lunch.





Appendix A **OSH&E Advisory Committee**

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Appendix B OSH&E Advisory Committee

Semi-Annual Meeting Agenda April 27, 2012

<u>Time</u>	<u>Issues</u>	Actions
9:30 - 9:45 am	Welcome & Introduction (By Ms. Dorinda Folse)	
9:45 - 10:30 am	Old Business 1. Hiring of a New Full-Time Instructor (By Dr. Lu Yuan) 2. Advisory Committee Questionnaire (By Dr. Lu Yuan)	
	 Internship & Employment for OSH&E (By Mr. Lawrence Mauerman) Celebration of Retirement and Achieven (By Dr. Lu Yuan) 	<u>nent</u>
10:30 - 11:45 am	 New Business OSHE Course Syllabus Examination (By All) ASSE Don Jones Scholarship (By All) OSHA Education Center (By Mr. Lawrence Mauerman) Others 	
11:45 - 12:00 pm	Portrait & Group Picture	
12:00 pm	Lunch (Courtesy of Glenn Young & Associa	ites LLC)

Appendix C

Response Summary

Total Started Survey: 13 Total Finished Survey: 13 (100%)

PAGI	Ε.

1. How do you feel about the competencies of Southeastern's OSH&E Bachelor of Science Degree Program graduates?

Create Chart

Download

12

	Response Percent	Response Count
Excellent	33.3%	4
Good	66.7%	8
Average	0.0%	0
Below Average	0.0%	0
Not Applicable	0.0%	0

answered question

skipped question

2. What knowledge and skill(s) do you feel that the students enrolled in Southeastern's OSH&E Download Bachelor of Science Degree Program need to strengthen? Please select all that applies and rank them using numbers where 1 means the most!

	Response	Response
	Percent	Count
Mathematical and statistical knowledge Show Responses	72.7%	8
Communication skills Show Responses	90.9%	10
Multi-disciplinary teamwork ability Show Responses	63.6%	7
Practical-oriented knowledge and skills Show Responses	72.7%	8
Other (Please specify) Show Responses	18.2%	2

skipped question 2

answered question

3. The following is the current statement of the OSH&E program educational Objectives. Please tell us according to your experience whether our program meets each of the four objectives and provide us your suggestions should it be revised.

	Agree	Don't know	Disagree	Not Applicable	Response Count
Apply knowledge and principles of mathematics, science, technology, and management in industry, business, or other related areas of employment as occupational safety, health, and environment professionals	83.3% (10)	8.3% (1)	8.3% (1)	0.0% (0)	12

13

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2. Apply practice-oriented knowledge and skills in safety, health, and environment to anticipate, identify and evaluate hazardous conditions and practices, to develop hazard control designs, methods, procedures and programs, and to implement and manage effective safety, health, and environment programs	83.3% (10)	8.3% (1)	8.3% (1)	0.0% (0)	12
3. Become effective communicators and ethical facilitators within the practice of safety, health, and environment	72.7% (8)	27.3% (3)	0.0% (0)	0.0% (0)	11
4. Continue professional development to address the need of applying principles of safety, health, and environment within a constantly changing and increasingly diverse environment	91.7% (11)	8.3% (1)	0.0% (0)	0.0% (0)	12

answered question 12

skipped question 1

4. The following is the current statement of the OSH&E program student outcomes. Create Chart Download Using numbers from 1 to 5 where 1 means the least and 5 means the most, please rate the importance of each outcome.

	1	2	3	4	5	Not Applicable	Response Count
.1. Ability to apply basic nathematical and statistical knowledge in the safety, health, and environment field	0.0%	0.0% (0)	8.3% (1)	50.0% (6)	41.7% (5)	0.0% (0)	1:
.2. Understanding basic principles in themistry, physics, and biology as it pertains to the practice of safety, lealth, and environment	0.0%	8.3% (1)	8.3% (1)	33.3% (4)	50.0% (6)	0.0% (0)	1:
.3. Understanding basic principles in ousiness management as it pertains the practice of safety, health, and environment	0.0%	16.7% (2)	16.7% (2)	50.0% (6)	16.7% (2)	0.0% (0)	1:
2.A1. Ability to understand occupational safety, health, and environment fundamentals	0.0%	0.0% (0)	0.0% (0)	33.3% (4)	66.7% (8)	0.0% (0)	1:
2.A2. Ability to know legal aspects of safety, health, and environmental practices	9.1% (1)	9.1% (1)	0.0% (0)	36.4% (4)	45.5% (5)	0.0% (0)	1
2.A3. Understanding the interactions of physical, chemical, biological, and ergonomic agents, factors, and/or stressors on the human body	0.0%	0.0% (0)	8.3% (1)	41.7% (5)	50.0% (6)	0.0% (0)	1:
2.A4. Understanding the application of aws, regulations, standards, and codes to safety, health and environmental conditions	8.3% (1)	0.0% (0)	8.3% (1)	8.3% (1)	75.0% (9)	0.0% (0)	1:
2.A5. Ability to understand and use pasic principles of fire prevention and protection in the workplace	0.0%	8.3% (1)	25.0% (3)	41.7% (5)	25.0% (3)	0.0% (0)	1:
2.A6. Ability to know industrial and construction safety throughout the work processes	0.0%	8.3% (1)	8.3% (1)	41.7% (5)	41.7% (5)	0.0% (0)	1:
2.B1. Ability to utilize basic laboratory nstrumentations associated with safety, health, and environment	8.3% (1)	8.3% (1)	8.3% (1)	58.3% (7)	16.7% (2)	0.0% (0)	1:
2.B2. Ability to anticipate, identify and evaluate hazardous agents, conditions, and practices	0.0%	8.3% (1)	0.0% (0)	25.0% (3)	66.7% (8)	0.0% (0)	1.

2.B3. Understanding fundamental exposure assessment and environmental sampling techniques	0.0% (0)	0.0% (0)	25.0% (3)	33.3% (4)	41.7% (5)	0.0% (0)	12
2.B4. Ability to develop control designs, methods, procedures, and programs to eliminate or mitigate safety, health, and environmental hazards	0.0%	8.3% (1)	16.7% (2)	16.7% (2)	58.3% (7)	0.0% (0)	12
2.B5. Ability to conduct accident/incident investigation and analysis	0.0%	0.0% (0)	25.0% (3)	16.7% (2)	58.3% (7)	0.0% (0)	12
2.B6. Ability to implement and manage effective safety, health, and environmental programs	0.0%	8.3% (1)	8.3% (1)	8.3% (1)	75.0% (9)	0.0% (0)	12
3.1. Ability to effectively express thoughts in oral and written communications	0.0%	0.0% (0)	0.0% (0)	25.0% (3)	75.0% (9)	0.0% (0)	12
3.2. Understanding the techniques, skills, and modern behavioral tools necessary for the practice of safety, health, and environment	0.0%	0.0% (0)	25.0% (3)	25.0% (3)	50.0% (6)	0.0% (0)	12
3.3. Ability to effectively function as a part of multi-disciplinary team	8.3% (1)	0.0% (0)	8.3% (1)	75.0% (9)	8.3% (1)	0.0% (0)	12
4.1. Students are encouraged to become members of ASSE (American Society of Safety Engineers) and AIHA (American Industrial Hygiene Association) Southeastern Louisiana University Student Sections and be actively involved in the events and activities organized by the Student Sections. At least 50% of upper-level students are ASSE/AIHA members.	0.0%	8.3% (1)	25.0% (3)	33.3% (4)	33.3% (4)	0.0% (0)	12
4.2. Students are encouraged to continue professional growth and improvement by pursuing the widely recognized certifications including, but not limited to: Certified Safety Professional (CSP) and Certified Industrial Hygienist (CIH); and/or by pursuing master's/doctoral degrees in environmental, health, and safety and similarly named programs. As measured on the Southeastern Alumni Survey, at least 50% of the OSH&E graduates will become CSPs and/or CIHs.	0.0%	0.0% (0)	8.3% (1)	33.3% (4)	58.3% (7)	0.0% (0)	12

answered question 12

skipped question

5. Using numbers from 1 to 5 where 1 means the lowest and 5 the highest, please Create Chart Download rate the level of Southeastern OSH&E students' competency for each of the OSH&E program student outcomes that are listed in question 4.

	1	2	3	4	5	Not Applicable	Response Count
1.1. Ability to apply basic mathematical and statistical knowledge in the safety, health, and environment field	0.0%	9.1% (1)	18.2% (2)	18.2% (2)	45.5% (5)	9.1% (1)	11
1.2. Understanding basic principles in chemistry, physics, and biology as it pertains to the practice of safety, health, and environment	0.0%	0.0% (0)	10.0%	20.0% (2)	60.0% (6)	10.0% (1)	10

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business management as it pertains to the practice of safety, health, and environment	0.0%	0.0% (0)	0.0% (0)	70.0% (7)	10.0% (1)	20.0% (2)	10
2.A1. Ability to understand occupational safety, health, and environment fundamentals	0.0%	0.0% (0)	0.0% (0)	0.0%	80.0% (8)	20.0% (2)	10
2.A2. Ability to know legal aspects of safety, health, and environmental practices	0.0%	0.0% (0)	20.0% (2)	20.0% (2)	30.0% (3)	30.0% (3)	10
2.A3. Understanding the interactions of physical, chemical, biological, and ergonomic agents, factors, and/or stressors on the human body	0.0%	0.0% (0)	0.0% (0)	30.0% (3)	60.0% (6)	10.0% (1)	10
2.A4. Understanding the application of laws, regulations, standards, and codes to safety, health and environmental conditions	0.0%	0.0% (0)	10.0% (1)	10.0% (1)	50.0% (5)	30.0% (3)	10
2.A5. Ability to understand and use basic principles of fire prevention and protection in the workplace	0.0% (0)	0.0% (0)	0.0% (0)	50.0% (5)	20.0% (2)	30.0% (3)	10
2.A6. Ability to know industrial and construction safety throughout the work processes	0.0% (0)	0.0% (0)	10.0% (1)	30.0% (3)	40.0% (4)	20.0% (2)	10
2.B1. Ability to utilize basic laboratory instrumentations associated with safety, health, and environment	0.0% (0)	0.0% (0)	20.0% (2)	30.0% (3)	40.0% (4)	10.0% (1)	10
2.B2. Ability to anticipate, identify and evaluate hazardous agents, conditions, and practices	0.0% (0)	0.0% (0)	0.0% (0)	40.0% (4)	40.0% (4)	20.0% (2)	10
2.B3. Understanding fundamental exposure assessment and environmental sampling techniques	0.0% (0)	0.0% (0)	10.0% (1)	40.0% (4)	40.0% (4)	10.0% (1)	10
2.B4. Ability to develop control designs, methods, procedures, and programs to eliminate or mitigate safety, health, and environmental hazards	0.0%	0.0% (0)	10.0% (1)	40.0% (4)	30.0% (3)	20.0% (2)	10
2.B5. Ability to conduct accident/incident investigation and analysis	0.0%	0.0% (0)	0.0% (0)	40.0% (4)	30.0% (3)	30.0% (3)	10
2.B6. Ability to implement and manage effective safety, health, and environmental programs	0.0% (0)	0.0% (0)	10.0% (1)	40.0% (4)	20.0% (2)	30.0% (3)	10
3.1. Ability to effectively express thoughts in oral and written communications	0.0% (0)	20.0% (2)	0.0% (0)	30.0% (3)	30.0% (3)	20.0% (2)	10
3.2. Understanding the techniques, skills, and modern behavioral tools necessary for the practice of safety, health, and environment	0.0%	0.0% (0)	10.0% (1)	30.0% (3)	30.0% (3)	30.0% (3)	10
3.3. Ability to effectively function as a part of multi-disciplinary team	0.0%	0.0% (0)	10.0% (1)	30.0% (3)	40.0% (4)	20.0% (2)	10
4.1. Students are encouraged to become members of ASSE (American Society of Safety Engineers) and AIHA (American Industrial Hygiene Association) Southeastern Louisiana University Student Sections and be actively involved in the events and activities organized by the Student Sections. At least 50% of upper-level students are ASSE/AIHA members.	0.0%	0.0% (0)	10.0% (1)	20.0% (2)	50.0% (5)	20.0% (2)	10
4.2. Students are encouraged to							

4.2. Students are encouraged to continue professional growth and improvement by pursuing the widely recognized certifications including, but not limited to: Certified Safety

Professional (CSP) and Certified Industrial Hygienist (CIH); and/or by pursuing master s/doctoral degrees in environmental, health, and safety and similarly named programs. As measured on the Southeastern Alumni Survey, at least 50% of the OSH&E graduates will become CSPs and/or CIHs.	0.0% (0)	0.0% (0)	10.0% (1)	10.0%	50.0% (5)	30.0% (3)	10
OSH&E graduates will become CSPs							

answered question 11

skipped question 2

6. Using numbers from 1 to 5 where 1 means the least and 5 means the most, please rate the importance of the following courses in the current Southeastern OSH&E Bachelor of Science curriculum. Details of the course content are available at http://bit.ly/w3nLvb. Download

	1	2	3	4	5	Not Applicable	Response Count	
OSHE 111 Introduction to Occupational Safety, Health, and Environment	0.0%	0.0% (0)	0.0% (0)	36.4% (4)	63.6% (7)	0.0% (0)	1	
OSHE 112 Design of Hazard Controls	0.0%	9.1% (1)	27.3% (3)	36.4% (4)	27.3% (3)	0.0% (0)	1	
OSHE 121 Safety and Health Program Management and Administration	9.1% (1)	0.0% (0)	9.1% (1)	18.2% (2)	63.6% (7)	0.0% (0)	1	
OSHE 141 Principles of Industrial Hygiene	0.0%	0.0% (0)	9.1% (1)	27.3% (3)	63.6% (7)	0.0% (0)	1	
OSHE 231 Safety Laws, Regulations, and Standards	0.0%	9.1% (1)	9.1% (1)	0.0%	81.8% (9)	0.0% (0)	1	
OSHE 242 Ergonomics	9.1% (1)	9.1% (1)	9.1% (1)	54.5% (6)	18.2% (2)	0.0% (0)	1	
OSHE 251 Environmental Laws and Practices	0.0%	9.1% (1)	18.2% (2)	45.5% (5)	27.3% (3)	0.0% (0)	1	
OSHE 261 Fire Protection and Prevention	0.0%	9.1% (1)	9.1% (1)	36.4% (4)	45.5% (5)	0.0% (0)	1	
OSHE 341 Field Methods of Industrial Hygiene and Toxicology	0.0%	0.0% (0)	9.1% (1)	27.3% (3)	63.6% (7)	0.0% (0)	1	
OSHE 381 Safety in Chemical and Process Industries	0.0%	0.0% (0)	0.0% (0)	45.5% (5)	54.5% (6)	0.0% (0)	1	
OSHE 382 Construction Safety	0.0%	0.0% (0)	9.1% (1)	45.5% (5)	45.5% (5)	0.0% (0)	1	
OSHE 421 Measurement of Safety Performance and Accident nvestigation and Analysis	0.0%	9.1% (1)	0.0% (0)	18.2% (2)	72.7% (8)	0.0% (0)	1	
OSHE 424 System Safety Methodologies	0.0%	9.1% (1)	9.1% (1)	63.6% (7)	18.2% (2)	0.0% (0)	1	
OSHE 452 Pollution Foundamentals and Control Technologies	0.0%	9.1% (1)	27.3% (3)	45.5% (5)	18.2% (2)	0.0% (0)	1	
OSHE 311 Safety and Health Program Development	0.0%	0.0% (0)	9.1% (1)	27.3% (3)	63.6% (7)	0.0% (0)	1	
OSHE 322 Behavior Aspects of Safety	0.0%	9.1% (1)	9.1% (1)	36.4% (4)	45.5% (5)	0.0% (0)	1	
OSHE 323 Product Safety and Liability	0.0%	18.2% (2)	27.3% (3)	36.4% (4)	18.2% (2)	0.0% (0)	1	
OSHE 441 Industrial Toxicology	0.0%	0.0% (0)	36.4% (4)	36.4% (4)	27.3% (3)	0.0% (0)	1	
							1'	

					skippe	ed question	2
					answere	d question	11
OSHE 471 Education and Training Methods for Occupational Safety and Health	0.0%	10.0%	10.0% (1)	10.0% (1)	70.0% (7)	0.0% (0)	10
OSHE 451 Hazardous Materials Management	0.0%	0.0% (0)	9.1% (1)	54.5% (6)	36.4% (4)	0.0% (0)	11

7. In addition to the OSHE courses listed above, our OSH&E program also requires students to take Courses in English, Mathematics, Natural Science, Computer Science, and Business, etc. Based on your professional experience, please suggest any other courses or concepts that should be incorporated in the curriculum to meet current and future needs of safety, health, and environment!

Response Count **Hide Responses** Responses (7) Text Analysis My Categories (0) × GOLD FEATURE: Text Analysis allows you to view frequently used words and phrases, Learn More Upgrade » categorize responses and turn open-ended text into data you can really use. To use Text Analysis, upgrade to a GOLD or PLATINUM plan. Showing 7 text responses No responses selected Industrial Psychology 11/21/2011 4:48 PM View Responses Technical Writing 11/14/2011 2:38 PM View Responses none at this time 11/1/2011 2:47 PM View Responses Technical Writing & Specific instruction in using government forms (OSHA 300, Tier II, SARA Title III, RMP, etc. 11/1/2011 8:33 AM View Responses soft skills; leadership, influence, time management, effective conflict resolution, 11/1/2011 7:09 AM View Responses microbiology, chemistry, statistics 10/31/2011 8:13 PM View Responses

answered question 7

skipped question

8. How do you feel about the following aspects in regard to the OSH&E faculty?

Create Chart Download

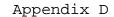
	Excellent	Good	Average	Below Average	Not Applicable	Response Count
Qualifications and competencies	75.0% (9)	25.0% (3)	0.0% (0)	0.0%	0.0% (0)	12
Size of full-time faculty	25.0% (3)	50.0% (6)	16.7% (2)	8.3% (1)	0.0% (0)	12

answered question 12

skipped question 1

9. The OSH&E current equipment inventory is available at http://bit.ly/sY4PQk. How do you feel about the sufficiency of these equipment and instruments? Please write down the names of any equipment/instruments that you suggest to be added.		
		Response
		Count
	Show Responses	7
	answered question	7
	skipped question	6
10. How do you feel about the following aspects in regard to the institutional and industrial support for the OSH&E program?	Create Chart	Download

answered question 12 1 skipped question





ABET

111 Market Place, Suite 1050 Baltimore, MD 21202 Phone: +1.410.347.7700 Fax: +1.410.625.2238 www.abet.org accreditation@abet.org

March 1, 2012

Applied Science Accreditation Commission Computing Accreditation Commission Engineering Accreditation Commission Technology Accreditation Commission

Dan McCarthy
Dean, College of Science & Technology
Southeastern Louisiana University
SLU 10829
Hammond, LA 70402

Dear Dean McCarthy:

The Applied Science Accreditation Commission (ASAC) of ABET has approved the request from Southeastern Louisiana University's Occupational Safety, Health, and Environment (B.S.) Program to extend the accreditation start date back two years for its initial accreditation awarded in July 2011.

The start date for accreditation for the above-referenced program has been updated to reflect October 1, 2008. Any graduate after October 1, 2008 should be considered to have a degree from an ASAC of ABET-accredited program.

Please contact me if you have any additional concerns.

Sincerely,

Maryanne Weiss

Senior Director, Accreditation Operations

Maryanne Weess

cc:

L. Yuan.

B. Clausen

Appendix E



March 5, 2012

Occupational Safety, Health, and Environment (OSH&E) Program Department of Computer Science and Industrial Technology Southeastern Louisiana University SLU 10847 Hammond, LA 70402

Dear OSH&E Advisory Committee Member,

Greetings!

As you may recall, three years ago in the Spring of 2009 we formed a course specification development subcommittee within the OSH&E advisory committee. The subcommittee was charged with the responsibility of reviewing and modifying the existing OSHE course specification sheets using the Bloom's Taxonomy. The members of the subcommittee examined the course objectives, and also reviewed other course materials, including textbook, course syllabus, final project guideline, assignments, and exams. As faculty, we are grateful that this process played a significant role in the ABET (Accreditation Board for Engineering and Technology) accreditation review process that occurred recently. As part of our continuous improvement process, our program continues to receive positive feedback from ABET.

In order to maintain the accreditation, it is ABET's requirement that we continue with this effort. We are "randomly" assigning each member of the committee the following documents for review: (a) the syllabus(i) of one or two OSHE courses and (b) *SELU Course Objectives and Bloom's Taxonomy* written by Mr. Rick Saizan in Spring 2009. Please use these documents to examine if the course description, objectives, topics, textbook, and project (if applicable) are appropriate.

We will appreciate if you could present to us with your comments when we meet on **April 27, 2012**. The meeting will be held at Southeastern Louisiana University main campus in Hammond. If you are unable to attend the meeting for any reason, please email or mail your findings to us. A formal invitation to attend this meeting will be sent out to you later this month.

Thank you very much for your consistent contribution the program!

Sincerely,

Dr. Lu Yuan

Phone: 985-549-3925 Fax: 985-549-5532

Email: Lu.Yuan@selu.edu

Southeastern OSHE Course Syllabus Examination Spring 2012

OSHE 111 Introduction to Occupational Safety, Health, and Environment	Dale Towle	Trey Rivet
OSHE 112 Design of Hazard Controls	Trey Rivet	Dale Towle
OSHE 121 Safety and Health Program Management and Administration	Dawn Bahm	Dorinda Folse
OSHE 141 [OSHE 241] Principles of Industrial Hygiene & Toxicology	Charles Leonard	Alan Rovira
OSHE 231 Safety Laws, Regulations, and Standards	Dorinda Folse	Don Jones
OSHE 242 Ergonomics	Richard Matherne	James Kerr
OSHE 251 Environmental Laws and Practices	Alex Appeaning	Donny Latiolais
OSHE 261 Fire Protection and Prevention	Lance Roux	Don Steadman
OSHE 311 Safety and Health Program Development	Don Jones	Lance Roux
OSHE 322 Behavior Aspects of Safety	Owens O'Quinn	Michael Page
OSHE 323 Product Safety and Liability	Michael Page	Owens O'Quinn
OSHE 341 Field Methods of Industrial Hygiene and Toxicology	Wayne LaCombe	Charles Leonard
OSHE 381 [OSHE 281] Safety in Chemical and Process Industries	James Kerr	Glenn Young
OSHE 382 [OSHE 282] Construction Safety	Paul Higdon	Buddy Mincey Jr.
OSHE 421 [OSHE 321] Measurement of Safety Performance and Accident Investigation and Analysis	Rick Saizan	Dawn Bahm
OSHE 424 [OSHE 324] System Safety Methodologies	Glenn Young	Rick Saizan
OSHE 441 Industrial Toxicology	Alan Rovira	Richard Matherne
OSHE 451 Hazardous Materials Management	Don Steadman	Wayne LaCombe
OSHE 452 Pollution Fundamentals & Control Technologies	Donny Latiolais	Alex Appeaning
OSHE 471 [OSHE 371] Education and Training Methods for Occupational Safety and Health	Beth Inbau	Michael Gautreaux

Richard Matherne	OSHE 242	OSHE 441
Don Jones	OSHE 231	OSHE 311
Wayne LaCombe	OSHE 341	OSHE 451
James Kerr	OSHE 242	OSHE 381
Dorinda Folse	OSHE 121	OSHE 231
Beth Inbau	OSHE 471	
Rick Saizan	OSHE 421	OSHE 424
Dawn Bahm	OSHE 121	OSHE 421
Lance Roux	OSHE 261	OSHE 311
Alan Rovira	OSHE 141	OSHE 441
Don Steadman	OSHE 261	OSHE 451
Buddy Mincey Jr.	OSHE 382	
Alex Appeaning	OSHE 251	OSHE 452
Michael Gautreaux	OSHE 471	
Michael Page	OSHE 322	OSHE 323
Owens O'Quinn	OSHE 322	OSHE 323
Trey Rivet	OSHE 111	OSHE 112
Glenn Young	OSHE 381	OSHE 424
Paul Higdon	OSHE 382	
Dale Towle	OSHE 111	OSHE 112
Donny Latiolais	OSHE 251	OSHE 452
Charles Leonard	OSHE 141	OSHE 341

Setting Educational Objectives that Insure Learning Takes Place at All Cognitive Levels

by: Rick Saizan

One of the things noticed when reviewing the course descriptions was that, in general, for courses from OSHE 111 through OSHE 322, the objectives only address a portion of the six levels of cognitive learning. The knowledge, comprehension and application elements of Bloom's Taxonomy of Cognitive Learning are in general addressed in all the objectives, but evaluation, synthesis, and analysis are not addressed in the objectives for these courses at all and not consistently in the higher level courses. I think that it is important that more of Bloom's higher level learning elements should be addressed in the objectives.

Bloom's Taxonmomy is a heirarchal classification of the cognitive levels at which learning take place. It also helps educators to define the objectives of learning so that educational techniques can be utilized to insure that learning takes place at the appropriate level for the materila being taught.

Skills in the **cognitive domain** revolve around knowledge, comprehension, and "thinking through" a particular topic. Traditional education tends to emphasize the skills in this domain, particularly the lower-order objectives.

There are six levels in the taxonomy, moving from the lowest order processes to the highest:

Knowledge

Exhibit memory of previously-learned materials by recalling facts, terms, basic concepts and answers

- Knowledge of specifics terminology, specific facts
- Knowledge of ways and means of dealing with specifics conventions, trends and sequences, classifications and categories, criteria, methodology
- Knowledge of the universals and abstractions in a field principles and generalizations, theories and structures

To evaluate knowledge, use questions like: What is...?

Comprehension

Demonstrative understanding of facts and ideas by organizing, comparing, translating, interpreting, giving descriptions, and stating main ideas

- Translation
- Interpretation
- Extrapolation

To evaluate comprehension, use questions like: How would you compare and contrast...?

Application

Using new knowledge. Solve problems to new situations by applying acquired knowledge, facts, techniques and rules in a different way

To evaluate application, use questions like: Can you organize to show...?

Analysis

Examine and break information into parts by identifying motives or causes. Make inferences and find evidence to support generalizations

- Analysis of elements
- Analysis of relationships
- Analysis of organizational principles

To evaluate analysis, use questions like: How would you classify...?

Synthesis

Compile information together in a different way by combining elements in a new pattern or proposing alternative solutions

- Production of a unique communication
- Production of a plan, or proposed set of operations
- Derivation of a set of abstract relations

To evaluate synthesis, use questions like: Can you predict an outcome?

Evaluation

Present and defend opinions by making judgments about information, validity of ideas or quality of work based on a set of criteria

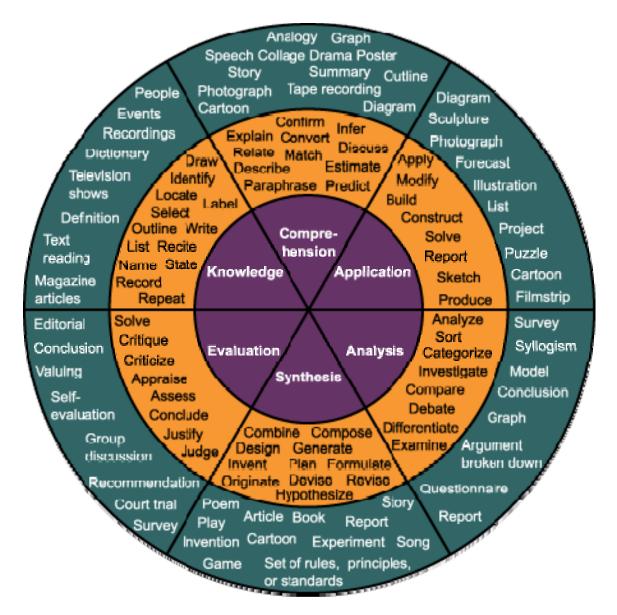
- Judgments in terms of internal evidence
- Judgments in terms of external criteria

To evaluate evaluation, use questions like: Do you agree with....?

Some critiques of Bloom's Taxonomy's cognitive domain ackanowledge the existence of these six categories, but question the existence of a sequential, hierarchical link as shown in the graphic below. [2] Also the revised edition of Bloom's taxonomy has moved Synthesis in higher order than Evaluation. Some consider the three lowest levels as hierarchically ordered, but the three higher levels as parallel. Others say that it is sometimes better to move to Application before introducing concepts.

Syr	nthesis	Evaluation		
	Ana	lysis		
	Appli	cation		
	Comprehension			
	Knowledge			

Below is a Bloom's Taxonomy model that provides an easy view of the levels of learning (purple), likely verbs that would be used in writing objectives (orange), and potential products that would demonstrate learning at that level (green).



References

- Taxonomy of Educational Objectives: The Classification of Educational Goals; pp. 201-207; B. S. Bloom (Ed.) Susan Fauer Company, Inc. 1956.
- A Taxonomy for Learning, Teaching, and Assessing A Revision of Bloom's Taxonomy of Educational Objectives; Lorin W. Anderson, David R. Krathwohl, Peter W. Airasian, Kathleen A. Cruikshank, Richard E. Mayer, Paul R. Pintrich, James Raths and Merlin C. Wittrock (Eds.) Addison Wesley Longman, Inc. 2001
- 1. <u>^ Learning Domains or Bloom's Taxonomy Donald R. Clark</u>
- 2. Paul, R. (1993). Critical thinking: What every person needs to survive in a rapidly changing world (3rd ed.). Rohnert Park, California: Sonoma State University Press.

Portions of this information were retrieved from "http://en.wikipedia.org/wiki/Taxonomy of Educational Objectives"

OSHE 111 INTRODUCTION TO OCCUPATIONAL SAFETY & HEALTH Spring Semester, 2012 (Evening)

Syllabus

Instructor:

Lawrence A. Mauerman, MAS, PE, CSP Office: Anzalone Hall, 110-3

Contacts: SLU Office 985-549-3476

SLU E-mail Imauerman@selu.edu

Office Hrs: Southeastern Office: Monday and Wednesday, 8:00 am to 12:00 noon &

1:00 pm to 4:00 pm

At other times by appointment

Course Description:

This course presents general safety and health concepts and terms, historical developments, program concepts and terms, legislative overview, including worker's compensation law, problem identification, hazard recognition, evaluation and control concepts, and an introduction to measurement and evaluation.

Course Objectives:

At the conclusion of this course, you will be able to:

- 1. Describe the history of the safety movement in the United States, including significant safety legislation and the importance of worker's compensation.
- 2. Describe important sources of loss control information.
- 3. Explain how loss control information is analyzed and used to develop effective loss control programs.
- 4. Relate how the elements of effective safety, industrial hygiene and environmental programs are interrelated and dependent on one another.

Course Text:

Roger L. Brauer. Safety and Health for Engineers (2nd ed,). New York: John Wiley & Sons, 2006.

Schedule:

Class meets on Monday from 6:00 pm to 8:50 pm.

First day of class	23 January, 2012
Mardi Gras Holiday	20 February, 2012
1 st Exam	27 February, 2012
2 nd Exam	2 April, 2012
Spring Break	9 April, 2012
Term project due	23 April, 2012
Last day of class	30 April, 2012
Final exam	7 May, 2012

Class dates are:

Jan	<u>Feb</u>	<u>Mar</u>	Apr May
<u>Jan</u> 23	6	5	2 - 2 nd Exam 7 - Final exam
30	13	12	9 - Spring Break
	20 - Mardi Gras	19	16
	27 - 1 st Exam	26	23 - Project due
			30 - Last class

Exams:

There will be two mid-term exams plus a final exam given during the semester to measure your progress and to provide a basis for your grade. Each of the three exams will consist of multiple choice, matching, fill-in-the-blank and, where applicable, short math problems. There will be no essay questions. The two mid-term exams will cover the material studied during the period since the last exam. Each mid-term exam will take approximately half of the class period to complete. The remainder of the period will be spent introducing new material. The final exam will be comprehensive, covering the entire course.

<u>Exam Make-up Policy</u>: You will be permitted to make-up an exam ONLY if you have made arrangements PRIOR to the time the exam was originally administered. No make-up exam will be allowed if you merely have not shown up for the original exam and have not made arrangements to take a make-up. The make-up exam must be taken BEFORE the next scheduled class period. **NO EXCEPTIONS will be allowed**.

Project:

Objective: The project will require the student to Select a safety topic for a list provided by the instructor and then apply the principles learned in class by doing research to **determine** potential hazards associated with real-life applications of the selected topic and developing appropriate control measures to eliminate or mitigate the hazards.

The project will be presented in a paper of no less than 5 and no more than 10 pages in length. The paper will be graded upon accuracy of analysis of the problem and the appropriateness of the corrective measures that are recommended. Good grammar and correct spelling will also be considered in grading the paper. I have attached a copy of "Guidelines for Term Papers" to this syllabus for your reference when preparing this paper. I have also attached a copy of the evaluation form I will use when grading your paper.

2

You should PROVIDE ME WITH A **HARD PAPER COPY** OF YOUR PAPER THAT I CAN KEEP. I will provide you with a summary of how the grade for your paper was determined. If you wish to see your original paper, you may do so by appointment. Projects are due on Monday, 23 April, 2012. **Projects turned in after that date will receive only partial credit**.

Course Grades:

1. Grades will be assigned in accordance with the Departmental Scale:

Points (Percent)		<u>Gra</u>	<u>de</u>
461-500	(93 - 100)	=	A, Superior
421-460	(85 - 92)	=	B, Very Good
381-420	(77 - 84)	=	C, Average
341-380	(69 - 76)	=	D, Below Average
0-340	(0 - 68)	=	E, Fail

2. Basis for assigning grades:

```
Two mid-term exams @ 100 points = 200 points (40% of grade)
Final Examination @ 150 points = 150 points (30% of grade)
Research Project @ 150 points = 150 points (30% of grade)
TOTAL = 500 points
```

Course Requirements:

- 1. Adherence to departmental policies and procedures, a copy of which has been provided to you.
- 2. Regular class attendance as prescribed in the departmental requirements.
- 3. Read the material to be discussed in class prior to coming to class.
- 4. Complete and turn in research project by due deadline.

NOTE:

- Students will NOT automatically be dropped from class. Students who choose to drop must do so by the semester deadline! The last day to withdraw or resign from the university is Friday, 9 March, 2012.
- 1. If you are a qualified student with a disability seeking accommodations under the Americans with Disabilities Act, you are required to self-identify with the Office of Student Life, Room 203, Student Union.
- 1. Students' behavior/classroom decorum: "Free discussion, inquiry, and expression is encouraged in this classroom. Classroom behavior that interferes with either (a) the instructor's ability to conduct the class, or (b) the ability of the students to benefit from the instruction is not acceptable. Examples may include routinely entering class late or departing early; use of beepers, cellular telephones, or other electronic devices; repeatedly talking in class without being recognized; talking while others are speaking; or arguing in a way that is perceived as 'crossing the civility line.' In the event of a situation where a student legitimately needs to carry a beeper/cellular telephone to class, prior notice and approval by the instructor is required."
- 1. Academic Integrity. The academic community relies upon a high standard of

integrity in the relations among its members. To the extent that this standard is not maintained, the good of the community suffers, and injustice (sometimes serious injustice) may be done. One of the most important aspects of academic integrity concerns the just measure of each student's academic accomplishments. These are ordinarily evaluated through written examination or submitted work. For such modes of assessment to operate fairly, it is essential that the instructor be assured that the work used to evaluate the student's performance is genuinely the student's own. It is also the responsibility of the student to uphold the academic integrity of the University. The use of unauthorized material, communication with fellow students during an examination, attempting to benefit from the work of another student and similar behavior that defeats the intent of an examination or other class work is unacceptable to the University. Cheating on examinations, plagiarism, improper acknowledgment of sources in essays and the use of a single essay or paper in more than one course without permission are considered very serious offenses and shall be grounds for disciplinary action.

Course Outline & Reading Assignments:

All reading assignments are from the Text

Module 1: INTRODUCTION TO SAFETY AND HEALTH: Exam: 27 February, 2012

Historical Perspectives (Chapter 1)

The Safety & Health Professions (Chapter 2)

Safety Culture (Chapters 3 & 32)

Regulatory History (Chapter 4)

Module 2: LOSS CONTROL INFORMATION AND ANALYSIS: Exam: 2 April 2012

Workers' Compensation (Chapter 6)

Injury and Illness Record Keeping and Incidence Rates (Chapter 37)

Loss Control Programs (Chapters 34 & 38)

Identifying Hazards (Chapter 36)

Module 3: SAFETY/HEALTH/ENVIRONMENT PROGRAM ORGANIZATION: Final Exam:

7 May 2012

Safety, Health and Environmental Auditing (Chapter 35)

Incident Investigation, Analysis, and Costs (Chapter 37)

OTHER READING:

The following chapters are to be considered as part of the term paper project:

Chapter 10: Mechanics and Structures

Chapter 11: Walking and Working surfaces

Chapter 12: Electrical Safety

Chapter 13: Tools and Machines

Chapter 14: Transportation

Chapter 15: Materials Handling

Chapter 16: Fire Protection & Prevention

Chapter 17: Explosions & Explosives

Chapter 18: Heat & Cold

Chapter 19: Pressure

Chapter 20: Visual Environment

Chapter 21: Non-Ionizing Radiation

Chapter 22: Ionizing Radiation

Chapter 23: Noise & Vibration

Chapter 24: Chemicals

Chapter 25: Ventilation

Chapter 26: Biohazards

Chapter 27: Hazardous Waste

Chapter 28: Personal Protective Equipment

Chapter 29: Emergencies

Chapter 30: Facility Planning & Design

Chapter 33: Ergonomics

GUIDELINES FOR TERM PAPERS

The following guidelines are provided to assist you in writing term papers for my classes. Part of the skills that you are expected to acquire in your studies in Occupational Safety, Health and Environment at Southeastern include being able to communicate effectively using the written word. You have probably noticed that your course of OSH&E studies requires you to take several English composition classes. This is also one of the reasons you are assigned to write a term paper. There are two major objectives:

01/12

Provide the opportunity to do research on a topic that is "above and beyond" the material that will be discussed in class. You will become acquainted with ideas and opinions of other writers on topics associated with our field of study. In short, you will expand your intellectual horizons.

Organize and present your research in an interesting and logical manner.

PART I

The first part of the guidelines outlines my requirements for the general layout of your term paper. I must emphasize that many of these are my preferences, and not necessarily universal, or university, standards. Nevertheless, they work well, and usually make for interesting and well-presented papers.

FORMAT

Margins: One inch (1") top, bottom and sides

Spacing: Single space text, double space between paragraphs.

Font: Face: Times New Roman is preferred. Arial is OK. Font size: 12

Style and Punctuation: The standard for the Department of Industrial Technology is the

Publication Manual of the American Psychological Association (APA).¹

LENGTH The length of the paper will vary, depending on the assignment. Generally, I specify that papers be between 5 and 10 pages of text, not including: the cover page; large charts, tables and illustrations; and the reference page. Such items which explain, expand, and illustrate your topic are welcomed - indeed, encouraged - but they do not count as pages of text. Pages should be numbered, either in the upper right-hand corner, or the bottom center of each page. Do not number title pages and tables of content.

RESOURCES Sources that you have consulted in writing your paper should be listed on the last page. I usually require no fewer than five sources, in addition to the course text, for a 5 to 10 page paper. All of your sources, including those obtained from the internet, must be authoritative. Emphasis should be given to those from books, journals, magazines, newspapers, and other printed sources. The reason is that the internet still does not contain all there is to know on a subject, and using it as your only font of information exhibits a kind of intellectual laziness. The APA manual should be consulted for the proper format to be used in listing the resources, including those from the internet.

GRAMMAR, SPELLING, ETC. Carefully review your paper for grammatical errors, spelling mistakes, and typographical errors before you turn it in. If you are not good at this, find someone who is and have them do it for you. Do not leave the corrections for me to make as I will charge you more than you can afford.

¹The *Publication Manual of the American Psychological Association* is the style guide used by the Department of Industrial Technology for term papers, research papers, and theses. A copy of this manual is available in the IT department office. If you prefer, it can be purchased at the university Book Store. My copy cost \$23.95, but since I do a lot of writing, it is worth it to have a copy available any time I need it. The APA has extracted some material from the Publication Manual and included it on its website: www.apastyle.org. You may be able to get some of the information you need there, particularly regarding internet sources.

SUBMISSION Papers should be submitted with a cover sheet which identifies the following:

Title or subject of your paper

The author: (you)

The class (number and name, ex.: OSHE 111, Introduction to Occupational Safety and Health)

The instructor: (me)

Date: The date the paper was submitted

In most cases, I do not want you to submit your paper with any special kind of binding or cover. I appreciate your interest in making the paper "unique" but a fancy cover will never make up for a well-written paper. My preference is a single staple in the upper left-hand corner. In a rare case where a special binding, cover, or folder is expected, I will inform you of this requirement.

Papers should be submitted on or before the specified due date. They are acceptable up to midnight on that date. Papers submitted after the due date will be accepted, but they will not receive full credit.

PART II

Your term paper will be graded on the following points.

PRESENTATION (20%) Presentation involves such things as spelling, grammar, neatness, and format. How does your paper look? Does it invite reading? Have you used proper form in citing and listing your references? Have you included aids to understanding such as charts, tables, and illustrations? In short, how professional is your work? At this stage in your studies, there is no place for sloppy work.

ORGANIZATION (33%) Does your paper flow in a natural, logical sequence? Do you start with basic principles, ideas, etc., and then build on them? Are important terms defined and explained? How much do you assume that your reader already knows, and what do you need to explain? Years ago, when I was serving in the military, I received some helpful, simple advice on how to make presentations. A good presentation, I was told, has three steps. They are: "(1) Tell 'em what you're going to tell 'em. (2) Tell 'em,! (3) Tell 'em what you told 'em." In case you missed it, this translates into: (1) Introduction; (2) Main body of the paper; (3) Summary. It's simple, but it works amazingly well.

CONTENT (47%) This, of course, is why you're writing your paper. It's the "meat" of your work. It should be based on a thorough examination of your assigned topic. Care should be taken to distinguish fact from opinion, although there is room for both. There is no place for fiction in our studies - that is the realm of the novelist. If the topic is controversial care should be taken to examine all sides of the issue. There is no problem assuming a position, yourself, but you have a solid base to support your stance.

FINALLY

This guideline sets the standards for your work. Adherence to its standards should not only result in a work that is worthy of your time and effort, but also should imbue you with a sense of pride and self confidence. I'm anxious to see what you can do!

OSHE 112 Design of Hazard Controls Spring Semester, 2012

Syllabus

Instructor: Lu Yuan, Sc.D.
Office: Fayard Hall 327E
Phone: 985-549-3925
Email: Lu.Yuan@selu.edu

Office Hrs: Southeastern Office: Wednesday, 9:00 am to 12:00 pm; 1:00 pm to 5:00 pm.

Other times by special appointment.

Course Description:

Prerequisites: Current enrollment or prior credit for OSHE 111. This course studies the application of scientific and engineering principles and methods to achieve optimum safety and health conditions through the analysis and design of process, equipment, products, facilities, operations, and environment. A variety of topics will be covered, including product design, plant layout, construction, maintenance, pressure vessels and piping, mechanical systems, materials handling and storage, ventilation, power tools, electrical equipment, confined space, and transportation vehicles and systems.

Course Objectives:

Students will be able to:

- 1. Identify a variety of occupational hazards.
- 2. Recognize information resources regarding occupational hazards.
- 3. Explain basic principles and technologies to analyze and control occupational hazards.
- 4. Project objective: Select a specific work area from a list provided by the instructor, then analyze the work for potential hazards and develop controls to eliminate or mitigate the hazards.

Course Text:

Hagan, Philip E., Montgomery, John F., O'Reilly, James T. (2001) *Accident Prevention Manual for Business & Industry: Engineering & Technology, 12th Edition.* National Safety Council, Itasca, Illinois.

Exams:

There will be two mid-term exams plus a final exam given during the semester to measure your progress and to provide a basis for your grade. Each of the three exams will consist of multiple choice, matching, fill-in-the-blank and, where applicable, short math problems. There will be no essay questions. Each exam will cover the material studied during each of the three units of the class.

You will be permitted to make-up an exam ONLY if you have made arrangements PRIOR to the time the exam was originally administered. No make-up exam will be allowed if you merely have not shown up for the original exam and have not made arrangements to take a make-up. The make-up exam must be taken BEFORE the next scheduled class period.

NO EXCEPTIONS will be allowed.

Assignments:

There are five assignments scheduled for this class. Assignments will cover the main course materials of the class. They should be written clearly and logically USING YOUR OWN WORDS. Copying and pasting directly from the lecture slides, textbook, and any other resources without proper citation are strictly prohibited. Incorrect spelling and grammar will lower the score. You may email your assignment (in Word please), or send a hard copy or your handwritten work (if you prefer) to me. **Assignments turned in after the due days will receive only partial credit.**

Project:

There will be a short research project which requires you to apply the principles learned in class to analyze a specific workplace hazard. The project will be presented in a paper of 5 to 10 pages. The paper will be graded upon accuracy of analysis of the problem and the appropriateness of the corrective measures that are recommended. Good grammar and correct spelling will also be considered in grading the paper.

Projects are due on Tuesday, April 24th. Projects turned in after that date will receive only partial credit.

Course Grades:

1. Grades will be assigned in accordance with the Departmental Scale:

<u>Points</u>	(Percent)		<u>Grade</u>
461-500	(93 - 100)	=	A, Superior
421-460	(85 - 92)	=	B, Very Good
381-420	(77 - 84)	=	C, Average
341-380	(69 - 76)	=	D, Below Average
0-340	(0 - 68)	=	E, Fail

2. Basis for assigning grades:

Three exams @ 100 points	=	300 points	(60% of grade)
Five Assignments @ 20 points	=	100 points	(20% of grade)
Research Project @ 100 points	=	100 points	(20% of grade)
TOTAL	=	500 points	

Course Requirements:

- 1. Adherence to departmental policies and procedures.
- 2. Regular class attendance as prescribed in the departmental requirements.
- 3. Read the material to be discussed in class prior to coming to class.
- 4. Complete and turn in assignments and research project by due deadline.

NOTE:

- 1. Students will NOT automatically be dropped from class. Students who choose to drop must do so by the semester deadline! The last day to withdraw or resign from the university is Friday, 9 March, 2012.
- 2. If you are a qualified student with a disability seeking accommodations under the Americans with Disabilities Act, you are required to self-identify with the Office of Disability Services, Rooms 172 and 173, Kinesiology and Health Studies building.
- 3. Students' behavior/classroom decorum: "Free discussion, inquiry, and expression are encouraged in this classroom. Classroom behavior that interferes with either (a) the instructor's ability to conduct the class, or (b) the ability of the students to benefit from the instruction is not acceptable. Examples may include routinely entering class late or departing early; use of beepers, cellular telephones, or other electronic devices; repeatedly talking in class without being recognized; talking while others are speaking; or arguing in a way that is perceived as 'crossing the civility line.' In the event of a situation where a student legitimately needs to carry a beeper/cellular telephone to class, prior notice and approval by the instructor is required."
- 4. Academic Integrity. The academic community relies upon a high standard of integrity in the relations among its members. To the extent that this standard is not maintained, the good of the community suffers, and injustice (sometimes serious injustice) may be done. One of the most important aspects of academic integrity concerns the just measure of each student's academic accomplishments. These are ordinarily evaluated through written examination or submitted work. For such modes of assessment to operate fairly, it is essential that the instructor be assured that the work used to evaluate the student's performance is genuinely the student's own. It is also the responsibility of the student to uphold the academic integrity of the University. The use of unauthorized material, communication with fellow students during an examination, attempting to benefit from the work of another student and similar behavior that defeats the intent of an examination or other class work is unacceptable to the University. Cheating on examinations, plagiarism, improper acknowledgment of sources in essays and the use of a single essay or paper in more than one course without permission are considered very serious offenses and shall be grounds for disciplinary action.

Course Outline & Reading Assignments (Revised 01/11/12)

Class meets on Tuesdays and Thursdays from 11:00 am to 12:15 pm

Week	Date	Topic	Readings Due	Work Due
Unit 1:	Facilities	and Workstations		
1	Jan. 17 & 19	Introduction & Hazard Control in General	Chapter 1	
2	Jan. 24 & 26	Buildings and Plant Layout	Chapter 2	
3	Jan. 31 Feb. 2	Construction of Facilities (Assignment #1)	Chapter 3	
4	Feb. 7 & 9	Maintenance of Facilities	Chapter 4	Assignment #1
5	Feb. 14 & 16	Boilers and Unfired Pressure Vessels (Assignment #2)	Chapter 5	
6A	Feb. 21	NO CLASS - Mardi Gras Holidays		
6B	Feb. 23	FIRST EXAM	Review Unit 1	Assignment #2
Unit 2:	Workplac	e Hazards and Controls		
7A	Feb. 28	Machine Safeguarding Chapter 6		
7B	Mar. 1	Lockout/Tagout Chapter 6		
8	Mar. 6 & 8	Personal Protective Equipment (Assignment #3) Chapter 7		
9	Mar. 13 & 15	Electrical Safety	Chapter 10	Assignment#3
10	Mar. 20 & 22	Fire Hazards and Life Safety (Assignment #4)	Chapter 11	
11A	Mar. 27	SECOND EXAM	Review Unit 2	Assignment #4
11B	Mar. 29	Research Project Update		
Unit 3:	Materials	Handling and Tool Usage		
12	Apr. 3 & 5	Materials Handling and Storage	Chapter 14	
13	Apr. 10 & 12	NO CLASS - Spring Break		
14	Apr. 17 & 19	Crane, Conveyor, and Rigging	Chapters 15 & 16	
15	Apr. 24 & 26	Powered Industrial Truck	Chapters 17 & 18	Project
16	May 1 & 3	Hand and Portable Power Tools (Assignment #5)	Chapter 19	
17	May 8	FINAL EXAM	Overview	Assignment #5

OTHER READING: Chapters 20 to 25 are to be considered as potential topics of the research project, besides those presented during the class.

OSHE 112 Design of Hazard Controls Spring 2012 Guidelines for Final Project

Objectives and Tasks

The final project for *OSHE 112 Design of Hazard Controls* will be to perform a job safety analysis in a job that you select from an industrial, service or small business worksite. The specific aims of the project are to:

- 1. Analyze the work for potential hazards, and
- 2. Develop controls to eliminate or mitigate the hazards.

First, check your own company or look around your community for possible sites, such as:

- Chemical plant
- > Auto repair shop
- ➤ Machine shop
- ➤ Woodworking shop
- ➤ Hospital laundry, clinical lab, or operating room
- Nursing homes
- Bakery
- ➤ Manufacturing assembly line
- Construction sites (you may just focus on one specific type, such as carpentry, painting, roofing, masonry, etc.)

Then, divide the job into steps or tasks and describe them. Pictures and/or video tapes are very helpful to illustrate the job, although not required. You will also need to get permission to take pictures.

The next step is to identify possible hazards and group them in different categories, including general safety, ergonomic, chemical, biological, etc. You may choose one major hazard, such as confined space, unsafe metalworking machinery, poor ventilation, heavy and repetitive manual material handlings, etc. that is involved in that job. Or depending on the job, the hazards can be multiple.

Next, conduct hazard analyses using the tools/methods that are either taught in classes, or required by the standard, or employed by previous researchers, or all of them. For example, for chemical's toxicity information, you can try to get the MSDS (Material Safety Data Sheet) information and check the related OSHA Health Standards. For confined space, there are certain standards/procedures/programs available that you can refer to.

In the end, recommend improvements or control interventions for the hazard(s) you have found. Try to be specific. For example, if you recommend use of gloves or respirators, describe what glove material or respirator type and cartridge will protect against the specific chemicals in use. If you recommend machine safeguarding, specify what kind of system and how it works. You may also need to examine your suggested controls whether they produce an unexpected impact on the safety and health of the job.

The summary/conclusion section of the project will describe the most important hazard(s) you have found and what controls you are recommending. It does not need to be long, but be comprehensive and concise.

For more information about Job Safety Analysis, refer to http://www.osha.gov/Publications/osha3071.pdf.

Writing Guidelines

- Format
 - ➤ Margins: One inch (1") top, bottom and sides
 - > Spacing: Double-spaced
 - Font: Times New Roman (Size 12) is preferred. Arial is also OK.
 - > Style, Punctuation and Reference: Please follow the *Publication Manual of the American Psychological Association (APA)*. You can purchase it in the university book store. Here are some useful websites that you can take a look as well:
 - 1) www.apastyle.org
 - 2) http://www.ccc.commnet.edu/apa/
 - 3) http://owl.english.purdue.edu/owl/resource/560/01/
 - 4) http://www.uwsp.edu/PSYCH/apa4b.htm
 - ➤ Cover page: Please try to be simple and include the information of project title, author's (your) name, class number and name, instructor's (my) name, and date of submission (Remember the due day is **April 24, 2012**).
- Length Usually between 5 and 10 pages of text, not including: the cover page; large charts, tables and figures; and the reference page. Pages should be numbered, either in the lower right-hand corner or the bottom center. Do not number title pages and tables of content.
- **References** At least 5 references are required. Most should come from books, journals, magazines, newspapers, and other printed sources. No more than half of your sources should be obtained from the internet.

Grading Policies

- Content (60%) Quality of the work
- Organization (20%) Structure of the paper
- Presentation (20%) Spelling, grammar, and format

Please refer to the rubric on next page for project performance consideration!

Performance Consideration (Maximum Points)	Below Expectations 1	Progressing to Criteria 2	Meets Criteria 3	Exceeds Criteria 4	Score
Content (60)	Inconsistent or few details that may interfere with the meaning of the text.	Some details but may include extraneous or loosely related material.	Provides adequate supporting detail to support solution/argument.	Provides ample supporting detail to support solution/argument.	
Organization (20)	Little evidence of organization or any sense of wholeness or completeness.	Little wholeness or completeness, though organization attempted.	Organization pattern is logical & conveys wholeness and completeness with few lapses.	Organization pattern is logical & conveys wholeness and completeness.	
Presentation (20)	Limited or inappropriate vocabulary & incorrect grammar and syntax for intended purpose.	Limited & predictable vocabulary, perhaps not appropriate & some grammar and syntax mistakes for intended purpose.	Uses effective language and appropriate word choices & makes minor grammar and syntax mistakes for intended purpose.	Uses effective language, appropriate word choices, and correct grammar and syntax for intended purpose.	

Total		
LOM		

OSHE 121 SAFETY AND HEALTH PROGRAM MANAGEMENT AND ADMINISTRATION Spring Semester, 2012

Syllabus

Professor: Lawrence A. Mauerman, PE, CSP Office: 110-3 Anzalone Hall

Contacts: Southeastern Office 985-549-3476

Southeastern E-mail Imauerman@selu.edu

Hours: Southeastern Office: Monday and Wednesday, 8:00 am to 12:00 noon & 1:00 to

4:00 pm

At other times by appointment

Course Description:

This course will address the application of management principles and techniques to the management of safety and health and loss control programs. Topics include planning, organizing, budgeting, resourcing, operating, implementing and evaluating safety functions. Prerequisite: Enrollment in or prior credit for OSHE 111.

Course Content:

This course includes an introduction to corporate organization and the concepts of line and staff authority; the importance of applying cost analysis to safety efforts; methods for motivating both management and employees to comply with safe work practices; analysis methods to gauge effectiveness of safety efforts; allocation of limited resources; and the human factors of safety.

Course Objectives:

At the conclusion of this course, the student will be able to:

- 1. Describe the history of modern industrial safety management and explain how the principles of modern safety management developed.
- 2. Discuss the safety roles and responsibilities of managers at the various levels of authority within a typical industrial organization.
- 3. Describe the proactive elements of management systems that can be used to develop and implement effective safety programs.
- 4. Describe the reactive elements of safety programs that are used in effective programs.

Text:

Grimaldi, John V. & Simonds, Rollin H. *Safety Management*. 5th Ed. American Society of Safety Engineers, 1993.

Schedule:

Class meets on Tuesday, from 6:00 pm to 8:50 pm in Anzalone Hall, Rm 214.

- First day of class Tuesday, 17 January, 2012
- 1st Mid-term Exam Tuesday, 14 February, 2012
- Mardi Gras Holiday Tuesday, 21 February, 2012
- 2nd Mid-term Exam Tuesday, 27 March, 2012
- Spring Break Tuesday, 10 April, 2012
- Term Project due Tuesday, 17 April, 2012
- Last day of classTuesday, 1 May, 2012
- Final exam Tuesday 8 May, 2012

Class dates are:

4 — ct .		<u>Mar</u>	<u>Apr</u> <u>May</u>
17 - 1 st day	1	6	3 1 - Last class
24	14 - 1 st Exam	13	10- Spring Break 8 - Final exam
31	21 - Mardi Gras	20	17 - Project Due
	28	27 - 2 nd Exam	24

Exams:

There will be two exams plus a final given during the semester to measure your progress and to provide a basis for your grade. Each of the three exams will consist of multiple choice, fill-in-the-blank and matching questions. There will be **no** essay questions. The exams will take half of the class period on the days they are given. The other half of the class period will be spent introducing the new material for the next topic. The final exam will follow the same format as the other exams, but it will be comprehensive, and will take the full class period.

You will be permitted to make up an exam ONLY if you have made arrangements PRIOR to the time the exam was originally administered. No make-up exam will be allowed if you merely have not shown up for the original exam and have not made arrangements to take a make-up. The make-up exam must be taken BEFORE the next scheduled class period. **NO EXCEPTIONS**.

Project:

There will be a short research project which will require students to evaluate a hypothetical safety problem at a manufacturing facility and to develop a program to eliminate the problem. The problem will be explained in detail in an attachment to this syllabus. The project will be graded on accuracy of analysis of the problem and the appropriateness of the corrective measures that are recommended. Good grammar and correct spelling will also be considered in grading the paper.

You should PROVIDE ME WITH A COPY OF YOUR PROJECT THAT I CAN KEEP. I will provide you with a summary of how the grade for your project was determined. If you wish to see your original project, you may do so by appointment.

The project is due on Tuesday, 17 April, 2012. Any project turned in after that date will receive only partial credit.

Grades:

1. Basis for assigning grades:

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    Exams: (2 mid-term exams @ 100 pts.) = 200 points (40% of grade)
    Final exam = 150 points (30% of grade)
    Term Project: = 150 points (30% of grade)
    TOTAL POINTS POSSIBLE = 500 points
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2. Grades will be assigned in accordance with the departmental code:

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461-500 pts (93%-100%) = A (Superior)

421-460 pts (85%-92%) = B (Very Good)

381-420 pts (77%-84%) = C (Average)

341-380 pts (69%-76%) = D (Below Average)

0-340 pts (0%-68%) = E (Failure)
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Course Requirements:

- 1. Adherence to departmental policies and procedures, a copy of which has been provided to vou.
- 2. Regular class attendance as prescribed in the departmental requirements.
- 3. Read the material to be discussed in class prior to coming to class.
- 4. Complete and turn in research project by due deadline.

IMPORTANT SOUTHEASTERN AND DEPARTMENT POLICIES:

- 1. Students will NOT automatically be dropped from class. Students who choose to drop must do so by the semester deadline! The last day to withdraw or resign from the university is Friday, 9 March, 2012.
- 1. If you are a qualified student with a disability seeking accommodations under the Americans with Disabilities Act, you are required to self-identify with the Office of Student Life, Room 203, Student Union.
- 1. Students' behavior/classroom decorum: "Free discussion, inquiry, and expression are encouraged in this classroom. Classroom behavior that interferes with either (a) the instructor's ability to conduct the class, or (b) the ability of the students to benefit from the instruction is not acceptable. Examples may include routinely entering class late or departing early; use of beepers, cellular telephones, or other electronic devices; repeatedly talking in class without being recognized; talking while others are speaking; or arguing in a way that is perceived as 'crossing the civility line.' In the event of a situation where a student legitimately needs to carry a beeper/cellular telephone to class, prior notice and approval by the instructor is required.
- 1. The academic community relies upon a high standard of integrity in the relations among its members. To the extent that this standard is not maintained, the good of the community suffers, and injustice may be done. One of the most important aspects of academic integrity concerns the just measure of each student's academic accomplishments. These are ordinarily evaluated through written examination of submitted work. For such modes of assessments to operate fairly, it is essential that the instructor be assured that the work used to evaluate the student's performance is genuinely the student's own. It is also the responsibility of the student to uphold the academic integrity of the University. The use of unauthorized material, communication with fellow students during an examination, attempting to benefit

from the work of another student, and similar behavior that defeats the intent of an examination or other classwork is unacceptable to the University. Cheating on examinations, plagiarism, improper acknowledgment of sources in essays and the use of a single essay or paper in more than one course without permission are considered very serious offenses and shall be grounds for disciplinary action.

Course Outline & Reading Assignments

UNIT 1: SAFETY MANAGEMENT FUNDAMENTALS: 1st Exam - Tuesday, 14 February, 2012 Chapters:

- 1 The Problem
- 2 Evolution of Modern Safety Concepts
- 3 OSHA Responsibilities and Implementation
- 4 Organization and Administration Effects
- 5 Safety Management

UNIT 2: SAFETY MANAGEMENT TOOLS: $\mathbf{2}^{\text{nd}}$ **Exam - Tuesday, 27 March, 2012** Chapters:

- 6 Cost Analysis
- 7 Performance Measurement and Motivation
- 8 Systems Safety Analysis
- 15 Employee Selection, Placement and Training

UNIT 3: SPECIAL SAFETY MANAGEMENT TOPICS - Final Exam - Tuesday, 8 May, 2012 Chapters:

- 16 Psychological Aspects and Ergonomics
- 17 Product Safety

OSHE 121

SAFETY & HEALTH MANAGEMENT & ADMINISTRATION Spring Semester, 2012

Research Project

Points possible: 150

INTRODUCTION:

You have just been hired by the X-Kemica Company (XKC), a manufacturer of products used by truck farmers and home gardeners for soil conditioning and fertilizing. XKC has operated for about 15 years as a small regional supplier of agricultural chemicals with about 75 employees. Recently, however, due to pressures imposed by the EPA for more environment-friendly products, and the demand for organically grown fruits and vegetables, truck farmers and home gardeners have become more environment-conscious. XKC's market has expanded rapidly, and it has opened up five new manufacturing and packaging facilities. Most of the new facilities are located at XKC's original mid-Western site, but two are in neighboring communities, about fifteen and twenty-eight miles away. Altogether, XKC has added about 600 new employees at its original and new plants.

XKC has two main product lines: (1) Soil conditioners which improve the general condition of farm soil. These consist of mulches produced from natural organic sources (lawn clippings, leaves, wood chips, etc.) that it obtains from lawn and tree service companies; and (2) fertilizers manufactured from natural minerals and manure. The minerals are purchased from sources all over the country and delivered by truck to XKC's manufacturing sites. The manure is obtained from cattle and poultry farmers in the three-state area surrounding XKC's operations.

As an additional source for the organic materials to be used in the soil conditioner mix, XKC is investigating the possibility of establishing contracts with communities to pick up grass clippings and leaves from residences left at curbside. It is looking at the pluses ands negatives of such an operation. Be sure to consider this as you develop your project.

The soil conditioners and fertilizers are added to a sand/soil mixture which provides bulk for the product and also serves as a carrier for the products, making them easier to apply and mix with existing soil. The products are marketed in 50 and 100-pound bags, and in one-ton reusable bulk containers.

Until its expansion, XKC was primarily a family owned and directed operation. The owners are serious, hard-working people, and handled most of the business matters themselves. However, with the expansion, they have recognized the need to bring on professionals that can help them with some of the more complex aspects of operating a larger company. Because they are environment-conscious, they also recognize the need to have a safe operation. They do not know where to start, however, beyond what would be common sense. This is why they have hired you as they new Director of Safety, Health and Regulatory matters.

ASSIGNMENT:

Your job is to complete several tasks as part of XKC's comprehensive safety and health program. The projects you complete must be designed so they will have the support of both XKC's traditional management, and its hourly employees. Remember, XKC's management has been accustomed to running a smaller operation, and they have been very close to the costs associated with manufacturing and how to control them.

On the other hand, XKC has two distinct groups of employees. The first group includes people who have worked with the company for years--most of them from the beginning of the company. They are

"just like family" having watched the company grow as they have worked there. (In fact, many of them are family, being the sons and daughters and other relatives of the original founders.) The other group of employees are new, and have no long-term ties with the company. Those in the two remote cities have even less knowledge of the company because of the separation from the original location. All of the employees have a high-school education, but few have anything beyond that.

Your safety projects will include:

- 1. <u>CORPORATE SAFETY STATEMENT</u> Develop a corporate safety statement that expresses **the Chief Executive Officer's and XKC's position** on Safety and Health.
- 2. <u>SAFETY STAFF</u> Recommend what you will need for a safety staff, and where you and your organization should **fit within the Company organization** and why.
- 3. <u>PROCEDURE</u> Write a brief safety procedure for dealing with the hazards posed by working with the manures obtained from the farmers. Research the hazards posed by natural manures. The company, of course, will need other procedures to deal with the other hazards posed by the operations, but you are to use this procedure as a model for the other ones. You want to do your very best job on this one, therefore, as it will determine what you can do with the rest.
- 4. <u>OTHER HAZARDS</u> Submit a **list** of the other hazards that you feel would be likely on an operation such as XKC's. Include not only the usual hazards that you would expect to encounter at almost any operation (ex.: electrical, housekeeping, etc.), but those that would be somewhat unique (ex.: packaging, handling bulk materials such as sand, leaves, etc.).

Your finished, total project should be between five (5) and ten (10) single-spaced pages (no more, no less), depending on how much you feel you need. Charts, graphs and illustrations do not count as pages, although you are encouraged to use them to illustrate your intent and position.

Assume that I am the founder and CEO of XKC. Consult with me on the project as you develop your programs to make sure they are acceptable. (It would be a shame to spend the rest of the term working on your Safety Program and find out that I will not go along with it right at the end.)

^{*} Your research paper should be between 5 and 8 pages; single-spaced text; one-inch margins; and double spaced between paragraphs. Font size should be 12-point. Use topic headings to help organize the paper and to guide the reader through a logical presentation of your material. If appropriate, you may use charts, graphs, and illustrations to enhance your paper. They should not, however, be counted as part of the total pages. Include a cover sheet on the front of your paper with the course number and name; the title of your paper; your name; and the date. Do not place your paper in a special cover or folder. Instead, a staple in the upper left-hand corner will be sufficient. You must consult and cite at least five different sources in your paper. For citations in footnotes and bibliography, use a generally accepted format, such as the APA method. Remember, proper grammar, syntax, and spelling are musts. If you have difficulty with these things, get someone to help you. Part of your grade will be determined by your ability to communicate in an intelligible and intelligent manner. For complete details on paper submission, see the Instructor's "Guidelines for Term Papers."

GUIDELINES FOR TERM PAPERS 01/12

The following guidelines are provided to assist you in writing term papers for my classes. Part of the skills that you are expected to acquire in your studies in Occupational Safety, Health and Environment at Southeastern include being able to communicate effectively using the written word. You have probably noticed that your course of OSH&E studies requires you to take several English composition classes. This is also one of the reasons you are assigned to write a term paper. There are two major objectives:

- Provide the opportunity to do research on a topic that is "above and beyond" the material that will be discussed in class. You will become acquainted with ideas and opinions of other writers on topics associated with our field of study. In short, you will expand your intellectual horizons.
- Organize and present your research in an interesting and logical manner.

PART I

The first part of the guidelines outlines my requirements for the general layout of your term paper. I must emphasize that many of these are my preferences, and not necessarily universal, or university, standards. Nevertheless, they work well, and usually make for interesting and well-presented papers.

FORMAT

Margins: One inch (1") top, bottom and sides

Spacing: Single space text, double space between paragraphs.

Font: Face: Times New Roman is preferred. Arial is OK. Font size: 12

Style and Punctuation: The standard for the Department of Industrial Technology is the

Publication Manual of the American Psychological Association (APA).¹

LENGTH The length of the paper will vary, depending on the assignment. Generally, I specify that papers be between 5 and 10 pages of text, not including: the cover page; large charts, tables and illustrations; and the reference page. Such items which explain, expand, and illustrate your topic are welcomed - indeed, encouraged - but they do not count as pages of text. Pages should be numbered, either in the upper right-hand corner, or the bottom center of each page. Do not number title pages and tables of content.

RESOURCES Sources that you have consulted in writing your paper should be listed on the last page. I usually require no fewer than five sources for a 5 to 10 page paper. No more than half (50%) of you resources should be obtained from the internet. Most should come from books, journals, magazines, newspapers, and other printed sources. The reason is that the internet still does not contain all there is to know on a subject, and using it as your only font of information exhibits a kind of intellectual laziness. The APA manual should be consulted for the proper format to be used in listing the resources, including those from the internet.

GRAMMAR, SPELLING, ETC. Carefully review your paper for grammatical errors, spelling mistakes, and typographical errors before you turn it in. If you are not good at this, find someone who is and have them do it for you. Do not leave the corrections for me to make for you as I will charge you more than you can afford.

¹The *Publication Manual of the American Psychological Association* is the style guide used by the Department of Industrial Technology for term papers, research papers, and theses. A copy of this manual is available in the IT department office. If you prefer, it can be purchased at the university Book Store. My copy cost \$23.95, but since I do a lot of writing, it is worth it to have a copy available any time I need it. The APA has extracted some material from the Publication Manual and included it on its website: www.apastyle.org. You may be able to get some of the information you need there, particularly regarding internet sources.

SUBMISSION Papers should be submitted with a cover sheet which identifies the following:

- Title or subject of your paper
- The author: (you)
- The class (number and name, ex.: OSH 115, Introduction to Occupational Safety and Health)
- The instructor: (me)
- Date: The date the paper was submitted

In most cases, I do not want you to submit your paper with any special kind of binding or cover. I appreciate your interest in making the paper "unique" but a fancy cover will never make up for a well-written paper. My preference is a single staple in the upper left-hand corner. In a rare case where a special binding, cover, or folder is expected, I will inform you of this requirement. Papers should be submitted on or before the specified due date. They are acceptable up to midnight on that date. Papers submitted after the due date will be accepted, but they will not receive full credit.

PART II

Your term paper will be graded using the following criteria:

ORGANIZATION (25%) Does your paper flow in a natural, logical sequence? Do you start with basic principles, ideas, etc., and then build on them? Are important terms defined and explained? How much do you assume that your reader already knows, and what do you need to explain? Years ago, when I was serving in the military, I received some helpful, simple advice on how to make presentations. A good presentation, I was told, has three steps. They are: "(1) Tell 'em what you're going to tell 'em. (2) Tell 'em,! (3) Tell 'em what you told 'em." In case you missed it, this translates into: (1) Introduction; (2) Main body of the paper; (3) Summary. It's simple, but it works amazingly well.

CONTENT (50%) This, of course, is why you're writing your paper. It's the "meat" of your work. It should be based on a thorough examination of your assigned topic. Care should be taken to distinguish fact from opinion, although there is room for both. There is no place for fiction in our studies - that is the realm of the novelist. If the topic is controversial care should be taken to examine all sides of the issue. There is no problem assuming a position, yourself, but you have a solid base to support your stance.

PRESENTATION (25%) Presentation involves such things as spelling, grammar, neatness, and format. How does your paper look? Does it invite reading? Have you used proper form in citing and listing your references? Have you included aids to understanding such as charts, tables, and illustrations? In short, how professional is your work? At this stage in your studies, there is no place for sloppy work.

FINALLY

This guideline sets the standards for your work. Adherence to its standards should not only result in a work that is worthy of your time and effort, but also should imbue you with a sense of pride and self confidence. I'm anxious to see what you can do!

OSHE 141: Industrial Hygiene and Toxicology - Spring Semester 2012

Tentative Syllabus*1

Instructor: Dr. Ephraim Massawe

Office: 329A Fayard Hall Tel: x2243 Fax: x5532 E-mail: Ephraim.Massawe@selu.edu

Office Hours: As posted on the blackboard and office door. Or by appointment

Course Description:

This course will introduce students to the basics of industrial hygiene and toxicology. The main principles or framework of industrial hygiene and toxicology are anticipation, recognition, evaluation and control of workplace or occupational hazards. Most recently, the word "confirm" was added to this framework. Students will also learn the concepts of toxicology and risk assessment and how these concepts are used to set up occupational health standards and regulations. The class discussion will focus on a variety of occupational hazards such as airborne contaminants, chemicals, biological and physical hazards (e.g. radiation, heat and cold stress). The course will also touch briefly on other hazards such as ergonomic, psychosocial and mechanical hazards.

Course Objectives:

At the conclusion of this course, student will be able to:

- 1. Describe the basic principles or framework of industrial hygiene and toxicology, i.e., the anticipation, recognition, evaluation and control (and "confirm") of hazards in the workplace.
- 2. Describe briefly federal, state and industry regulations and guidelines regarding worker health on the job.
- 3. Apply fundamental concepts of industrial hygiene, such as toxicology and risk assessment, in the work environment, including standards, regulations and controls.
- 4. Describe specific factors or stresses in the workplace and their potential health effects.
- 5. Demonstrate proper methods in the use and care of IH instrumentation, controls, administrative procedures and PPE.

Required Text:

Scott, Ronald. Basic Concept of Industrial Hygiene. New York: Lewis Publishers, 1997.

Optional Text: Plog, Barbara. Fundamentals of Industrial Hygiene. National Safety Council, 5th edition

Other recommended readings: OSHA and NIOSH Website; TLV handbook

The two books for this course are available at the rental stores, and both will be used interchangeably. It is therefore recommended that students should obtain these two books (available for free) from the book rental

^{*1}This syllabus is subject to change depending on various parameters

First day of class: Tuesday 17th January, 2012 (9:30 a.m – 10:45 a.m) – other dates are shown below

Janua	ary,2012	Februa	ry, 2012	Marc	h, 2012	Api	ril, 2012	May	, 2012
Tuesday	Thursday	Tuesday	Thursday	Tuesday	Thursday	Tuesday	Thursday	Tuesday	Thursday
17 th First Day of Class	19 th	2 nd			1 st	3 rd	5 th Exam #2	1 st ++	3 rd ++ Last Day of Class
24 th	26 th	7 th	9 th	6 th	8 th	10 th	12 th	8 th	10 th
31 st		14 th	16 th	13 th	15 th	17 th	19 th		
		21 st No Class Mad Gras	23 rd <i>Exam #1</i>	20 th	22 nd	24 th	26 th Final Term Paper Due		
		28 th		27 th	29 th				

Last Day of Class: 4th May 2012 (see university calendar - attached)

++ Presentations to class: Students must attend both sessions to get full credit for their terms papers (see grading rubric)

Exams:

Take note of the following exam dates: Exam # 1 (02/23/2012); Exam # 2 (04/05/2012). The final exam date is 5/7/2012 as posted on the university exam schedule - http://www.selu.edu/admin/rec_reg/exam_sch/).

Class Day(s)	Class Starts Time from	Class Starts Time to	Spring 2012 Exam Day	Exam Time
ТТН	9:30 am	10:45 am	Mon., May 7	12:30 pm - 2:30 pm

These three exams will measure a student's academic progress and provide a basis for a final grade. Each exam will consist of multiple choices, fill in the blank, and matching questions, short essay questions and, solving mathematical problems related to industrial hygiene and toxicology.

Students will not be permitted to make-up any exam <u>unless</u> prior approval has been sought from the instructor. A permit will only be granted on the basis of compelling reasons such as unforeseen emergencies – e.g. death of a close relative. Exam make-up will <u>not</u> be allowed if a student merely decides not to show up for the original exam. If permission is granted to make up an exam, the exam must be taken before the next scheduled class!

Term Paper or Project:

Students will conduct a short research project, hereinafter referred to as a "Term Paper". A term paper requires students to use the framework of IH i.e. anticipate, identify, evaluate and recommend control measures to prevent exposures to occupational hazards that would otherwise impact on a worker's health and safety. Term papers are based upon a serious research, data gathering, and justification of why the work or interventions in that occupational environment is important. This work must be considered a "work in progress" i.e. knowledge building upon one another as the semester begins. Please avoid a last minute rush! Students should link the theory learned and apply it to a particular research project or work situation, including why the research is important in the nation or at the local level i.e. in the state of Louisiana.

All term papers are due as indicated on this syllabus i.e. on <u>4/26/2012 at 9:30 am</u>. Please note: if <u>a term paper or other attachments required on the due date are submitted after this date</u> it will be subjected to a penalty of <u>5 pts per day to be subtracted from the overall grade. There is no exception because the deadline indicated on this syllabus is the last day to submit the term papers.</u> Students are encouraged to finish their term papers early to avoid *last* minute rush. Although students <u>may</u> submit term papers anytime before due date, for convenience of handling and grading the term papers collectively, I prefer if you to submit on the <u>date and time</u> shown here.

Students must submit the following documents at the time and date the term papers are due

- (1) One original term paper as a hard copy (6-10 pages) and the appendices;
- (2) Power points slides attached to the term paper as hard copies (5-6 slides)
- (3) An electronic version of all the above 1&2.

A sign-in sheet will be provided where students will acknowledge to have submitted each of these documents

Each term paper will be graded based upon its quality, content and how it is organized in the context of the **course objectives** (**please read course objectives**). The grading is also based upon the *number and quality* of reference materials that are cited, grammar, punctuation and spelling. Students are encouraged to use credible references, including the required or recommended text book(s) or both and other references that will be used to help with the research paper. Please run spell check of your term papers before submission. Guidelines to help students with their research and writing, together with a grading rubric will be posted on the blackboard.

The following are tentative dates for students to present their term papers: 05-01-2012 and 05-03-2012beginning at 9:30 am. Please arrange to come to class early enough to load your power points. Please note that as part of the grading process, students should attend all presentation sessions, be formal, respect each other and raise relevant questions when colleagues are doing their presentations. For details, please see the grading rubric.

Assignments: Activities included are the pop-up quizzes, individual and group class exercises and homework assignments. While the numbers of assignments will be decided by the instructor, points for each assignment will be based on the level of involvement! Students cannot make up missed class exercises, pop-up quizzes or other in-class assignments. Please note that the instructor reserves the right to give class exercise at any time of the semester or during any time of the class. Also note that the basis for assigning the course grades to determine the overall grade includes impromptu quizzes, assignments and in-class exercises. Homework assignments or tasks are assigned to help students to better understand the materials. Please take class exercises, pop up quizzes and group or homework assignments seriously. See the weighting factor for this item.

<u>Validation of the Syllabus</u>: Student must read and understand the content of this syllabus, including the fact that "it is tentative"; the dates of the exam(s); assignment due dates; and the grading rubric! In addition to validating the syllabus online, students must also <u>sign and hand</u> over to the instructor a statement indicating that they have read and understood the contents herein of the entire syllabus! <u>Please ask questions to clarify the content of the syllabus</u>, including incorrect dates, grading schematic etc.

Course Grades: Basis for the final letter grades are <u>based on the 10 point scale as indicated below:</u>

A Letter Grade	On the Basis of 100 %
A, Superior	90 - 100
B, Very Good	80 – 89.9
C, Average	70 – 79.9
D, Below Average	60 – 69.9
F, Fail	0 – 59.9

Grade Distribution Table

	On a 100 % Basis
HW & Class Assignments; Popup Quizzes	20
Term Paper**	20
Exam # 1	20
Exam # 2	20
Final Exam	20
Total	100 (%)

Course Requirements:

- 1. Adherence to departmental policies and procedures, a copy of which has been provided to you.
- 2. Regular class attendance as prescribed in the departmental requirements (students are responsible to sign the roll sheet every time the class meets).
- 3. Read the material to be discussed in class prior to coming to class.
- 4. Complete and turn in research project by due deadline.
- 5. No independent studies will be negotiated with the instructor. If a student wants to pursue this path, they should consult with the head of the department ahead of time
- 6. Attendance: Please consult the following link for class attendance policy: http://www2.selu.edu/documents/policies/empl/p4_instructional_practices.pdf

Note:

- 1. <u>Dropping out of class:</u> Students may <u>not</u> automatically drop from class. Students who choose to drop must do so by the semester deadline! See the University calendar attached for dates referring to withdrawal.
- 2. <u>Student disability policy:</u> A qualified student with a disability seeking accommodations under the Americans with Disabilities Act should self-identify with the Office of Student Life, Rm. 203, in the Student Union Bldg. <u>Hand a copy of your papers to the instructor on the first day of class</u>
- 3. <u>Students' behavior/classroom decorum:</u> Free discussion, inquiry, and expression are encouraged in the classroom. Classroom behavior that interferes with either the instructor's ability to teach or the ability of other students is not acceptable. Refrain from routinely entering class late or departing early; use cellular telephones or other electronic devices in class or repeatedly talking in class without being recognized. Talking while others are speaking or arguing in a way that is perceived as 'crossing the civility line' will not be tolerated.
- 4. **Academic Integrity.** The academic community relies upon a high standard of integrity in the relations among its members. To the extent that this standard is not maintained, the good of the community suffers, and injustice (sometimes serious injustice) may be done. One of the most important aspects of academic integrity concerns the just measure of each student's academic accomplishments. These are ordinarily evaluated through written examination or submitted work. For such modes of assessment to operate fairly, it is essential that the instructor be assured that the work used to evaluate the student's performance is genuinely the student's own. It is also the responsibility of the student to uphold the academic integrity of the University. Any use of unauthorized material, communication with fellow students during exams, or an attempt to benefit from the work of other students and similar behavior that defeats the intent of an exam or other class work is unacceptable. Cheating on examinations, plagiarism, improper acknowledgment of sources in essays and the use of a single essay or paper in more than one course without permission are considered very serious offenses and shall be grounds for disciplinary action.

Course Outline & Reading Assignments (power points lectures are provided for convenience)

Module 1: Hazard Anticipation and Identification (ch 1-5 – Scott and various pages from Plog)

- a. Introduction to Industrial Hygiene & Historical Views
- b. Definitions and professionals involved in industrial hygiene work
- c. Federal and state regulations and standards pertaining to the work of an Industrial Hygienist
 - a. Threshold Limit Values (TLVs), Permissible Exposure Limits (PEL), etc
- d. Broad Categories and Specific hazards, including environmental factors/stresses
- e. Ethics of the IH profession (Plog et al)
- f. Job description of an IH or OEHS professional

Exam #1

Module 2: Industrial toxicology and the basics (evaluating toxicity) – (*Ch 1-5 Scott and various pages from Plog*)

- a. Toxicology and risk assessment (basics)
- b. Dose-response relationships
- c. LD_{50} and EC_{50}
- d. Classifications of toxics agents and classes of toxicity
 - i. Systemic and Local health effects
 - ii. Asphyxiants categories
 - iii. Reproductive, Teratogenicity etc.
 - iv. Acute vs. chronic health effects
 - v. Latency period
- e. Inhalation toxicology particulates, aerosols etc; and health effects i.e. respiratory illnesses
- g. Toxicokinetics and toxicodynamics; modes of entry of harmful agents into human body (Chapt 4)
 - i. GI System and the skin/eye
 - ii. Liver
 - iii. Lungs
- h. Occupational Dermatitis/Eye Hazards (Ch 6 Scott and Various pages from Plog) Exam #2

Depending on time availability during the semester, the following hazards or topics may or may not be covered

Module 3: - Introduction to Hazards Evaluation in the Workplace (Ch.: 6/7 Scott and various pgs from Plog)

- a. Air Contaminants a brief overview of sampling and analytical methods/instruments
 - a. Gases, vapors and solvents/asphyxiants/silica
 - b. Particulate
- b. Other hazards
 - a. Chemicals
 - b. The anatomy of the ear, noise and the hearing loss (Ch 12 Scott and various pages from Plog)

<u>Module 4: Hazard Evaluation and Control -Protecting the worker-</u> (Ch 8/9 Scott and pages from Plog)

- a. Methods of control
 - i. Substitution
 - ii. Engineering Control Local and General Exhaust Ventilation
 - iii. Administrative Controls
 - iv. Personal Protective Equipment (PPE), including respirators
- a. Ionization Radiation and Extreme Temperature
- b. Ergonomics
- c. Biohazards and Noise

Final Exam

Academic Calendar - Spring 2012 (For your convenience)

Date	Description				
January 9	Rental textbook pick-up begins for students who are paid.				
January 9 – 10	Freshman Orientation.				
January 10	Open Registration Ends at 5:00 p.m.				
January 11	No Registration or Schedule Adjustments during this time. Registration re-opens during Final				
January 11	Schedule Adjustment.				
	Final Schedule Adjustment begins at 7:30 a.m. on Thursday, January 12th. Students should check				
January 12 - 13	their schedule for any classes removed due to low enrollment. Students who decide not to attend must				
Junuary 12 13	drop all their classes. Students will be financially responsible for any classes remaining on their schedule				
	as of 12:30 p.m. on Friday.				
	Fee Payment Deadline at 12:30 p.m. for all students registered for Spring 2012. Students who have				
January 13	not paid by 12:30 p.m. will not have access to other university services such as textbook rentals, ID				
<i>y</i> -	services, hangtags, housing, meals, etc. Students are responsible for tuition and fees for any courses that				
T 10	remain on their schedule as of 12:30 p.m.				
January 13	Last day for undergraduate students to remove "I" grades.				
January 16	Martin Luther King Holiday.				
January 17	First Day of Classes; Regular semester and Term I.				
Eshmany 15	Graduation Audit for Spring 2012 Graduation Candidates begin. No graduation applications will be				
February 15	accepted for Spring 2012 after this date. Last day to apply for Summer/Fall 2012 graduation without late fee.				
February 16					
February 20 - 22	Mardi Gras Holidays.				
March 5	Term I Classes End.				
March 6	Term I Classes: Final Examinations: T-TH schedule.				
March 7	Term I Classes: Final Examinations: M-W schedule.				
March 9	Regular Classes: Last Day to withdraw or resign from the University. Deadline at 12:30 p.m.				
March 12	Term II Classes Begin.				
March 16	Term I grades due by 9:00 a.m.				
March 19 - 23	Priority Registration for Summer and Fall 2012 classes.				
April 6 - 13	Spring Break.				
April 11-12	Early Orientation for Scholarship Recipients.				
April 20	Term II Classes: Last Day to withdraw from classes.				
May 4	Last Day of Classes				
May 5	Saturday Only Classes - Final Examinations.				
May 7 - 11	Final Examinations				
May 12	Commencement 10:00 a.m.				
May 14	Grades due by 9:00 a.m Last day to return rental textbooks without a fine.				
May 18	Student accounts will be charged for any rental books not returned by 12:30 p.m.				

^{*}Grades of prospective graduating students are due by 9:00 a.m., Thursday, May 10, 2012.

Note: UNIVERSITY OFFICES WILL BE CLOSED ON MARTIN LUTHER KING HOLIDAY - JANUARY 16; MARDI GRAS - FEBRUARY 20-21, AND EASTER - APRIL 6-9. CAMPUS DINING OPERATIONS WILL ALSO BE CLOSED WHEN UNIVERSITY CLASSES ARE NOT IN SESSION. PLEASE REFER TO www.selu.edu/AuxServices FOR FURTHER INFORMATION.

ALL RENTAL TEXTBOOKS MUST BE RETURNED TO TEXTBOOK RENTAL ON OR BEFORE 6:00 P.M. ON THE FIRST BUSINESS DAY FOLLOWING THE LAST DAY OF FINAL EXAMINATIONS. HOURS OF OPERATION EACH DAY DURING FINAL EXAMS: 7:00 A.M. -6:00 P.M.

OSHE 231

Safety Laws, Regulations and Standards - Spring Semester 2012 – TENTATIVE SYLLABUS¹*

Instructor: Ephraim A. Massawe, Sc.D; Industrial Hygiene and Environmental Health

Office: 329A: Fayard Hall

Contacts: Southeastern Office: Tel: 985-549-2243 Fax: 985-549-5532

Southeastern e-mail: ephraim.massawe@selu.edu

<u>Office Hrs:</u> As posted on the blackboard and instructor's office door - <u>Other times by special appointment, please</u> (<u>Walk-Ins Will Not be Entertained</u>).

Course Description:

<u>Prerequisites:</u> Current enrollment of prior credit for OSHE 111. OSHE 231 - Safety Law, Regulation and Standards course - provides students with an opportunity to study the development processes, sources and applications of the minimum safety and health requirements established by laws, regulations, standards, and codes for the general industries (i.e. OSH Act and 29 CFR 1910). Major topics therefore include but not limited to introduction to OSHA general industry standards and regulations and their enforcement, sources of regulations and standards and key roles played by NIOSH, ACGIH and other professional organizations in the safety and health promotion in the U.S. through the standards development processes (consensus and the adoption of standards by reference). Note that construction industry standards are not covered

Course Content:

This course provides an in-depth study and analysis of the role played by federal safety laws, regulations and standards to ensure workplace safety and health and the benchmark for minimum performance of safety and health professionals. This course is designed on the premise that safety and health professionals, who serve as experts for regulatory compliance at workplace, must have some knowledge of safety and health laws, regulations and standards pertaining to workplace safety and health. These professionals can then ensure that workplace managers and other workers have the requisite safety and health information pertaining to these same laws, regulations and standards through training to be able to carry out their daily duties without injuries or suffering adverse health effects.

Course Objectives:

At the conclusion of this course, you will be able to:

- Identify the origin or sources of safety laws, regulations and standards and to be able to differentiate between them
- Describe the historical development of the Occupational Safety and Health Act of 1970 (as a broad legislative framework for occupational safety regulations and standards).
- List the major pieces of the OSH Act (Law) that affect industrial health and safety, and the environment.
- Demonstrate a mastery knowledge of how regulatory material in the *Code of Federal Regulations* (CFR) is organized and presented for easy of reference (CFR made easy).

¹* This syllabus is subject to change depending on various parameters

- Demonstrate knowledge of standards and codes developed by industry and private organizations to supplement and compliment federal regulations. To explain how these materials are or were used as "consensus standards."
- Demonstrate knowledge of the content of safety regulations found in 29CFR 1910 (General Industry Regulations).

<u>Course Text:</u> U.S. Department of Labor: Title 29, *Code of Federal Regulations*, Part 1910 - Occupational Safety and Health Act: General Industry Regulations. Washington, D.C.: U.S. Department of Labor. Updated through September 2011 (This book will cost students about \$60.00. The text book is available at the SLU Bookstores http://www.southeasternbookstore.com/home.aspx. Tel 985-549-5393

<u>Optional Materials or References:</u> (Available in the Library - Government Documents Section OR online) – OSHA and NIOSH Website (http://www.osha.gov/ and http://www.osha.gov/

Schedule:

Class meets on Wednesdays, from 6:30 to 9:15 pm (See University Policy). At Livingston Literacy Center, Walker

Class Dates are: First Day of Class: Wednesday January 18th, 2012 at 6:30 pm (Livingstone Literacy Center)

January, 2012	February, 2012	March, 2012	April, 2012	May, 2012
18 th First Day of Class	1 st	7 th	4 th Exam # 2	*2 nd * Last Day of Class and Presentations Continue
25 th	8 th	14 th	11 th Spring Break	9 th Final Exam
	15 th	21 st	*18 th * Final project due Presentations	
	22 th Mardi Gras Holiday ⁺ <u>No class</u>	28 th ++	*25 th * Presentations	
	29 th <i>Exam # 1</i>			

^{*}students will present their final papers to their colleagues

^{*}Term paper due/student presentations! Attend both sessions to get full credit for the final paper

^{*} See University Academic Calendar also for these deadlines and the days to remember!

^{**} Guest Speaker – tentative date

Exams:

Students will take *three* exams (*Exam #1; Exam #2*) on the dates shown above. Provided below is the university website link for the <u>final exam date</u> for this class.

Evening Classes						
Class Day(s) Class Starts Time from Class Starts Time to Spring 2012 Exam Time						
MW	6:30 pm	7:45 pm	Wed., May 9	7:15 pm - 9:15 pm		
http://www.selu.edu/admin/rec_reg/exam_sch/						

Each of the three exams will consist of multiple choice, matching, fill-in-the-blanks or essay type of questions. In **some exceptional cases**, e.g. noise calculations or fall protection standards, mathematics skills or calculations may be needed and included. Some exams <u>may</u> involve the use of the text book (open-book) or students may be asked to come to class with a one sheet of written notes. Exams are not limited to the materials presented in the lectures, or text book alone, but also from the videos shown in class on various aspects of standards and regulations or materials that may have been presented by guest speakers. Exams will be comprehensive and <u>may</u> cover or <u>may not</u> cover all the material completed at the time of taking a particular exam. Students should be prepared at all times to be able to answer any question(s) related to the OSHA law of 1970; as well as the general regulations and standards (29 CFR 1910), sources of laws, regulations and standards etc. It is at the discretion of the instructor to issue or not to issue study guide(s) for these exams. Students are strongly encouraged to make their own study guides by taking notes in class or by reading the textbook, lecture notes (spoken and power point slides).

<u>Make up Exams Policy:</u> In <u>very exceptional cases</u>, a student will be permitted to make up an exam. This is only possible when a student missed an exam because he or she made <u>prior</u> arrangements with the instructor and approval was obtained. <u>No exam make up will be allowed if a student merely decides not show up for the original exam date.</u> If the approval for missing an exam is granted, then the make-up exam must be taken <u>before</u> the next scheduled class period <u>without exception</u>, <u>please!</u>.

<u>Term Paper or Project</u>: There will be a short research project (term paper) which will require students to apply theoretical knowledge of the <u>OSH Act (1970)</u>, <u>regulations</u>, <u>codes and standards</u> (29 CFR 1910) to a real-life situation [<u>no construction standards or regulations unless such standards and regulations specifically apply to the general industry e.g. fall protection, please]. Students may pick up topics which interest them from <u>29 CFR 1910</u> or research topics such as "violations in the general industry in past decade". The final term paper or term paper report will be in the form of a technical paper of *no less than 6 and no more than 10 pages* in length. Students should consult with the grading rubric to complete their term papers to the required standards.</u>

Students are encouraged to abide by the guidelines for writing technical papers, including selecting a **relevant topic to the course** and **use of credible references**. Students may decide to use any style of choice, including the fonts, but, it preferable to use New Times Romans or Times. In any case, the writing style must be uniform throughout the entire report/term paper. The format (titles and subtitles) of the term paper will be available on the blackboard. These guidelines also include the grading rubric.

Term papers will be graded on the basis of accuracy and use of credible literature, critical analysis and critique of relevant OSHA laws, standards and regulations and application of safety regulations and standards (**General industry standards**) to real or hypothetical workplace scenarios. Normally part of the grading process may include , (a) contents, (b) good grammar, (c) relevance to the course objectives/lectures (d) formal presentations – including

<u>formal dressing</u> e) attendance at all presentation session(s); (f) correct spelling are some key components of the grading rubric; and respecting the class during presentations.

Note also that the mandatory attachments – e.g. the electronic version of the term paper itself and power point slides (at the minimum 5 pptx. slides) and appendices must be incorporated into the report as appendix/appendices to receive full credit. Term papers are due on 18th April 2012 at the beginning of the class.

At the time of presentation please include the following documents:

- A hard copy (limit to page number required) and appendices, if any (attached)
- Hard copy of the power point slides
- Electronic version of the term paper
- Electronic version of the power point slides

The due date of 18th April 2012 means that this is the last day to submit your term papers. A penalty of 5 pts per day will apply to students turn their term papers after this due date. A penalty of 5 points per day will also apply to any document that is not submitted on the due date.

The tentative dates for students to present their term papers in class are: 04/18/2012; 04/25/2012 and 05/02/2012. To get full credit for the term papers, students must attend all these two sessions. All electronic versions (power point slides and term paper) must be turned in at the time term paper are due.

<u>Impromptu quizzes, class exercises or group work</u>: The instructor reserves the right to give in-class exercises/assignments at any time and throughout the spring semester <u>without prior or advance notice</u>. These exercises are ad hoc (impromptu) and will depend on the lectures and discussions presented. Students who miss these assignments will <u>not be allowed to make up</u> any of these class exercises, impromptu quizzes. **See the grading schedule below to see the grade of this item and related it to the** overall grade for the course.

Homework Assignments/Reflections on Videos/Guest Speakers Presentations: Students will complete take homework assignments. The due date will be posted on the assignment; usually one week after the assignment is posted on the blackboard or handed out to them. It is the responsibility of the students to ensure that they check the blackboard to determine which assignments are posted and adhere to all due dates. It is not and it will not be the responsibility of the instructor to tell students which homework assignments have not been handed in. See the grading schedule below to see the overall grade of this item towards the overall grade of the course.

<u>Validation of Syllabus:</u> Each student has the responsibility to read and understand the content of this syllabus. For students' convenience, I have also included a validation statement on the blackboard which must be signed and handed back to the instructor on the first day of class.

Course Grades:

Grades will be assigned in accordance with 10-point Scale below:

100 Points scale	Remarks (Final Grade)
90 - 100	A, Superior
80 - 89.99 *	B, Very Good
70 - 79.99 *	C, Average
60 - 69.99 *	D, Below Average
0 - 59.99 *	F, Fail (FY or FN)**

^{*}Instructor reserves the right to adjust the grades to the nearest number. Students should refrain from demanding it as a right.

**FY – Student attended ≥60% of the time **FN – Student attended ≤60% of the time Basis for assigning final grades:

Item to be Graded	On a 100 % scale		
Assignments (HW/Quizzes etc)	20		
Term Paper	20		
Exam # 1	20		
Exam # 2	20		
Final Exam	20		
Total	100 (%)		

Course Requirements:

- 1. Adherence to departmental policies and procedures, a copy of which has been provided to you.
- 2. Regular class attendance as per departmental policy (students are responsible to sign the roll sheet).
- 3. Read the material to be discussed in class prior to coming to class.
- 4. Complete and turn in research project by due deadline.
- 5. No independent studies will be negotiated with the instructor. If a student wants to pursue this path, they should consult with the head of the department ahead of time
- 6. Attendance: Please consult the following link for class attendance policy: http://www2.selu.edu/documents/policies/empl/p4 instructional practices.pdf

Note:

- 1. <u>Dropping out of class:</u> Students may <u>not</u> automatically drop from class. Students who choose to drop must do so by the semester deadline! See the University calendar attached for dates referring to withdrawal.
- Student disability policy: A qualified student with a disability seeking accommodations under the Americans with Disabilities Act should self-identify with the Office of Student Life, Rm. 203, in the Student Union Bldg. Hand a copy of your papers to the instructor on the first day of class
- 3. <u>Students' behavior/classroom decorum:</u> Free discussion, inquiry, and expression are encouraged in the classroom. Classroom behavior that interferes with either the instructor's ability to teach or the ability of other students is not acceptable. Refrain from routinely entering class late or departing early; use cellular telephones or other electronic devices in class or repeatedly talking in class without being recognized. Talking while others are speaking or arguing in a way that is perceived as 'crossing the civility line' will not be tolerated.
- 4. **Academic Integrity.** The academic community relies upon a high standard of integrity in the relations among its members. To the extent that this standard is not maintained, the good of the community suffers, and injustice (sometimes serious injustice) may be done. One of the most important aspects of academic integrity concerns the just measure of each student's academic accomplishments. These are ordinarily evaluated through written examination or submitted work. For such modes of assessment to operate fairly, it is essential that the instructor be assured that the work used to evaluate the student's performance is genuinely the student's own. It is also the responsibility of the student to uphold the academic integrity of the University. Any use of unauthorized material, communication with fellow students during exams, or attempting to benefit from the work of other students and similar behavior that defeats the intent of an examination or other class work is unacceptable to the University. Cheating on examinations, plagiarism, improper acknowledgment of sources in essays and the use of a single essay or paper in more than one course without permission are considered very serious offenses and shall be grounds for disciplinary action.

Course Outline & Reading Assignments***:

<u>Module 1:</u> Occupational Safety and Health Act (1970) vs. Occupational Safety and Health Administration (OSHA)

- 1.1 The evolution of the OSHE Laws, regulations, codes and standards
 - 1.1.1 Students recall three branches of the government and why we need laws, regulations and standards
 - 1.1.2 Industry standards-making organizations (professional organizations etc)
 - 1.1.3 Types of OSHA standards
 - 1.1.3.1 Consensus, Permanent and Other types of standards (e.g. adopted federal standards (*Subpart B 1910:11 -18*)
 - 1.1.3.2 Vertical and Horizontal Standards
 - 1.1.3.3 Compliance or specification standards and performance standards
 - 1.1.4 Comparison and contrasting OSH (OSHA) and Environmental Laws and Regulations (EPA) and the jurisdiction of these two agencies

Module 2: How to Use the Code of Federal Regulations

- 2.1 The CFR Made Easy What is a CFR and how is it Organized?
- 2.2 Annual updates of the Federal CFRs and when each CFR is updated?
- 2.3 Organization of the *Code of Federal Regulations* (CFR)

Module 3: The Content of the OSHA Laws, Regulations and Standards - Specifics

- 4.1 OSHA regulations as minimum safety standards
 - 4.1.1 General Industry Standards (**29** *CFR* **1910**) (<u>note:</u> we are <u>skipping 1926</u> <u>Construction and 1928 Agriculture</u>)
 - 4.1.2 Inspections, Citations and Proposed Penalties (1903: 1-22)
 - 4.1.3 Record Keeping and Occupational Injuries and Illnesses (1904 Subpart A G)
 - 4.1.3.1 OSHA Log 300; 300A; 301 (pg 728/729); Incident Rates pg 734
- 4.2 Working and Walking Surfaces 29 CFR 1910.21-30 (Subpart D)
- 4.3 Exit Routes, Emergency and Fire Prevention Plans (29 CFR 1910: 33-39Subpart E)
- 4.4 Fire Protection (29 CFR 1910: Subpart L:155-165)

- 4.4.1 Fire Extinguishers Portables/Extinguishing systems etc...29 *CFR 1910: Subpart L 1910.157-1910.162*)
- 4.5 Occupational Noise Exposure and Control PELs; Audiograms; Rule of Thumb for Adding up Noise Levels **29** CFR **1910**: **95**) Guest Speaker (OSHA Area Director)
- 4.6 Personal Protective Equipment (PPEs) (29 CFR 1910: 132-138)
- 4.7 Regulations on the Ventilation Systems Engineering Controls 29 CFR 1910.84
- 4.8 Hazardous Substances Substances 29 CFR 1910 Subpart H
 - 4.8.1 Flammables/Combustibles **29 CFR 1910.106**
 - 4.8.2 Process Safety Management Standards (PSM) 29 *CFR 1910:119*) *Guest Speaker*
 - 4.8.3 Hazardous Substances Hazardous Waste Operations and Emergency Response (HAZWOPER) SQG, Hazmat, LQG² etc (*Subpart Z: 1910:120*)
- 4.9 Machinery and Machine Guarding The LOTO³ Program- (Subpart O: 29 CFR 1910:211-219)
- 4.10 Toxic and Hazardous Substances *Subpart Z: 29 CFR 1910.1000; 1910.1030 (BBP);* 1910.1043;1910.1096;1910;1200⁴
- 4.11 Materials Handling and Storage Subpart N: **29CFR 1910.178-179**⁵
- 4.12 The General Duty Clause Addendums: e.g. In the absence of a regulation or standard, the **general duty clause** stands or applies! Ignorance of the Law isn't an Excuse
 - ***PS: Please note that the presentation of these materials will not necessarily be in the order they appear on this syllabus!!

² SQG/LQG – Small/Large Quantity Generator (Hazmat)

³ LOTO – The Lockout/Tagout Program

⁴ 1910.1000-Air Contaminants; 1030 (Bloodborne Pathogens – BBP); 1043 Cotton Dust; 1096 – Ionizing Radiation

⁵ Powered Industrial Trucks and Overhead and Gantry Cranes

Academic Calendar - Spring 2012 (Attached for your convenience)

Date	Description					
January 9	Rental textbook pick-up begins for students who are paid.					
January 9 - 10	Freshman Orientation.					
January 10	Open Registration Ends at 5:00 p.m.					
January 11	No Registration or Schedule Adjustments during this time. Registration re-opens during Final Schedule Adjustment.					
January 12 - 13	Final Schedule Adjustment begins at 7:30 a.m. on Thursday, January 12th. Students should check their schedule for any classes removed due to low enrollment. Students who decide not to attend must drop all their classes. Students will be financially responsible for any classes remaining on their schedule as of 12:30 p.m. on Friday.					
January 13	Fee Payment Deadline at 12:30 p.m. for all students registered for Spring 2012. Students who have not paid by 12:30 p.m. will not have access to other university services such as textbook rentals, ID services, hangtags, housing, meals, etc. Students are responsible for tuition and fees for any courses that remain on their schedule as of 12:30 p.m.					
January 13	Last day for undergraduate students to remove "I" grades.					
January 16	Martin Luther King Holiday.					
January 17	First Day of Classes; Regular semester and Term I.					
February 15	Graduation Audit for Spring 2012 Graduation Candidates begin. No graduation applications will be accepted for Spring 2012 after this date. Last day to apply for Summer/Fall 2012 graduation without late fee.					
February 16	Term I Classes: Last day to withdraw from classes.					
February 20 - 22	Mardi Gras Holidays.					
March 5	Term I Classes End.					
March 6	Term I Classes: Final Examinations: T-TH schedule.					
March 7	Term I Classes: Final Examinations: M-W schedule.					
March 9	Regular Classes: Last Day to withdraw or resign from the University. Deadline at 12:30 p.m.					
March 12	Term II Classes Begin.					
March 16	Term I grades due by 9:00 a.m.					
March 19 - 23	Priority Registration for Summer and Fall 2012 classes.					
April 6 - 13	Spring Break.					
April 11-12	Early Orientation for Scholarship Recipients.					
April 20	Term II Classes: Last Day to withdraw from classes.					
May 4	Last Day of Classes					
May 5	Saturday Only Classes - Final Examinations.					
May 7 - 11	Final Examinations					
May 12	Commencement 10:00 a.m.					
May 14	Grades due by 9:00 a.m Last day to return rental textbooks without a fine.					
May 18	Student accounts will be charged for any rental books not returned by 12:30 p.m.					

 $\ensuremath{^*Grades}$ of prospective graduating students are due by 9:00 a.m., Thursday, May 10, 2012.

NOTE: UNIVERSITY OFFICES WILL BE CLOSED ON MARTIN LUTHER KING HOLIDAY - JANUARY 16; MARDI GRAS - FEBRUARY 20-21, AND EASTER - APRIL 6-9. CAMPUS DINING OPERATIONS WILL ALSO BE CLOSED WHEN UNIVERSITY CLASSES ARE NOT IN SESSION. PLEASE REFER TO www.selu.edu/AuxServices FOR FURTHER INFORMATION.

ALL RENTAL TEXTBOOKS MUST BE RETURNED TO TEXTBOOK RENTAL ON OR BEFORE 6:00 P.M. ON THE FIRST BUSINESS DAY FOLLOWING THE LAST DAY OF FINAL EXAMINATIONS. HOURS OF OPERATION EACH DAY DURING FINAL EXAMS: 7:00 A.M. - 6:00 P.M.

OSHE 242: Ergonomics Spring Semester, 2012

Syllabus

Instructor: Lu Yuan, Sc.D.
Office: Fayard Hall 327E
Phone: 985-549-3925
Email: Lu.Yuan@selu.edu

Office Hrs: Southeastern Office: Wednesday, 9:00 am to 12:00 pm; 1:00 pm to 5:00 pm.

Other times by special appointment.

Southeastern Livingston Center: Thursday before class from 6:00 pm to 6:30 pm.

Course Description:

Credit 3 hours. *Prerequisites: Enrollment in or prior credit for Mathematics 241 and OSHE 111*. This course explores ergonomic design principles which involve the planning and adapting of equipment and tasks to promote workers' efficiency and comfort. Major topics include: human anatomy, physiology, anthropometry, and other characteristics; and the application of ergonomic principles to workstations, tool design, and material handling procedures.

Course Objectives:

At the conclusion of this course, students will be able to:

- 1. Select different conceptual frameworks and models to summarize the diversity of ergonomics subjects.
- 2. Relate the human musculoskeletal system with the work that human performs.
- 3. Describe the importance of anthropometric information and apply it to the design of workstation, equipment, and tool.
- 4. Compare and assess the differences between standing and sitting postures and their importance in proper workstation design.
- 5. Predict how body tissues respond to excessive loading and apply the basic principles for the design of hand tools and equipment.
- 6. Explain the biomechanics of shoulder and back injuries.
- 7. Summarize ergonomic risk factors for musculoskeletal disorders and recommend interventions to the redesign of work.

Course Text:

Kroemer, K., Kroemer, H., and Kroemer-Elbert, K. (2001) *Ergonomics: How to Design for Ease and Efficiency*, 2nd *Edition*. Prentice Hall, Upper Saddle River, New Jersey.

Exams:

There will be one mid-term exam plus a final exam given during the semester to measure your progress. Both two exams will consist of fill-in-the-blank, short essay and math problems. The mid-term exam will cover the material studied up to that point. The final exam will be comprehensive, covering the entire course.

You will be permitted to make-up an exam ONLY if you have made arrangements PRIOR to the time the exam was originally administered. No make-up exam will be allowed if you merely have not shown up for the original exam and have not made arrangements to take a make-up. The make-up exam must be taken BEFORE the next scheduled class period.

NO EXCEPTIONS will be allowed.

Homework:

There are three sets of homework scheduled for this class. Homework will be collected at the beginning of the class period in which they are due. They should be written clearly and logically. Incorrect spelling and grammar will lower the score. **Homework turned in after the due day will receive only partial credit.**

Project:

There will be a group research project which will require you to apply the principles learned in class to conduct an ergonomic job analysis in a real-life situation. The project will be reported both in 1) a paper of 5 to 10 pages, and 2) an oral presentation in 10 to 15 minutes. The project will be graded upon: 1) accuracy of analysis of the problem, 2) appropriateness of the corrective measures that are recommended, and 3) dissemination of information through oral presentation. Good grammar and correct spelling will also be considered in grading the paper.

You should PROVIDE ME WITH A COPY OF YOUR PAPER AND PRESENTATION SLIDES (IF THERE IS ANY) THAT I CAN KEEP. I will provide you with a summary of how the grade for your project was determined. If you wish to see your original paper, you may do so by appointment. Projects are due by the oral presentation date on **THURSDAY**, **MAY 3**RD. **Projects turned in after that date will receive only partial credit**.

Course Grades:

1. Grades will be assigned in accordance with the Departmental Scale:

<u>Points</u>	(Percent)		<u>Grade</u>
461-500	(93 - 100)	=	A, Superior
421-460	(85 - 92)	=	B, Very Good
381-420	(77 - 84)	=	C, Average
341-380	(69 - 76)	=	D, Below Average
0-340	(0 - 68)	=	E, Fail

2. Basis for assigning grades:

One mid-term exam @ 100 points = 100 points (20% of grade)
Three homework @ 50 points = 150 points (30% of grade)
Final examination @ 100 points = 100 points (20% of grade)
Research Project @ 150 points = 150 points (30% of grade)

TOTAL = 500 points

Course Requirements:

- 1. Adherence to departmental policies and procedures.
- 2. Regular class attendance as prescribed in the departmental requirements.
- 3. Read the material to be discussed in class prior to coming to class.
- 4. Complete and turn in homework and research project by due deadline.

NOTE:

- 1. Students will NOT automatically be dropped from class. Students who choose to drop must do so by the semester deadline! The last day to withdraw or resign from the university is Friday, 9 March, 2012.
- 2. If you are a qualified student with a disability seeking accommodations under the Americans with Disabilities Act, you are required to self-identify with the Office of Disability Services, Rooms 172 and 173, Kinesiology and Health Studies building.
- 3. Students' behavior/classroom decorum: "Free discussion, inquiry, and expression are encouraged in this classroom. Classroom behavior that interferes with either (a) the instructor's ability to conduct the class, or (b) the ability of the students to benefit from the instruction is not acceptable. Examples may include routinely entering class late or departing early; use of beepers, cellular telephones, or other electronic devices; repeatedly talking in class without being recognized; talking while others are speaking; or arguing in a way that is perceived as 'crossing the civility line.' In the event of a situation where a student legitimately needs to carry a beeper/cellular telephone to class, prior notice and approval by the instructor is required."
- 4. Academic Integrity. The academic community relies upon a high standard of integrity in the relations among its members. To the extent that this standard is not maintained, the good of the community suffers, and injustice (sometimes serious injustice) may be done. One of the most important aspects of academic integrity concerns the just measure of each student's academic accomplishments. These are ordinarily evaluated through written examination or submitted work. For such modes of assessment to operate fairly, it is essential that the instructor be assured that the work used to evaluate the student's performance is genuinely the student's own. It is also the responsibility of the student to uphold the academic integrity of the University. The use of unauthorized material, communication with fellow students during an examination, attempting to benefit from the work of another student and similar behavior that defeats the intent of an examination or other class work is unacceptable to the University. Cheating on examinations, plagiarism, improper acknowledgment of sources in essays and the use of a single essay or paper in more than one course without permission are considered very serious offenses and shall be grounds for disciplinary action.

Course Outline & Reading Assignments (Revised 01/13/12)

Class meets on Thursdays from 6:30 pm to 9:20 pm

				=
Week	Date	Topic	Readings Due	Work Due
Module	e 1: Ergon	omics Basics		
1	Jan. 19	Introduction to Ergonomics	Introduction	
2	Jan. 26	Human Anatomy, Posture, and Biomechanics	Chapter 1 (pp 51- 89)	
3	Feb. 2	Anthropometry and Workstation Design (Homework #1)	Chapter 1 (pp 15 - 51)	
4	Feb. 9	Standing VS. Sitting	Chapter 9	
5	Feb. 16	How the Mind Works	Chapter 3	Homework #1
6	Feb. 23	Human Senses (Homework #2)	Chapter 4	
7	Mar. 1	Interaction with the Environment	Chapter 5	Homework #2
8	Mar. 8	MID-TERM EXAM		Review Module 1
Module	e 2: Ergon	omics Applications and Interventions		
9	9 Mar. 15 Manual Material Handling (Homework #3) Chapter 11 &			
10	Mar. 22	Manual Material Handling (cont.)	Handouts	
11	Mar. 29	The Upper Body at Work & Hand-Tool Design	Chapter 8	
12	Apr. 5	Ergonomic Job Analysis	Handouts	Homework #3
13	Apr. 12	NO CLASS - Spring Break		
14	Apr. 19	Whole-Body Exertion	Chap. 2 & 6	
15	Apr. 26	Work Organization and Psychosocial Stress	Chapter 13	
16	May 3	Research Project Presentation		Term Project
17	May 10	FINAL EXAM		Overview

OSHE 242 Ergonomics Spring 2012 Guidelines for Final Project

Objectives and Tasks

The final project for *OSHE 242 Ergonomics* will be to perform an ergonomic job analysis in a job that you select from an industrial, service or small business worksite. The specific aims of the project are to:

- 1. Assess and summarize ergonomic hazards, and
- 2. Construct and recommend appropriate interventions.

The product will include both a group presentation and a technical paper of 5-10 pages in length.

First, choose a single job where there are at least 2 possible types of ergonomic risk factors involved. Check your own company or look around your community for possible sites, such as:

- > Chemical plant
- > Auto repair shop
- Machine shop
- Manufacturing assembly line
- Construction sites (you may just focus on one specific type, such as carpentry, painting, roofing, masonry, etc.)
- > Computer workstation

Then, follow the outline below to conduct the project:

- 1. State the objective of the process (i.e. what product if produced or service performed?)
- 2. Describe the worksite/work area.
- 3. Divide the job into steps or tasks and describe them. Pictures and/or video tapes are very helpful to illustrate the job, although they are not required. You will also need to get permission to take pictures.
- 4. For each step/task do an ergonomic hazard evaluation. Present your findings in a table with each step/task a column and the rows listing relevant ergonomic hazards. The typical ergonomic hazards include: forceful exertion, repetitive motions, awkward postures, vibration, muscle fatigue, poor tool design and usage, improper work process design and organization, etc. For each specific type of ergonomic hazard, use the tools/methods that are either taught in classes, or required by the standard, or employed by previous researchers, or all of them, to evaluate such a hazard. For example, if the job includes manual material handling, use the NIOSH lifting equation to produce a lift index. Include the lifting equation calculations in the appendix.

- 5. In prose form, go through each task and recommend improvements or control interventions for the hazards you have found. Try to be specific. For example, if you recommend a redesign in workstation, specify the actual changes in size, height, location, etc. You may also need to examine your suggested controls whether they produce an unexpected impact on the safety and health of the job.
- 6. Summarize your findings. Describe the most important hazards you have found and what controls you are recommending. This is the bottom line of your report.

Writing Guidelines

- Format
 - ➤ Margins: One inch (1") top, bottom and sides
 - Spacing: Double-spaced
 - Font: Times New Roman (Size 12) is preferred. Arial is also OK.
 - > Style, Punctuation and Reference: Please follow the *Publication Manual of the American Psychological Association (APA)*. You can purchase it in the university book store. Here are some useful websites that you can take a look as well:
 - 1) www.apastyle.org
 - 2) http://www.ccc.commnet.edu/apa/
 - 3) http://owl.english.purdue.edu/owl/resource/560/01/
 - 4) http://www.uwsp.edu/PSYCH/apa4b.htm
 - ➤ Cover page: Please try to be simple and include the information of project title, author's (your) name, class number and name, instructor's (my) name, and date of submission (Remember the due day is **May 3, 2012**).
- Length Usually between 5 and 10 pages of text, not including: the cover page; large charts, tables and figures; appendix and the reference page. Pages should be numbered, either in the upper right-hand corner or the bottom center. Do not number title pages and tables of content.
- **References** At least 5 references are required. Most should come from books, journals, magazines, newspapers, and other printed sources. No more than half of your sources should be obtained from the internet.

Project Grading Policies

- Technical report (60%)
 - ➤ Content (40%) Quality of the project
 - Organization (10%) Structure of the paper
 - > Presentation (10%) Spelling, grammar, and format
- Oral Presentation (40%)
 - ➤ Quality (20%) Dissemination of information
 - ➤ Professionalism (10%) logical thinking, technical language, etc.
 - ➤ Time Control (10%) 10-15 minutes for presentation and 5-10 minutes for questions

Please refer to the rubric on next page for project performance consideration!

	ee Consideration num Points)	Below Expectations 1	Progressing to Criteria 2	Meets Criteria 3	Exceeds Criteria 4	Score
Technical Report (90)	Content (60)	Inconsistent or few details that may interfere with the meaning of the text.	Some details but may include extraneous or loosely related material.	Provides adequate supporting detail to support solution/argument.	Provides ample supporting detail to support solution/argument.	
	Organization (15)	Little evidence of organization or any sense of wholeness or completeness.	Little wholeness or completeness, though organization attempted.	Organization pattern is logical & conveys wholeness and completeness with few lapses.	Organization pattern is logical & conveys wholeness and completeness.	
	Presentation (15)	Limited or inappropriate vocabulary & incorrect grammar and syntax for intended purpose.	Limited & predictable vocabulary, perhaps not appropriate & some grammar and syntax mistakes for intended purpose.	Uses effective language and appropriate word choices & makes minor grammar and syntax mistakes for intended purpose.	Uses effective language, appropriate word choices, and correct grammar and syntax for intended purpose.	
Oral Presentation (60)	Quality (30)	Inconsistent or few details & nothing worthy to keep.	Some details but may include extraneous or loosely related material & no creative design or informative learning.	Provides adequate supporting detail to support solution/argument & something worthy/new to learn.	Provides ample supporting detail to support solution/argument & many creative designs and informative learning.	
	Professionalism (15)	Does not follow the rules of formal presentation & standard English.	Generally does not follow the rules of formal presentation & standard English.	Generally follows the rules of formal presentation & standard English.	Consistently follows the rules of formal presentation & standard English.	
	Time Control (15)	Finishes presentation in less than 5 minutes or more than 20 minutes.	Finishes presentation in less than 10 minutes or more than 15 minutes.	Finishes presentation within 10-15 minutes but has to either slow down or speed up as time elapses.	Finishes presentation within 10-15 minutes properly.	

Southeastern Louisiana University OSHE 251: Environmental Laws, Regulations and Standards

Syllabus Fall Semester, 2011

Instructor: Dr. Ephraim Massawe

Contacts: Office: 392A: Tel: 985-549-2243

E-mail: Ephraim.Massawe@selu.edu

Office Hours: As posted on the blackboard or office door. Other times by appointment, please

<u>Course Description:</u> This course is an introduction to federal and state environmental laws, regulations and standards which impact the human health and safety and public welfare. We will explore how these laws, regulations and standards can impact industry and workers as well. Many companies expect their safety and health officers to be able to handle environmental responsibilities along with their safety and health functions. In fact the three disciplines are closely related and in many cases they overlap. A competent safety and health professional must also have the requisite knowledge or "a hat" of an environmental officer who understands environmental issues, including regulatory and oversight requirements, whether he/she is deals with the environmental issues directly or interfaces them with another employee who does.

Course Content: This course will revisit the roles of three branches of government: legislative, executive, and the judicial branches in the development, implementation, and enforcement of the environmental laws and policies. This course will also provide an overview of different sources of environmental laws, regulations and standards and will attempt to introduce students to the regulatory mandate and requirements of the U.S. EPA on the conduct of environmental businesses in the country. This course also examines the implementation of provisions in specific regulations e.g. EPA's requirements for the implementation of the Clean Air Act (CAA). Other legislations to be covered during the semester include state environmental statutes such as the Massachusetts Toxics Use Reduction Act (MATURA), the Toxics Substances and Control Act (TSCA); Resources Conservation and Recovery Act (RCRA); Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) or the Superfund Act and the Pollution Prevention Act (PPA) etc. Also discussed in this course are the international laws and treaties that affect environmental, safety and health management programs in the industry. These are the Registration, Evaluation, Authorization and Restriction of Chemical (REACH); Kyoto Protocol, the Basel Convention on the Control of Transboundary Movement of Hazardous Wastes; the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides etc.

Course Objectives: At the conclusion of this course, the students should be able to:

- Describe the process by which environmental laws are passed by the legislative branch (Senate/Congress); implemented/enforced by the Executive Branch; and interpreted by the Judicial Branch
- Discuss the history of the environmental movement leading to environmental legislations in the U.S.
- Demonstrate knowledge of some environmental laws related to toxic chemical usage and emissions e.g. Toxic Chemical Substances Act (federal) and state laws such as the Massachusetts Toxics Use Reduction Act (1989) and other related laws
- Identify and discuss the basic provisions of each of the following environmental laws and tell where, within the Code of Federal Regulations (CFR), the regulations resulting from these laws are found: TSCA; FIFRA; OSH Act; CAA; CWA; SDWA; RCRA; CERCLA; SARA; Hazardous Materials and Transportation Act (MTA); and Hazardous Materials Transportation Uniform Safety Act (HMTUSA)

Required Text Book:

1. Nancy K. Kubasek & Gary S. Silverman, *Environmental Law* (7th ed. 2010)

Optional but highly recommended: Government Documents (SIMS Library)

First Day of Class: First	st day of class: Thursda	y 18 th 2011 at 9:30 am – 10:45 a.m.	Venue: Fay Hall Room 218:

Au	ıgust	Septe	ember 2011	Octobe	er 2011	November 2011		December 2011	
Tue	Thur	Tue	Thur	Tue	Thur	Tue	Thur	Tue	Thur
	18 th		1 st	4 th	6 th	1 st Exam # 2	3 rd		1 st
23 rd	25 th	6 th	8 th	11^{th}	13 th	8 th	10 th		
30 th		13 th	15 ^{th*} Guest Speaker	18 th	20 th	15 th	17 th		
		20 th	22 nd Exam # 1	25 th	27 th	22 nd Term Papers Due Date	24 th Thanks Giving No Class		
		27 th	29 th			29 th Last Day of Class			

Last Day of Class: November 29th 2011

Exams:

Students will take **two mid-term exams on 09/22 and 11/01; and a final exam date** according to the university academic calendar i.e. schedule for the final exams - http://www.selu.edu/admin/rec_reg/exam_sch/). All the three exams are intended to measure students' progress and to provide a basis for a final grade. Each of these exams will consist of multiple choice, matching, fill-in-the-blanks and some short essay questions.

Students can **only** make-up an exam if they made advanced arrangements (at least one week) *prior* to the time the exam is scheduled. A student will **not** be allowed to take a make-up exam if he or she merely decides not to show up for the original exam. If a student is permitted to make-up an exam, then that exam must be taken at the convenience of the instructor, preferably before the next class meeting and not otherwise. No *exceptions* will be allowed.

Project:

Students are required to carry out a short research project (herein after referred to as a "term paper"). The term paper should draw lessons from the principles learned and covered in the entire class. For example, case studies where environmental laws, regulations and standards have particularly been applied to in the real-life environmental situations are recommended and encouraged: e.g. clean-up of combustion sites in LA or other states under the Superfund Act or oil spill response; management of ground-level ozone in the urban centers such Baton Rouge, New Orleans, Shreveport etc under the Clean Air Act (CAA) etc. A student may choose an area that he or she feels comfortable for as a term paper from other areas as well.

Students are encouraged to submit and discuss the title of the term papers to the instructor during the first three weeks of the semester. The research project will culminate into a term paper of no less than 6 and no more than 10 pages in length — double spaced, excluding the references, power points, appendices and title page or contents. Note that the term paper will be graded upon its accuracy and analysis of the environmental problems researched as well as the appropriateness of the laws, regulations and standards on which the premises of the paper is grounded. Also note that the use of credible references, including required text book as a reference, are encouraged and are graded. A mere cut and paste from the "Wikipedia" and similar types of sites on the internet will attract poor grade in this respect. All references must follow a consistent format or guidelines. Grammar and correct spelling are also part of the grading process for students' term papers. The grading rubric for the term-papers will be posted on the blackboard.

When submitting your term papers on 11/22 at 9:30 am, PLEASE submit the following items:

- (1) Hard copy of the term papers (6-10 pages), plus appendices if any;
- (2) Power point slides at the same time (5-6 power point slides);
- (3) Electronic versions of the term paper ON THE USB No email attachment, please!).
- (4) Electronic versions of the power point slides ON THE USB No email attachment, please!).

The term papers (hard copies, plus 5-6 power point slides, appendices and electronic version on the USB) are due on 11/22 at 9:30 am. A term paper turned in after this date will receive only partial a credit. 5 pts will be subtracted from the overall grade for each day the report is delayed. Note: 22nd November 2011 and 29th December 2011 are tentatively reserved for

^{*09/15/2011)} Guest Speaker – Lori Smith – Library SIMS Library – Room 474 in the SIMS Library - 4th floor to the left as you exit the elevator.

presentations. To get full credit for these presentations students must take these presentations seriously – be formal, respect others, and attend all two sessions (see the grading rubric).

If a student wishes to see how his or her term paper was graded, he or she may request to see the graded term paper by appointment.

Assignments: During the 3 contact hrs per week of the course, students will be assigned with homework, pop-up quizzes and/ or class exercises. Note that students cannot and will not be allowed to make-up any class exercise or pop-up quizzes that are or were missed. **The number of points for each of the activity assigned will be determined by the level of involvement.**

<u>Validation of the Syllabus:</u> Student must read and understand the content of this syllabus, including the dates of the exam(s); assignments due dates; and the grading rubric! In addition to validating the syllabus online, students must also <u>sign</u> <u>and hand</u> over to the instructor a statement indicating that they have read and understood the contents herein of the entire syllabus! <u>Please ask questions that will clarify the content of the syllabus, including incorrect dates, grading schema etc.</u>

Course Grades: Basis for the final letter grades are <u>based on the 10 point scale as indicated below:</u>

A Letter Grade	On the Basis of 100 %
A, Superior	90 - 100
B, Very Good	80 – 89.9
C, Average	70 – 79.9
D, Below Average	60 – 69.9
F, Fail	0 – 59.9

Basis for assigning final grades:

Academic Activity	Points	On a 100 % Basis
Assignments (quizzes; hw; class exercises etc)	100	20
Term Paper**	125	25
Exam # 1	75	15
Exam # 2	75	15
Final Exam	125	25
Total	500	100 points (%)

Course Requirements:

- 1.0 Adherence to the departmental and university academic policies and procedures.
- 1.1 Regular class attendance as prescribed in the departmental requirements or university policy.
- 1.2 Read the material to be discussed in class prior to coming to class.
- 1.3 Complete and turn in research project or term paper and assignments by due dates.
- 1.4 No independent studies will be negotiated with the instructor. If a student wants to pursue this path, they should consult with the head of the department ahead of time
- 1.5 Attendance: Please consult the following link for class attendance policy: http://www2.selu.edu/documents/policies/empl/p4_instructional_practices.pdf

Note:

- 1. Students may <u>not</u> automatically drop from class. Students who choose to drop the class must do so by the deadline. Please see the university calendar, attached below for your convenience
- 2. If you are a <u>qualified student with a disability</u> and seeking accommodation under the Americans with Disabilities Act, you are required to self-identify with the Office of Student Life, Room 203, Student Union. If you fall under this category, document your disability with the instructor within two weeks into the semester.
- 3. Students' behavior in classroom: Free discussion, inquiry, and expression are encouraged in this classroom and throughout the semester. Classroom behavior that interferes with either the instructor's ability to conduct the class or the inability of other students from benefitting from the instruction is not acceptable. Examples may include routinely entering class late or departing early; use of beepers, cellular telephones, or other electronic devices; repeatedly talking in class without being recognized; talking while others are speaking; or arguing in a way that is perceived as 'crossing the civility line.'
- 4. Academic Integrity: The academic community relies upon a high standard of integrity in the relations among its members. To the extent that this standard is not maintained, the good of the community suffers, and injustice may be done. One of the most important aspects of academic integrity concerns the just or fair measure of each student's academic accomplishments. These are evaluated through written examinations or submitted work. Such modes of assessment to operate fairly, it is essential that the instructor be assured that the work used is genuinely the student's own work. It is the responsibility of students to uphold the academic integrity of Southeastern Louisiana University by not cheating, and not to use unauthorized material or communicate in any way with other students during examinations or attempt to benefit from the work of others and any other behavior that defeats the purpose of examinations or other class work. Cheating on examinations, plagiarism, improper acknowledgment of sources in essays and use of same academic materials such as essay or paper in more than one course without permission are considered very serious offenses and shall be grounds for disciplinary action.

Course Outline

I. Introduction to Environmental Law

- A. American Legal System (3 Branches of Government) Sources of Law; Legislative process; Statutes; Classifications of Environmental Laws; Executive Orders; Treaties
- B. Rationale/Approaches to Protect the Environment Important Federal Publications and Sources (CFR/FR)
- C. Environmental Disputes and the Litigation Process (include adversary system; federal and state court systems; key players/actors in the U.S. legal system; standing)
- D. Environmental Policy and Assessment Historical Perspectives NEPA

II: Environmental Laws Related to Toxic Chemicals - Chemical Production, Use and Disposal

- A. Toxic Substances Control Act (TSCA)
- B. Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)
- C. Occupational Safety and health Act (OSH Act) Hazcom/Right to Know Act

III. Specific Environmental Laws related to Pollution Control and Pollution Prevention

- A. Water Pollution Clean Water Act (CWA)
- B. Air Pollution Clean Air Act (CAA)
- C. Pesticides Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)
- D. Solid and Hazardous Wastes Resource Conservation and Recovery Act (RCRA)
- E. Hazardous Substances Comp Environmental Response, Compensation, and Liability Act (CERCLA)
- F: Pollution Prevention Act (PPA 1990) and Massachusetts Toxics Use Reduction Act (TURA 1989)

IV. Energy Policy Vs. Environmental Concerns

- A: U.S. Energy Policy i.e. Energy Production vs. Consumption
- C: Energy Sources (coal, petroleum, natural gas, renewable energy vs. environmental pollution

Optional: International Treaties Related to Environment, Industry and Development – Montreal and Kyoto Protocols; Non-Proliferation Treaty (1968); UN Framework Convention on Climate Change (UNFCCC) etc.

Southeastern Louisiana University - Fall 2011

Date	Day	Description	
August 1 - 15	Mon – Mon	All fees for interim classes must be paid by the first class meeting.	
August 8	Monday	Rental textbook pick-up begins for students who are paid.	
August 8 - 9	Mon - Thur	Freshman Orientation.	
August 10	Wednesday	Open Registration Ends at 5:00 p.m.	
August 11 - 13	Thur – Sat	No Registration or Schedule Adjustments during this time.	
August 14 - 16	Sun –Tue	Final Schedule Adjustment begins at 9:00 a.m. on Sunday, August 14 th .	
August 16	Tuesday	Fee Payment Deadline at 5:00 p.m. for all students registered for Fall 2011.	
August 16	Tuesday	Last day for undergraduate students to remove "I" grades.	
August 17	Wednesday	First Day of Classes - Regular semester and Term I.	
August 17	Wednesday	Interim grades due by 9:00 a.m.	
September 5	Monday	Labor Day Holiday.	
September 15	Thursday	No graduation applications for Fall 2011 will be accepted after this date.	
September 23	Friday	Term I Classes: Last day to withdraw classes.	
October 5	Wednesday	Term I Classes End.	
October 6 -7	Thur – Fri	Fall Break.	
October 10	Monday	Term I Classes: Final Examinations; M-W schedule.	
October 11	Tuesday	Term I Classes: Final Examinations; T-TH schedule.	
October 12	Wednesday	Term II Classes Begin.	
October 21	Friday	Last day to withdraw or resign from the University. Deadline at 12:30 p.m.	
October 21	Friday	Term I grades due by 9:00 a.m.	
Nov 14 - 18	Mon – Friday	Priority Registration for Spring 2012 Classes.	
November 16	Wednesday	Term II Classes: Last day to withdraw from classes.	
Nov 23 - 25	Wed – Friday	Thanksgiving Holiday.	
December 2	Friday	Last Day of Classes.	
December 3	Saturday	Saturday Only Classes - Final Examinations.	
December 5 - 9	Mon - Friday*	Final Examinations.	
December 10	Saturday	Commencement 10:00 a.m.	
December 12	Monday	Grades due by 9:00 a.m Last day to return rental textbooks without a fine.	
December 16	Friday	Student accounts will be charged for rental books not returned by 12:30 p.m.	

*Grades of prospective graduating students are due by 9:00 a.m., Thursday, December 8, 2011. UNIVERSITY WILL BE CLOSED ON LABOR DAY - SEPT 5; FALL BREAK - OCT 6 - 7; THANKSGIVING - NOV 23-25; AND CHRISTMAS & NEW YEAR HOLIDAYS, DEC 19 - DEC 31. CAMPUS DINING OPERATIONS WILL BE CLOSED WHEN UNIVERSITY CLASSES ARE NOT IN SESSION. ALL RENTAL TEXTBOOKS MUST BE RETURNED TO TEXTBOOK RENTAL ON OR BEFORE 6:00 P.M. ON THE FIRST BUSINESS DAY FOLLOWING THE LAST DAY OF FINAL EXAMS

http://www.selu.edu/admin/rec_reg/calendar/index.html (accessed 0n 06/15/2011)

OSHE 261 – Fire Protection & Prevention Syllabus

Instructor: Steven P. Pereira, CSP

Office: Professional Safety Associates, L.L.C.

1027 N. Range Ave.

Denham Springs, LA 70726

Office: (225) 665-6000 Phone:

> Fax: (225) 665-6021 Home: (225) 665-2263

Hours: After class as necessary

Other times by pre-arrangement

E-mail: spereira@professionalsafety.com

Alternate Instructor: Steve Varnado

Office: Professional Safety Associates, L.L.C.

1027 N. Range Ave.

Denham Springs, LA 70726

Phone: Office: (225) 665-6000

Fax: (225) 665-6021

Hours: After class as necessary

Other times by pre-arrangement

E-mail: svarnado@professionalsafety.com

Course Description

This course will introduce participants to the basic principles of fire and fire prevention in the work place. Participants will learn how to evaluate existing and planned facilities from a fire and explosion standpoint and apply the basic principles of hazard recognition, evaluation and control when developing fire prevention and emergency response activities.

Course Objectives

Upon completion of the course, participants should be able to:

- 1. Define the term "fire"
- Explain the Fire Triangle and Fire Tetrahedron 2.
- 3. Explain various methods of fire and explosion control
- List and explain the classes of fire 4.
- Describe characteristics of combustible solids such as wood, plastics, polymers and textiles 5.
- 6. Define key terms relative to flammable and combustible liquids, gases and vapors as well as hazardous materials

- 7. Explain the NFPA / NEC Electrical Hazard Classification System
- 8. Describe the general procedure for conducting a fire investigation
- 9. Explain the Elements of Building Fire Safety
- 10. Compare and contrast the properties of wood, steel, concrete, glass, gypsum, masonry and plastics with respect to fire
- 11. Explain the concept of Flame Spread Ratings
- 12. Explain the concept of Fire Loading Based on Occupancy
- 13. Describe basic methods of smoke management
- 14. Explain NFPA 220 relative to the Types of Building Construction
- 15. Describe the economic benefits of sprinkler / deluge systems
- 16. Compare and contrast the dry pipe, wet pipe and deluge type systems
- 17. Explain the properties, characteristics and limitations of the following extinguishing agents:

- CO₂ - Dry Powder - Halon - Nitrogen - Dry Chemical - Steam

- 18. Explain OSHA and NFPA requirements for the inspection and maintenance of fire extinguishing systems and portable fire extinguishers
- 19. Describe the services that can be performed by heat and smoke detection devices
- 20. Explain the purpose of the NFPA Life Safety Code
- 21. Use Chapters 1-8 of the current Life Safety Code to answer a series of questions in a guided classroom exercise and an outside graded exercise
- 22. Explain the difference between a "specification" code and a "performance" code
- 23. Describe the relationships between Building Codes and Fire Codes
- 24. Describe OSHA requirements for:
 - Controlling Hot Work
 - Fire Watches
 - Emergency Action Plans
 - Fire Prevention Plans
 - Fire Brigades
- 25. Describe how to prepare a Welding, Burning / Hot Work Permit

Text

<u>Fundamentals of Fire Protection</u>, (2004) Arthur Cote, P.E., National Fire Protection Association, Quincy, MA

Supplemental Material Included

- Table of Contents & Chapters 1 8 of the current NFPA 101 Life Safety Code
- Chapter 6 Hazardous Materials Pages 1-16 on Hazardous (Classified) Locations of the OSHA Voluntary Compliance Outreach Program dated 1993
- Summaries of the following OSHA General Industry Regulations:
 - 1910.251-257 Hot Work
 - 1910.38 Fire Prevention & Emergency Action Plans
 - 1910.155-156 Fire Protection & Fire Brigades

Grades

1. Final grade will be determined by scores on three (3) 100 point tests and two (2) outside assignments worth a total of 100 points as shown below:

-	Test 1	100 points
-	Test 2	100 points
_	Test 3 (Final Exam)	100 points

- Outside Assignments (2) 100 points (50 points each)

Total Available Points $\frac{}{400}$

2. Grading Scale: A = 100 - 93

B = 92 - 85 C = 84 - 77 D = 76 - 69 F = 68 - 0

Course Requirements

- 1. Adherence to Departmental Policies and Procedures, a copy of which has been provided to you.
- 2. Regular class attendance, as prescribed in the Departmental Regulations.

Course Outline

- 1. Fire in History and Contemporary Life
- 2. Understanding America's Fire Problem
- 3. Fire Behavior
- 4. Building Design and Construction
- 5. Concepts of Egress Design
- 6. Assessing Life Safety in Buildings
- 7. Fire Department Structure and Management
- 8. Fire Department Facilities and Equipment
- 9. Preventing Fire Loss
- 10. Controlling Fire Loss through Active Fire Protection Systems
- 11. Fire Investigation
- 12. Introduction to the NFPA 101 Life Safety Code
- 13. Planning for Emergency Response
- 14. OSHA Requirements Relative to Fire Prevention and Emergency Action / Response Plans
- 15. Public and Private Support Organizations
- 16. Careers in Fire Protection

OSHE 311: Safety and Health Program Development - Syllabus - Fall - 2011

Instructor: Dr. Ephraim Massawe

Contacts: Office: 392A Tel: 985-549-2243 E-mail: Ephraim.Massawe@selu.edu

Office Hours: As posted on the blackboard and office door. Other times by appointment, please

Class Meets: Tuesdays 6:00 – 8:50 pm, Livingston Literacy Center

Course Description: This course presents the key elements (guidelines) necessary to develop new or to assess an existing occupational safety and health program(s). Major topics include (1) OSHA's Safety and Health Program Management Guidelines; (2) Policy, Goals and Objectives; (3) Management Leadership and Commitment; (4) Employee Involvement and Participation; (5) Responsibilities; (6) Accountability; (7) Hazards Inventory; (8) Hazard Prevention and Control; (9) Medical/Occupational Health; (10) Training (11) Safety and Health Program Evaluation

Course Objectives:

Upon successful completion of this course, students will be able to:

- 1. Describe the basic elements that make up an effective occupational safety and health program, such as safety and health mission, policy, management commitment and employees' involvement
- 2. Demonstrate the use of proven concepts of analyzing occupational safety and health programs for organizations by preparing a research paper or term based on the knowledge from this course.
- 3. Assess or evaluate existing occupational safety and health programs based on the illnesses or injury rates reported by a corporation e.g. annual corporate social responsibility reports.
- 4. Apply proven management principles to correct deficiencies discovered through the assessment of an occupational safety and health program.
- 5. Develop a new written occupational safety and health program for a firm/industry after researching the process and occupational safety and health risk potential based on analysis of illness/injury data.

Course Text: Required

1. Terrell, M. J. (1995). Safety and Health Management in the Nineties: Creating a Winning Program. ISBN: 978-0-471-28705-6. Wiley, NY

Recommended Text Books (optional):

- 1. Brauer, Roger L. Safety and Health for Engineers 2nd Edition. 2006. Wiley
- 2. Dan Hopwood and Steve Thompson (2006). Workplace Safety: A Guide for Small and Midsized Companies. John Wiley & Sons, Inc.
- 3. Don Jones (2009). Managing Worker Safety and Health: CSP, PE. Comprehensive Safety Solutions

Class meets on Wednesdays:

First day of class: 17th	August , 2011	 at the Livingstone Literacy 	Center.	Other dates as shown below
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August ,2011	September, 2011	October, 2011	November, 2011	December 2011
17 th	7 th	5 th	2 nd	7 ^{th*}
First Day of Class				Final Exam
24 th	14 th	12 th	9th	
31 st	21 st	19 th	16 th	
			Exam # 2	
	28 th	26 th	*23 rd	
	Exam # 1		Term Papers or Project Due	
			*30 th	
			Last Day of Class and	
			presentations	

Exam # 1; 09/28/2011 - Exam # 2; 11/23/2011 - Final Exam consult the University Calendar

Exams: The exam dates are 09/28 and 11/23, plus a final exam (12/7 at 6:00 or according to the university exam dates and schedule – available at http://www.selu.edu/admin/rec_reg/exam_sch/). The three exams are intended to measure students' progress and provide a basis for their final grades. Each of these three exams will consist of multiple choice, matching, fill-in-the-blanks, and, where applicable, some essay questions. The two mid-term exams will cover the material studied during the period since the last exam. The final exam will be comprehensive, covering the entire course. The instructor is not obligated to give out a study guide for any of these three exams.

Students will be permitted to make-up an exam *only* if they have made advance arrangements *prior* to the time the exam was originally administered. No student will be permitted to make-up an exam if a student merely did not show up for the original exam without convincing reasons. If a make-up exam is allowed it must be taken *before* the next scheduled class period. *No exceptions are permitted*.

Project: Students will be required to complete a short research project during the semester. This term paper will be based on the principles/elements of safety and health programs to real-life situations. The paper will consist of no less than 6 and no more than 10 pages in length – double spaced excluding the references and title page, appendices such as your slides or other relevant materials.

Note: The term paper will be graded upon their accuracy, the thesis and content and appropriateness its relevance to the course i.e. safety and health programs or elements of these programs. Students must spell check their term papers for typos before submitting them because these are also important part of the grading process. A detailed rubric and other information pertaining to grading of the term papers will be available to students the first two-three weeks into the fall semester.

Students are required to submit the *term papers of the highest quality that can be graded*. A summary of how the terms papers were graded can will be available upon request. The term papers/projects are due on the date indicated on this syllabus: *Tuesday*, 23rd November, 2011 at 6:00 pm.

Note #1: Please attach OR submit the following documents to your term paper:

(1) A hard copy of your term with the appendices, if any

- (2) Power point slides (recommended 5-6 power point slides)
- (3) An electronic version of item 1 & 2 (please have it on the flash drive on the due date)

Note#2: Term papers turned in after this date will receive a partial credit based on the following policy: 5 pts to be subtracted from the overall grade for each day the term paper is delayed.

Note: Students are expected to present their term papers on 23rd Nov. 2011 (1st batch of students) and 30th Nov. 2011 (2nd batch of students). To get full credits for these presentations students must be formal, respect others, raise questions and attend the two sessions (see the grading rubric)!

Assignments: The numbers of assignments will be decided by the instructor and the number of points determined based on the level of involvement! Students cannot make up a missed class exercise, pop-up quiz or other in-class assignment. The instructor reserves the right to give class exercise at any time of the semester and during any time of the class. Note: the basis for assigning the course grades to determine the overall grade also includes the impromptu quizzes, assignments and the in-class exercises. Homework assignments or tasks are assigned in order to help students to better understand the chapter that was reviewed during the previous week. Please take class exercises, pop up quizzes and group or homework assignments seriously. See the weighting factor for this item.

<u>Validation of the Syllabus:</u> Student's responsibility is to read and understand the content of this syllabus, including the dates of the exam(s); assignments due dates; and the grading rubric!. Please sign and hand over to the instructor a statement indicating you have read and understood the contents herein

Course Grades Assignment: The final letter grades are <u>based on the 10-point scale</u>:

A Letter Grade	On the Basis of 100 %
A, Superior	90 - 100
B, Very Good	80 – 89.9
C, Average	70 – 79.9
D, Below Average	60 – 69.9
F, Fail	0-59.9

Basis for assigning final grades:

	Points	On a 100 % Basis
Assignments (quizzes; hw; class work)	75	15
Term Paper	100	20
Exam # 1	100	20
Exam # 2	100	20
Final Exam	125	25
Total	500	

Course Requirements:

1. Adherence to the departmental and university academic policies and procedures.

- 2. Regular class attendance as prescribed in the departmental requirements or university policy.
- 3. Read the material to be discussed in class prior to coming to class.
- 4. Complete and turn in research project or term paper and assignments by due dates.
- 5. No independent studies will be negotiated with the instructor. If a student wants to pursue this path, they should consult with the head of the department ahead of time
- 6. Attendance: Please consult the following link for class attendance policy: http://www2.selu.edu/documents/policies/empl/p4 instructional practices.pdf

Note:

- 1. Students may <u>not</u> automatically drop from class. Students who choose to drop the class must do so by the deadline. Please see the university calendar, attached below for your convenience
- 2. If you are a <u>qualified student with a disability</u> and seeking accommodation under the Americans with Disabilities Act, you are required to self-identify with the Office of Student Life, Room 203, Student Union. If you fall under this category, please <u>document your disability with</u> the instructor within two weeks into the semester.
- 3. Students' behavior in classroom: throughout the semester, free discussion, inquiry, and expression are encouraged in the classroom. Classroom behavior that interferes with either the instructor's ability to conduct the class or inability of other students from benefitting from the instruction is not acceptable. Examples include routinely entering class late or departing early; use of beepers, cellular telephones, or other electronic devices; repeatedly talking in class without being recognized; talking while others are speaking; or arguing in a way that is perceived as 'crossing the civility line.'
- 4. Academic Integrity: The academic community relies upon a high standard of integrity in the relations among its members. To the extent that this standard is not maintained, the good of the community suffers, and injustice may be done. One of the most important aspects of academic integrity concerns the just or fair measure of each student's academic accomplishments. These are evaluated through written examinations or submitted work. Such modes of assessment to operate fairly, it is essential that the instructor be assured that the work used is genuinely the student's own work. It is the responsibility of students to uphold the academic integrity of Southeastern Louisiana University by not cheating, and not to use unauthorized material or communicate in any way with other students during examinations or attempt to benefit from the work of others and any other behavior that defeats the purpose of examinations or other class work. Cheating on examinations, plagiarism, improper acknowledgment of sources in essays and use of same academic materials such as essay or paper in more than one course without permission are considered very serious offenses and shall be grounds for disciplinary action.

Southeastern Louisiana University - Fall 2011

Date	Day	Description	
August 1 – 15	Mon – Mon	All fees for interim classes must be paid by the first class meeting.	
August 8	Monday	Rental textbook pick-up begins for students who are paid.	
August 8 – 9	Mon - Thur	Freshman Orientation.	
August 10	Wednesday	Open Registration Ends at 5:00 p.m.	
August 11 - 13	Thur – Sat	No Registration or Schedule Adjustments during this time.	
August 14 - 16	Sun –Tue	Final Schedule Adjustment begins at 9:00 a.m. on Sunday, August 14 th .	
August 16	Tuesday	Fee Payment Deadline at 5:00 p.m. for all students registered for Fall 2011.	
August 16	Tuesday	Last day for undergraduate students to remove "I" grades.	
August 17	Wednesday	First Day of Classes - Regular semester and Term I.	
August 17	Wednesday	Interim grades due by 9:00 a.m.	
September 5	Monday	Labor Day Holiday.	
September 15	Thursday	No graduation applications for Fall 2011 will be accepted after this date. Last day to apply for Spring 2012 graduation without late fee.	
September 23	Friday	Term I Classes: Last day to withdraw classes.	
October 5	Wednesday	Term I Classes End.	
October 6 -7	Thur – Fri	Fall Break.	
October 10	Monday	Term I Classes: Final Examinations; M-W schedule.	
October 11	Tuesday	Term I Classes: Final Examinations; T-TH schedule.	
October 12	Wednesday	Term II Classes Begin.	
October 21	Friday	Last day to withdraw or resign from the University. Deadline at 12:30 p.m.	
October 21	Friday	Term I grades due by 9:00 a.m.	
Nov 14 – 18	Mon – Friday	Priority Registration for Spring 2012 Classes.	
November 16	Wednesday	Term II Classes: Last day to withdraw from classes.	
Nov 23 – 25	Wed – Friday	Thanksgiving Holiday.	
December 2	Friday	Last Day of Classes.	
December 3	Saturday	Saturday Only Classes - Final Examinations.	
December 5 - 9	Mon - Friday*	Final Examinations.	
December 10	Saturday	Commencement 10:00 a.m.	
December 12	Monday	Grades due by 9:00 a.m Last day to return rental textbooks without a fine.	
December 16	Friday	Student accounts will be charged for rental books not returned by 12:30 p.m.	

*Grades of prospective graduating students are due by 9:00 a.m., Thursday, December 8, 2011. UNIVERSITY WILL BE CLOSED ON LABOR DAY - SEPT 5; FALL BREAK - OCT 6 - 7; THANKSGIVING - NOV 23-25; AND CHRISTMAS & NEW YEAR HOLIDAYS, DEC 19 - DEC 31. CAMPUS DINING OPERATIONS WILL BE CLOSED WHEN UNIVERSITY CLASSES ARE NOT IN SESSION. ALL RENTAL TEXTBOOKS MUST BE RETURNED TO TEXTBOOK RENTAL ON OR BEFORE 6:00 P.M. ON THE FIRST BUSINESS DAY FOLLOWING THE LAST DAY OF FINAL EXAMS

Minimum Elements/Guidelines Covered in the OSHE 311 Course Fall 2011

1 Introduction

- a. Class Business, Policies etc.
- b. Course Objectives
- c. VPPs and Sustainable Programs

2 Introduction and Management Commitment

- a. Safety and Health Management Guidelines (Chapter 1)
- b. Determining the direction of the Safety and Health Programs (Chapter 2)
 - i. Policies, Goals and Objectives (+ Appendix 1 Policy Statement)
- c. Assessment of the Management Commitment Visibility of Top Leadership (Chap 3)
 - i. How do you Obtain Changes where Needed?

3 Employee Involvement (Chapter 4)

- a. Why involve employees?
 - i. Opportunities for Involvement
 - ii. How To Fully Engage Employees
 - 1. Committees
 - 2. Orientation
 - 3. Training others etc.
 - 4. Incentive Programs
 - 5. Union and non-unionized sites
- b. Business Owners and Employee Relationships (Chapter 5-6) + Appendix 2 (Responsibility Worksheet)
 - Assigning Safety and Health Responsibilities (Supervisors and Employees)
 - a. Job –Description
 - i. Written Vs. Oral Assignment of duties
 - ii. Bullet Vs. Narrative Format
 - 2. Developing Accountability (Chapter 6)

4 Establishing Hazard Inventories (Chapter # 8) + Appendix 4/5/6/7

- a. Worksite Analysis
 - i. Analysis Techniques
 - 1. Conducting Worksite Analysis
 - 2. Use of Work Site Analysis for Effective Safety and Health Programs Management
 - 3. Process Hazard Analysis
 - 4. Change Analysis
 - 5. Job Safety Analysis
 - 6. Activity Hazard Analysis

5 Hazard Corrections, Prevention and Controls Programs (Chapter 10)

- a. Methods of Control
 - i. Engineering Control
 - ii. Administrative Control

- iii. Personal Protective Equipment (PPE)
- b. How to Implement Changes
- c. Catching the hazards that escape controls (Chapter 9)
- 6 Safety and Health Training (Chapter 12)
 - a. Training Needs Assessment
 - i. Why do we need training
 - ii. When is training needed
 - iii. Is training always an answer in the safety and health programs' management
 - b. Elements of effective training
 - c. Different Types of Training
 - i. Classrooms
 - ii. Hands-on
 - iii. On-the job
 - d. Evaluating the Effectiveness of the training offered
- 7 Evaluation of Safety and Health Programs (Chapter 7) + Appendix 3 (pg 261
 - a. Methods of Evaluation
 - b. Use of Feedback Techniques

OSHE 322 BEHAVIORAL ASPECTS OF SAFETY Spring Semester, 2012

Syllabus

Instructor:

Lawrence A. Mauerman, PE, CSP Office: 110-3 Anzalone Hall

Office Hrs: SLU Office: Monday and Wednesday, 8:00 am to 12:00 noon, and 1:00 pm to

4:00 pm.

Course Description:

This course will introduce students to the application of scientific research based principles and methods to bring about change in the work culture through attitude, behavior and environmental conditions. Specific topics will include traditional approaches and philosophies for improving safety, environmental effects, incentives, developing and building cultural change, identifying critical behavior, developing checklists, giving and receiving recognition, and measuring performance.

Course Objectives:

At the conclusion of this course, you will be able to:

- 1. List the components of a workplace; i.e., its human, situational and environmental components, and describe their interrelationships.
- 2. Explain how many current safety practices in the workplace are not effective reducing the number workplace incidents below present levels.
- 3. Describe the characteristics of a Total Safety Culture and list the elements that must be present in order to create such a culture.
- 4. Describe the characteristics of human nature that must be considered and understood in order to make meaningful, permanent changes in behavior that will promote safety.
- 5. Explain the principles upon which behavior is based.
- 6. Describe how critical behaviors can be defined, identified, observed and analyzed.
- 7. Describe how activators and consequences can be used to modify and mold behavior.
- 8. Describe the use of intervention in established behavior patterns to change them to include acceptable safety practices.
- 9. Explain how to obtain support and buy-in for a Total Safety Culture through behavior based safety efforts.

Course Text:

Gellar, E. Scott. *The Psychology of Safety Handbook*. Boca Raton, Florida: Lewis Publishers, 2001.

Locations:

The class meets on Tuesday and Thursday, at 8:00 am to 9:15 am in Anzalone Hall, Room 214.

Schedule:

! First day of class	Tuesday, 17 January,, 2012
! Holiday - Mardi Gras	Tuesday. 21 February, 2012
	Thursday, 23 February, 2012
	Thursday, 27 March, 2012
	Thursday, 5 April, 2012
! Spring Break	Tuesday & Thursday,10 & 12 April, 2012
!Last day of class	Thursday, 3 May, 2012
! Final Exam	TBA

Class dates are:

<u>Jan</u> 17	Feb 2	Mar 1	Apr	<u>May</u>
19	7	6	5 - Project Due	3 - Last Day
24	9	8	10 - Spring Break	TBA - Final
26	14	13	12 - Spring Break	
31	16	15	17	
	21 - Mardi Gras	20	19	
	23 - 1st Exam	22	24	
	28	27 - 2 nd Exam 29	26	
		23		

Exams:

There will be two mid-term exams and a final exam given during the semester to measure your progress and to provide a basis for your grade. Each of the exams will consist of multiple choice, matching, fill-in-the-blank and, where applicable, short math problems. There will be no essay questions. The two mid-term exams will cover the material studied during the period since the last exam. Each mid-term exam will take approximately half of the class period to complete. The final exam will be comprehensive in that it will cover material from the entire course. The remainder of the period will be spent introducing new material. The two mid-term exams will be worth 100 points. The final exam will be worth 150 points.

You will be permitted to make-up an exam ONLY if you have made arrangements PRIOR to the time the exam was originally administered. No make-up exam will be allowed if you merely have not shown up for the original exam have not made arrangements to take a make-up. The make-up exam must be taken BEFORE the next scheduled class period. **NO EXCEPTIONS will be allowed**.

Project

There will be a short project in the form of a research paper on the subject of the application of the principles of psychology in managing safety in the workplace. The project is attached to this syllabus. The project is due on Thursday, 5 April, 2012. **Only partial credit will be given for work turned in after that date**.

Course Grades:

1. Grades will be assigned in accordance with the Departmental Scale:

Points (Percent) Grade 461-500 (93 - 100) = A, Superior 421-460 (85 - 92) = B, Very Good 381-420 (77 - 84) = C, Average 341-380 (69 - 76) = D, Below Average 0-340 (0 - 68) = E, Fail

2. Basis for assigning grades:

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Two exams @ 100 points = 200 points (40% of grade)
Research projects @ 150 points = 150 points (30% of grade)
Final Exam @ 150 points = 150 points (30% of grade)
TOTAL = 500 points
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Course Requirements:

- 1. Adherence to departmental policies and procedures, a copy of which has been provided to vou.
- 2. Regular class attendance as prescribed in the departmental requirements.
- 3. Read the material to be discussed in class prior to coming to class.
- 4. Complete and turn in research project by due deadline.

NOTES:

- 1. Students will NOT automatically be dropped from class. Students who choose to drop must do so by the semester deadline! The deadline for the Spring Semester, 2010 Semester is Friday, 9 March, 2012
- 2. If you are a qualified student with a disability seeking accommodations under the Americans with Disabilities Act, you are required to self-identify with the Office of Student Life, Room 203, Student Union.
- 3. Students' behavior/classroom decorum: "Free discussion, inquiry, and expression is encouraged in this classroom. Classroom behavior that interferes with either (a) the instructor's ability to conduct the class, or (b) the ability of the students to benefit from the instruction is not acceptable. Examples may include routinely entering class late or departing early; use of beepers, cellular telephones, or other electronic devices; repeatedly talking in class without being recognized; talking while others are speaking; or arguing in a way that is perceived as 'crossing the civility line.' In the event of a situation where a student legitimately needs to carry a beeper/cellular telephone to class, prior notice and approval by the instructor is required."
- 4. Academic Integrity. The academic community relies upon a high standard of integrity in the relations among its members. To the extent that this standard is not maintained, the good of the community suffers, and injustice (sometimes serious

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injustice) may be done. One of the most important aspects of academic integrity concerns the just measure of each student's academic accomplishments. These are ordinarily evaluated through written examination or submitted work. For such modes of assessment to operate fairly, it is essential that the instructor be assured that the work used to evaluate the student's performance is genuinely the student's own. It is also the responsibility of the student to uphold the academic integrity of the University. The use of unauthorized material, communication with fellow students during an examination, attempting to benefit from the work of another student and similar behavior that defeats the intent of an examination or other class work is unacceptable to the University. Cheating on examinations, plagiarism, improper acknowledgment of sources in essays and the use of a single essay or paper in more than one course without permission are considered very serious offenses and shall be grounds for disciplinary action.

Course Outline & Reading Assignments:

Text:

Gellar, E. Scott. *The Psychology of Safety Handbook*. Boca Raton, Florida: Lewis Publishers, 2001.

Selected instructor handouts

Unit 1: Foundations Exam: 23 February, 2012

Reading: Chapters 1 through 6, plus Instructor's Handouts

- A Elements of The Workplace System
- B Problems Using Psychological Approaches to Preventing Accidents
- C Core Concepts For The Course
- D Establishing Theories For Behavior-based Safety The Total Safety Culture
- E Person-Based vs. Behavior-Based
- F The Required Paradigm Shift
- G The Nature of the Worker

Unit 2, Principles of Behavior-Based Safety Exam: 27 March, 2012

II Reading: Chapters 7 through 13, plus Instructor's Handouts

- A Principles of Behavior
- **B** Critical Behaviors
- C Analysis of Behaviors
- D The Role of Activators
- E The Role of Consequences
- F Intervention for Change

Unit 3, Applying Behavior-Based Safety Final Exam: TBA

- III Reading: Chapters 14 through 20
 - A Actively Caring
 - B Promoting Teamwork
 - C Obtaining Buy-in and Support

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OSHE 322, BEHAVIORAL ASPECTS OF SAFETY Spring Semester, 2012

Research Project

Instructions:

Using material from the text, and at least three other authoritative sources, write a research paper on the topic provided below. The paper should follow the "Guidelines for Term Papers" attached to this assignment, unless modified by these instructions. The paper should be no less than 5, but no more than 10 pages in length. Your research sources should be cited in the body of the paper and listed in a bibliography at the end. The paper should be turned in on Thursday, 5 April, 2012. Papers received after that date will not received full credit.

Assignment:

Demonstrate an understanding and application of the principles of psychology can be used to produce beneficial changes in safety in the workplace. There are, however, two approaches to producing these changes:

- (1) Those classified as **person-based**, and
- (2) Those that are considered **behavior-based**.

Your paper should include the following:

- ! Provide a description of each approach which includes salient characteristics which would distinguish one approach from the other. Be sure to point out contrasts where they exist.
- ! Discuss the major historic theorists, developers and current-day proponents of each approach.
- ! Describe the circumstances under which each approach is used, or applied, in the contemporary industrial climate.

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- ! Analyze and discuss the advantages and limitations of each approach. If there have been negative experiences reported, what are they, and how have they been resolved?
- ! Finally, express your own opinion, based on your research for this paper.

The following guidelines are provided to assist you in writing term papers for my classes. Part of the skills that you are expected to acquire in your studies in Occupational Safety, Health and Environment at Southeastern include being able to communicate effectively using the written word. You have probably noticed that your course of OSH&E studies requires you to take several English composition classes. This is also one of the reasons you are assigned to write a term paper. There are two major objectives:

- ! Provide the opportunity to do research on a topic that is "above and beyond" the material that will be discussed in class. You will become acquainted with ideas and opinions of other writers on topics associated with our field of study. In short, you will expand your intellectual horizons.
- ! Organize and present your research in an interesting and logical manner.

PART I

The first part of the guidelines outlines my requirements for the general layout of your term paper. I must emphasize that many of these are my preferences, and not necessarily universal, or university, standards. Nevertheless, they work well, and usually make for interesting and well-presented papers.

FORMAT

Margins: One inch (1") top, bottom and sides

Spacing: Single space text, double space between paragraphs.

Font: Face: Times New Roman is preferred. Arial is OK. Font size: 12

Style and Punctuation: The standard for the Department of Industrial Technology is the

Publication Manual of the American Psychological Association (APA).¹

LENGTH The length of the paper will vary, depending on the assignment. Generally, I specify that papers be between 5 and 10 pages of text, not including: the cover page; large charts, tables and illustrations; and the reference page. Such items which explain, expand, and illustrate your topic are welcomed - indeed, encouraged - but they do not count as pages of text. Pages should be numbered, either in the upper right-hand corner, or the bottom center of each page. Do not number title pages and tables of content.

RESOURCES Sources that you have consulted in writing your paper should be listed on the last page. I usually require no fewer than five sources, in addition to the course text, for a 5 to 10 page paper. Your research should be selected from authoritative sources, i.e., books, journals, magazines, newspapers, and other printed items from scholarly and technical sources. The internet still does not contain all there is to know on a subject, and using it as your only font of information exhibits a kind of intellectual laziness. Be discerning and write with authority. The APA manual should be consulted for the proper format to be used in listing the resources, including those from the internet.

GRAMMAR, SPELLING, ETC. Carefully review your paper for grammatical errors, spelling

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The Publication Manual of the American Psychological Association is the style guide used by the Department of Industrial Technology for term papers, research papers, and theses. A copy of this manual is available in the IT department office. If you prefer, it can be purchased at the university Book Store. My copy cost \$23.95, but since I do a lot of writing, it is worth it to have a copy available any time I need it. The APA has extracted some material from the Publication Manual and included it on its website: www.apastyle.org. You may be able to get some of the information you need there, particularly regarding internet sources.

mistakes, and typographical errors before you turn it in. If you are not good at this, find someone who is and have them do it for you. Do not leave the corrections for me to make for you as I will charge you more than you can afford.

SUBMISSION Papers should be submitted with a cover sheet which identifies the following:

- ! Title or subject of your paper
- ! The author: (you)
- ! The class (number and name, ex.: OSH 115, Introduction to Occupational Safety and Health)
- ! The instructor: (me)
- ! Date: The date the paper was submitted

In most cases, I do not want you to submit your paper with any special kind of binding or cover. I appreciate your interest in making the paper "unique" but a fancy cover will never make up for a well-written paper. My preference is a single staple in the upper left-hand corner. In a rare case where a special binding, cover, or folder is expected, I will inform you of this requirement.

Papers should be submitted on or before the specified due date. They are acceptable up to midnight on that date. Papers submitted after the due date will be accepted, but they will not receive full credit.

PART II

Your term paper will be graded on the following points.

ORGANIZATION (25%) Does your paper flow in a natural, logical sequence? Do you start with basic principles, ideas, etc., and then build on them? Are important terms defined and explained? How much do you assume that your reader already knows, and what do you need to explain? Years ago, when I was serving in the military, I received some helpful, simple advice on how to make presentations. A good presentation, I was told, has three steps. They are: "(1) Tell 'em what you're going to tell 'em. (2) Tell 'em,! (3) Tell 'em what you told 'em." In case you missed it, this translates into: (1) Introduction; (2) Main body of the paper; (3) Summary. It's simple, but it works amazingly well.

CONTENT (50%) This, of course, is why you're writing your paper. It's the "meat" of your work. It should be based on a thorough examination of your assigned topic. Care should be taken to distinguish fact from opinion, although there is room for both. There is no place for fiction in our studies - that is the realm of the novelist. If the topic is controversial care should be taken to examine all sides of the issue. There is no problem assuming a position, yourself, but you have a solid base to support your stance.

PRESENTATION (25%) Presentation involves such things as spelling, grammar, neatness, and format. How does your paper look? Does it invite reading? Have you used proper form in citing and listing your references? Have you included aids to understanding such as charts, tables, and illustrations? In short, how professional is your work? At this stage in your studies, there is no place for sloppy work.

FINALLY

This guideline sets the standards for your work. Adherence to its standards should not only result in a work that is worthy of your time and effort, but also should imbue you with a sense of pride and self confidence. I'm anxious to see what you can do!

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OSHE 323-51X PRODUCT SAFETY AND LIABILITY

Syllabus

Instructor: Steven P. Pereira, CSP

Office: Professional Safety Associates, L.L.C.

1027 N. Range Ave.

Denham Springs, LA 70726 www.professionalsafety.com

Phone: Office: (225) 665-6000

Fax: (225) 665-6021 Home: (225) 665-2263

Hours: After class as necessary

Other times by pre-arrangement

E-mail: spereira@professionalsafety.com

Alternate Instructor: Steve Varnado

Phone: Cell: (225) 776-2050

Hours: After class as necessary

Other times by pre-arrangement

E-mail: svarnado@professionalsafety.com

Course Description:

This course examines the importance of considering the safety of a product in its ultimate use. It considers aspects of product design; intended use and foreseeable mis-use; and potential injury mechanisms. It uses classic products liability case studies to provide practical application of the principles learned. It also looks at manufacturer liabilities through injury tort actions.

Course Objectives:

Upon completion of the course, the student will be able to:

- 1. List the kinds of potential liabilities associated with such products as drugs; children's toys; automobiles and related products, food products; etc.
- 2. Discuss ways in which consumers may bring tort suits against manufacturers.
- 3. Describe the hazardous characteristics of products.
- 4. Describe methods used to identify and correct potential safety problems during the conceptual and design phases of a new product.
- 5. Describe the causes of and ways to minimize malfunctions.
- 6. Explain the causes of operator error and methods of minimizing such errors.

- 7. Describe methodologies used to test products to ascertain potential defects, safety hazards, and liabilities.
- 8. Assist in the development of a Product Safety Design Review Process.
- 9. Describe the components of a comprehensive product safety management program form the conceptual phase through decommissioning.

Group Exercise:

As a group exercise participate in a mock products liability trial to determine if a plaintiff's injury was the result of:

- A design defect
- A manufacturing defect
- A failure to warn
- The plaintiff's contributory negligence

Research Project:

Conduct two separate research projects (#1: written report only -25 points, #2: written report and oral presentation -75 points) on a past or present products liability case. The first report must address items 1-4 as shown below. The final report must be on a **different** product than the first report and address items 1-7 as shown below.

- 1. Purported problem / issue
- 2. Potential or actual harm to the user (magnitude of the problem)
- 3. Purported defect(s) (i.e., design problem, manufacturing defect, failure to warn, foreseeable mis-use, etc.)
- 4. Impact to the manufacturer or seller (i.e., defense costs, number of law suits, settlements or judgments, bankruptcy, etc.)
- 5. Company's response (how did they handle the issue)
- 6. Positive or negative public relations issues, if any
- 7. What could the manufacturer have done to prevent or mitigate the issue?

Course Text:

- 1. Hammer, W. (1993). *Product Safety Management and Engineering* (2nd ed.). Des Plaines, IL: American Society of Safety Engineers.
- 2. Instructor handouts

Course Grades:

1. Grades will be assigned in accordance with the Departmental Scale:

<u>Points</u>	<u>Percent</u>	<u>Grade</u>
372 - 400	93 -100=	A, Superior
340 - 371	85 -92 =	B, Very Good
308 - 339	77 -84 =	C, Average
341 - 380	69 - 76 =	D, Below Average
0 - 340	0 - 68 =	F, Fail

2. Basis for assigning grades:

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Two exams @ 100 points = 200 points
Final Examination @ 100 points
Outside Report #1 = 25 points
Outside Report #2 = 75 points
TOTAL

TOTAL
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Course Prerequisites:

None

Course Requirements:

- 1. Adherence to departmental policies and procedures, a copy of which has been provided to vou.
- 2. Regular class attendance as prescribed in the departmental requirements.
- 3. Read the material to be discussed in class prior to coming to class.
- 4. Complete and turn in research project by due deadline.

NOTES:

- 1. Students will NOT automatically be dropped from class. Students who choose to drop must do so by the semester deadline! Deadline for dropping the class this semester is October 22, 2010.
- 2. If you are a qualified student with a disability seeking accommodations under the Americans with Disabilities Act, you are required to self-identify with the Office of Student Life, Room 203, Student Union.
- 3. Students' behavior/classroom decorum: "Free discussion, inquiry, and expression is encouraged in this classroom. Classroom behavior that interferes with either (a) the instructor's ability to conduct the class, or (b) the ability of the students to benefit from the instruction is not acceptable. Examples may include routinely entering class late or departing early; use of beepers, cellular telephones, or other electronic devices; repeatedly talking in class without being recognized; talking while others are speaking; or arguing in a way that is perceived as 'crossing the civility line.' In the event of a situation where a student legitimately needs to carry a beeper/cellular telephone to class, prior notice and approval by the instructor is required."

- 4. Academic Dishonesty: Students should note that repercussions from academic dishonesty are discussed in the university catalog.
- 5. Reports and research projects must be typewritten. Proper grammar, sentence structure and spelling will be taken into consideration during the grading process.

Course Outline

- I. Introduction
 - A. Product Liability Issues
 - Manufacturer
 - Importer
 - Wholesalers and retailers
 - Legal recourse for product defects
 - Safety costs and losses
 - B. Standards and Criteria
 - Federal and state standards and laws
 - Consensus standards
 - Case studies
 - C. Modern Concepts of Accident Prevention
- II. Hazardous Characteristics of Products
 - A. Hazards which cause injury
 - B. Hazards which cause sickness
 - C. Malfunctions
 - D. Environmental Factors
 - E. Operator Error
- III. Minimizing Accidents and Their Effects
- IV. Diagnostic Tools and Methodologies
 - A. Fault Tree Analysis
 - B. Failure Mode and Effect Analysis
 - C. Operating Hazard Analysis
- V. Product Safety Program
 - A. Risk Assessment
 - B. Manufacturing the Safe Product

References

- 1. AIHA Staff et. al. (1986). A Guide To Product Health And Safety And The Right To Know. Fairfax, VA: American Industrial Hygiene Association.
- 2. Colley, M. F. (1985). Product Safety In America. Roscoe Pound Institute.
- 3. Gad. (1988). Product Safety Evaluation Handbook. Marcel Dekker, Incorporated.
- 4. Kolb, J., et. al. (1979). Product Safety: A Desk Reference. New York: McGraw-Hill.

- 5. McGuire, E. P. (1979). *The Product-Safety Function: Organizing And Operations*. Chicago: The Conference Board, Incorporated.
- 6. NSC Staff, et. al. (1989). Product Safety: Management Guidelines. Itasca, IL: National Safety Council.
- 7. Seiden, R. M. (1986). *Product Safety Engineering For Managers*. Englewood Cliffs, NJ: Prentice Hall.
- 8. Tyron, E. (1995). Worker Protection Standard Product Safety Data: Pocket Guide. New York: North American Compendium, Incorporated.
- 9. Viscusi, W. K. (1984). *Regulating Consumer Product Safety*. Washington, D.C.: American Enterprise Institute for Public Policy.

OSHE 341 Field Methods of Industrial Hygiene - Spring Semester, 2012

Tentative Syllabus*1

Instructor: Ephraim Massawe Sc.D Office: 329A Fayard Hall

Tel Contacts: SELU Office: Tel: 985-549-2243 Fax: 985-549-5532

SELU E-mail: ephraim.massawe@selu.edu

As posted on the blackboard and office door. Other times, please make appointment Office Hrs:

Course Description: Prerequisites: Mathematics 241 and OSHE 141 [Originally, OSHE 241]. This course presents an examination of the methods used by industrial hygienists for the identification and assessment of health hazards in the workplace. In other words, it examines the theoretical and practical perspectives of the methods and strategies used by industrial hygienists and environmental scientists, engineers and technologists to evaluate or assess occupational environments. However, due to recent requirement by the American Board of Engineering Technology (ABET), methods to evaluate non-occupational health hazards will also be examined. The major topic is the establishment and use of methodologies to sample and evaluate exposures to air contaminants (gases, vapors, aerosols and particulates). Other occupational and non-occupational pollutants to be evaluated include noise, heat, and cold stress, radiation, and ionizing and non-ionizing radiation and microorganisms, (bioaerosols and allergens). This course also offers students an opportunity to understand methods of selecting an equipment, maintenance, calibration as well as sample handling practices (the chain of custody).

Course Objectives:

At the conclusion of this course, you will be able to:

- 1.0 Describe the basic principles of sampling of airborne contaminants and physical agents (e.g. noise) and analytical methods – including answering questions: why's; what's; when's and how's of sampling etc
- 2.0 Design and implement air sampling programs for gases, vapors, aerosols and particulates in occupational and non-occupational environments.
- 3.0 Design and implement sampling programs for other health hazards such as microorganisms, noise, heat and cold, and various radiation sources.
- 4.0 Describe the common analytical methods used by accredited laboratories.
- 5.0 Select, calibrate and use of the proper direct reading instruments and other air flow instruments for sampling or industrial hygiene evaluation.
- 6.0 Use statistical data to assist in making decisions and to establish violation or non-violation of occupational standards such as Occupational Exposure Limits (OEL) or National Ambient Air Quality Standards (NAAQs) for non-occupational environments and as a basis to develop control methods.

Required Course Text: DiNardi, S. R. (Ed.). (1998). The Occupational Environment - Its Evaluation and Control. Fairfax, VA: American Industrial Hygiene Association. (Available at the Textbook Rental Stores -Southeastern - Tel 985-549-3784) - http://www.selu.edu/admin/tb rental/

^{*1} This syllabus is subject to change without notice and depending on various parameters

Optional Textbooks:

Barbara, A. P and Patricia, J. Q. (2002) Fundamentals of Industrial Hygiene. 5th Ed. NSC

Bisesi, M.S. (2004). Industrial Hygiene Evaluation Methods. Lewis Publishers

Boss, M. J. and Day, W.D (2001). Air Sampling and Industrial Hygiene Engineering. Lewis Publishers

NIOSH (1977). Occupational Exposure Sampling Strategy Manual. NIOSH Publication No. 77-173. http://www.cdc.gov/niosh/docs/77-173/pdfs/77-173.pdf

Ramacharan G. (2005). Occupational Exposure Assessment for Air Contaminants, CRC Press. Boca Raton, Fl.

ACGIH – TLV Handbook (2011)

Schedule:

First day of class Thursday 01/19/2012 (Note university official class time is 6:30 pm through 9:15 pm)

January, 2012	February, 2012	March, 2012	April, 2012	May, 2012
19 th	2 nd	1 st	5 th	*3 rd *
First Day of Class			Exam # 2	Last Day of Class and Presentations
26 th	9 th	8 th	12 th	10 th
			Spring Break	Final Exam
	16 th	15 th	19 th	
	23 th	22 nd	*26 th *	
	Exam #1		Final project due and Student Presentations	
	1.6.1.	29 th		

^{*}students will present their term paper research findings to their colleagues

Exams:

Students will take three exams (<u>Exam #1; Exam #2 and Final Exam</u>) on the dates indicated on this syllabus (unless otherwise changed by the instructor through formal announcements in the class).

Evening Classes - http://www.selu.edu/admin/rec_reg/exam_sch/				
Class Day(s)	Class Starts Time from	Class Starts Time to	Spring 2012 Exam Day	Exam Time
ТН	6:30 pm	9:15 pm	Thurs., May 10	7:15 pm - 9:15 pm

The exams are intended to measure a student's progress and to also provide a basis for the final grades. Each of the three exams will consist of multiple choice, matching, fill-in-the-blanks and, where applicable, questions involving using mathematical skills. Some essay questions, to critique field evaluation methods or strategies may also appear as part of the exams. The exams will cover the materials presented during any period of the semester and those materials presented up to the day before the exam date. Students are encouraged to take notes in class in order to capture any new information that may be discussed in class but does not appear in the required or recommended text book or lecture notes because such information may be required to answer some questions in the exams. The table below shows the contribution of each of the three exams to the students' final grade. Please read and understand the content of this grading policy and thereafter **validate the syllabus electronically.**

Students should also validate the syllabus by signing and handing over the validation statement back to the instructor on the first day of class.

Students are <u>only</u> permitted to make-up an exam if they had made arrangements <u>prior</u> to the time the exam was originally administered. This prior arrangement must also be approved by the instructor. Unless approval has been granted there will be no make-up exam allowed if a student merely did not shown up for the original exam. In the circumstances that an approval to miss an exam is granted, a student will take the make-up exam before the next scheduled class. There will be no exceptions to this policy.

Final Project or Term Paper:

There will be a research project or term paper to be submitted during the semester. The term project or paper require students to apply the principles learned in class in real-life situations (for evaluating past IH studies; instruments or methods used or evaluating instruments used for particular IH field sampling scenarios). Details of the term project or paper are will be handed out separately as guidelines for term project or paper. The term paper is due on <u>26th April 2012</u>, at the beginning of the class. Students should take note that a delay in submitting their term paper or attachments after the due date will attract a penalty of 5 pts per day.

Students are encouraged to follow the format of the term papers, including a <u>formal</u> presentation to peers on the dates indicated on this syllabus. Students must submit the following: (1) One original hard report/term paper together with five power point slides and appropriate appendices; and (2) an <u>electronic version of all the documents listed in (1)</u>. Presentation dates are tentatively scheduled for two days: <u>04/26 and 05/03</u>. Students should consult grading rubric on the blackboard.

<u>Impromptu quizzes, class exercises or group work:</u> There will be in-class exercises/assignments throughout the semester. Some class exercises will be <u>impromptu</u> (at the beginning of the class, mid- or end of lectures). Most quizzes will be based on the lecture notes, discussions in class, power point slides or from the homework assignments. The instructor reserves the right to give these assignments or quizzes at any time. Thus students should be prepared at all times and take note that **these assignments, exercises or quizzes will be given at any time of the class or semester.** Students will <u>not be allowed to make up</u> any of the missed class exercises or impromptu

quizzes. See the grading schedule below for the grade of this item towards the overall grade of the course.

Homework assignments/field evaluation reports: Students should visit the blackboard frequently because that is where most homework assignments will be posted. It is the responsibility of the students to ensure that the homework assignments are handed back to the instructor on the due date. It is not and it will not be the responsibility of the instructor to tell students which homework assignments have not been handed in. See the grading schedule below to determine the contribution of this item towards the overall grade of the course.

Validation of Syllabus: It is the student's responsibility to read and understand the content of this syllabus.

Course Grades Assignment:

Grades will be assigned in accordance with 10-point Scale below:

100 Points scale	Remarks (Final Grade)
90 - 100	A, Superior
80 - 89.99 *	B, Very Good
70 - 79.99 *	C, Average
60 - 69.99 *	D, Below Average
0 - 59.99*	F, Fail (FY or FN)**

^{*}Instructor reserves the right to adjust the grades to the nearest number. Students should refrain from demanding it as a right.

**FY - Student attended \(\geq 60\% \) of the time

**FN - Student attended \(\section 60\% \) of the time

Grade distribution for various assignments

	On a 100 Points scale
Assignments (HW/Quizzes etc)	20
Term Paper	20
Exam # 1	20
Exam # 2	20
Final Exam	20
Total	100 (%)

Course Requirements:

- 1. Adherence to departmental policies and procedures, a copy of which has been provided to you.
- 2. Regular class attendance as per departmental policy (students are responsible for signing a roll sheet).
- 3. Read the material to be discussed in class prior to coming to class.
- 4. Complete and turn in research project by due deadline.
- 5. No independent studies will be negotiated with the instructor. If a student wants to pursue this path, they should consult with the head of the department ahead of time
- 6. Attendance: Please consult the following link for class attendance policy: http://www2.selu.edu/documents/policies/empl/p4_instructional_practices.pdf

Note:

- 1. <u>Dropping out of class:</u> Students may <u>not</u> automatically drop from class. Students who choose to drop must do so by the semester deadline! See the University calendar attached for dates referring to withdrawal.
- 2. <u>Student disability policy:</u> A qualified student with a disability seeking accommodations under the Americans with Disabilities Act should self-identify with the Office of Student Life, Rm. 203, in the Student Union Bldg. <u>Hand a copy</u> of your papers to the instructor on the first day of class
- 3. <u>Students' behavior/classroom decorum:</u> Free discussion, inquiry, and expression are encouraged in the classroom. Classroom behavior that interferes with either the instructor's ability to teach or the ability of other students is not acceptable. Refrain from routinely entering class late or departing early; use cellular telephones or other electronic devices in class or repeatedly talking in class without being recognized. Talking while others are speaking or arguing in a way that is perceived as 'crossing the civility line' will not be tolerated.

4. **Academic Integrity.** The academic community relies upon a high standard of integrity in the relations among its members. To the extent that this standard is not maintained, the good of the community suffers, and injustice (sometimes serious injustice) may be done. One of the most important aspects of academic integrity concerns the just measure of each student's academic accomplishments. These are ordinarily evaluated through written examination or submitted work. For such modes of assessment to operate fairly, it is essential that the instructor be assured that the work used to evaluate the student's performance is genuinely the student's own. It is also the responsibility of the student to uphold the academic integrity of the University. Any use of unauthorized material, communication with fellow students during exams, or attempting to benefit from the work of other students and similar behavior that defeats the intent of an examination or other class work is unacceptable to the University. Cheating on examinations, plagiarism, improper acknowledgment of sources in essays and the use of a single essay or paper in more than one course without permission are considered very serious offenses and shall be grounds for disciplinary action.

Course Outline & Reading Assignments:

Basic Principles of Sampling or Evaluating Worker Exposures

- Introduction and Review Readings: Chapters 2,3, 6, 7, & 8
 - A General Principles answering the questions: who; where; why; what and how to sample/evaluate
 - B Basic Principles of Occupational and Non-occupational Sampling Practices
 - 1 NAAQs (non-occupational standards) to answer the "why field evaluation" question
 - 2 OELs (occupational standards) to answer the "why field evaluation" question
 - Resources for Field Evaluations NIOSH; OSHA; AIHA; ACGIH; EPA etc.

Sampling for Gases and Vapor or Air Contaminants

• Air Contaminants *Reading: Chapters 8, 9, 10, 11, 12, 13, 14 & 15*

Gas; Vapors and Air (Particulates) – what are these; how to sample and quantify them?

- A Sampling for Gases and Vapors
 - Examples of instruments/equipment to be discussed in class are PID/FID/ Detector Tubes; Adsorption Tubes; Passive Sampling etc
- B Sampling for Airborne Particulates
 - Examples of instruments/equipment to be discussed are: Open and Closed Cassettes; Use of filters; Midget Impingers; Cyclones etc. and other instruments/equipment such as the Portacount® for Quantitative Respirator Fit Tests

Sampling for Physical Hazards (wi

- Physical Hazards: Reading: Chapters 20. 21, 22, 23. 24 & 25 Noise Noise Dosimeters
 - Examples of instruments/equipment to be discussed are: Metrosonics dBA 4000 and other older versions of these instruments etc

Depending on the time availability

Radiation (Non-ionizing and ionizing radiation)

- 2 Examples of instruments/equipment to be discussed are Geiger-Muller Radiation Meter
- 3 Thermal Heat/Cold Stress
 - a Wet Bulb Globe Temperature (WBGT)
- 4 Evaluation and Light or Lux Measurements:
 - a Heavy and Duty Light Meter Model 407026

Academic Calendar - Spring 2012 (attached for your convenience)

Date	Description		
January 9	Rental textbook pick-up begins for students who are paid.		
January 9 - 10	Freshman Orientation.		
January 10	Open Registration Ends at 5:00 p.m.		
January 11	No Registration or Schedule Adjustments during this time. Registration re-opens during Final Schedule Adjustment.		
January 12 - 13	Final Schedule Adjustment begins at 7:30 a.m. on Thursday, January 12th. Students should check their schedule for any classes removed due to low enrollment. Students who decide not to attend must drop all their classes. Students will be financially responsible for any classes remaining on their schedule as of 12:30 p.m. on Friday.		
January 13	Fee Payment Deadline at 12:30 p.m. for all students registered for Spring 2012. Students who have not paid by 12:30 p.m. will not have access to other university services such as textbook rentals, ID services, hangtags, housing, meals, etc. Students are responsible for tuition and fees for any courses that remain on their schedule as of 12:30 p.m.		
January 13	Last day for undergraduate students to remove "I" grades.		
January 16	Martin Luther King Holiday.		
January 17	First Day of Classes; Regular semester and Term I.		
February 15	Graduation Audit for Spring 2012 Graduation Candidates begin. No graduation applications will be accepted for Spring 2012 after this date. Last day to apply for Summer/Fall 2012 graduation without late fee.		
February 16	Term I Classes: Last day to withdraw from classes.		
February 20 - 22	Mardi Gras Holidays.		
March 5	Term I Classes End.		
March 6	Term I Classes: Final Examinations: T-TH schedule.		
March 7	Term I Classes: Final Examinations: M-W schedule.		
March 9	Regular Classes: Last Day to withdraw or resign from the University. Deadline at 12:30 p.m.		
March 12	Term II Classes Begin.		
March 16	Term I grades due by 9:00 a.m.		
March 19 - 23	Priority Registration for Summer and Fall 2012 classes.		
April 6 - 13	Spring Break.		
April 11-12	Early Orientation for Scholarship Recipients.		
April 20	Term II Classes: Last Day to withdraw from classes.		
May 4	Last Day of Classes		
May 5	Saturday Only Classes - Final Examinations.		
May 7 - 11	Final Examinations		
May 12	Commencement 10:00 a.m.		
May 14	Grades due by 9:00 a.m Last day to return rental textbooks without a fine.		
May 18	Student accounts will be charged for any rental books not returned by 12:30 p.m.		

^{*}Grades of prospective graduating students are due by 9:00 a.m., Thursday, May 10, 2012.

NOTE: UNIVERSITY OFFICES WILL BE CLOSED ON MARTIN LUTHER KING HOLIDAY - JANUARY 16; MARDI GRAS - FEBRUARY 20-21, AND EASTER - APRIL 6-9. CAMPUS DINING OPERATIONS WILL ALSO BE CLOSED WHEN UNIVERSITY CLASSES ARE NOT IN SESSION. PLEASE REFER TO www.selu.edu/AuxServices FOR FURTHER INFORMATION.

ALL RENTAL TEXTBOOKS MUST BE RETURNED TO TEXTBOOK RENTAL ON OR BEFORE 6:00 P.M. ON THE FIRST BUSINESS DAY FOLLOWING THE LAST DAY OF FINAL EXAMINATIONS. HOURS OF OPERATION EACH DAY DURING FINAL EXAMS: 7:00 A.M. - 6:00 P.M.

OSHE 381 SAFETY IN CHEMICAL AND PROCESS INDUSTRIES Fall Semester, 2011

Syllabus

Instructor:

Lawrence A. Mauerman, MAS, PE, CSP Office: 110-3 Anzalone Hall

Contacts: • Southeastern office..................985-549-3476

Southeastern e-mail......<u>lmauerman@selu.edu</u>

Office Hrs: • Southeastern Office: Monday, 8:00 am to 12:00 noon and 1:00 pm to 4:00

pm.

Southeastern Office: Tuesday and Thursday, 10:45 am to

12:00 noon

Livingston Literacy & Technology Center (Walker):

Thursday, before class from 5:30 pm to 6:00 pm.

Other times by appointment.

Course Description:

This course provides the fundamentals of chemical process industry safety. It includes a discussion of federal regulatory requirements; the major hazards inherent in chemical plants and petroleum refineries; and the methods used to identify, assess and eliminate those hazards. Chemical process safety is discussed in the context of case studies, providing students with the opportunity to examine real-life industry safety practices.

Course Content:

This course includes critical information for dealing with both normal and emergency operations within the chemical industry. It considers toxic releases, fires, and explosions, and designs to prevent these events, such as inerting, control of static electricity, and pressure relief systems.

Course Objectives:

At the conclusion of this course, you will be able to:

- 1. Discuss the provisions of the federal Process Safety Management (PSM) regulations and describe how they are applied at typical industries in the area.
- 2. Identify the toxic effects of chemicals encountered in the industrial environment; and discuss how engineering controls are used to eliminate these hazards.
- Discuss the physical characteristics of materials which make them flammable or explosive; and describe the controls that are used in the industrial setting to counter these hazards.
- 4. State the causes of over-pressurization in equipment and systems in the industrial environment; and describe the operation and use of devices to prevent its occurrence.
- 5. Describe how each of the formal Process Hazard Analysis (PHA) techniques discussed in class is used and list the advantages and disadvantages of each technique.
- 6. Complete a research project, based on an actual case history, which demonstrates mastery of the principles learned in the class.

Course Text:

Daniel A. Crowl, and Joseph F. Louvar. *Chemical Process Safety: Fundamentals with Applications*. Englewood Cliffs, New Jersey: Prentice Hall, 1990.

29 CFR 1910.119, *Process Safety Management* (with appendices). You should obtain a copy of this OSHA standard and bring it to class with you each week.

Instructor handouts

Schedule:

Class meets on Tuesday, from 8:00 am to 9:15 pm at the Livingston Literacy & Technology Center, 9261 Florida Boulevard, Walker, Louisiana. (Room TBA)

First day of class	Tuesday, 23 August, 2011
1 st Project Due	Tuesday, 13 September, 2011
1 st Exam	Tuesday, 20 September, 2011
2 nd Project Due	Tuesday, 11 October, 2011
2 nd Exam	Tuesday, 18 October, 2011
Term project due	
Last day of class	
Final exam	Tuesday, 6 December, 2011

Class dates are:

Aug	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	
23	6	4	1	6 - Final exam	
30	13 - 1 st Proj.	11 - 2 nd Proj.	8		
	20 - 1 st Exan	n 18 - 2 nd Exa	am 15		
	27	25	22 - Terr	n Project due	
			29 - La	st Day of Class	
				•	

Exams:

There will be two mid-term exams plus a final exam given during the semester to measure your progress and to provide a basis for your grade. Each of the three exams will consist of multiple choice, matching, fill-in-the-blank and, where applicable, short math problems. There will be no essay questions. The two mid-term exams will cover the material studied during the period since the last exam. They will take approximately half of the class period to complete. The remainder of the period will be spent introducing new material. The final exam will be comprehensive, covering the entire course.

You will be permitted to make up an exam ONLY if you have made arrangements PRIOR to the time the exam is originally administered. No exam make up will be allowed if you merely have not shown up for the original exam and have not made arrangements to take a make up. The make up exam must be taken BEFORE the next scheduled class period. NO EXCEPTIONS.

Projects:

There will be three research projects during the semester: two short and one larger (final) project. They will require you to apply the principles learned in class in a real-life situations. The final project will include analysis of an actual chemical plant, identification of potential hazards, and recommendations of measures to eliminate or minimize the hazards. The final project will be submitted as a package including worksheets and a short technical paper and is due on Tuesday, 22 November, 2011. **Projects turned in after that date will receive only partial credit**.

Course Grades:

1. Grades will be assigned in accordance with the Departmental Scale:

Points (Percent)		<u>Grade</u>	
461-500 421-460	(93 - 100) (85 - 92)	=	A, Superior B, Very Good
381-420	,	_	
341-380	(77 - 84) (69 - 76)	_	C, Average D, Below Average
0-340	(0 - 68)	=	E, Fail

2. Basis for assigning grades:

Two mid-term exams @ 100 points	= 200 points (40% of grade)
Final Examination @ 150 points	= 150 points (30% of grade)
Two Short Research Projects @ 25 points	= 50 points(10% of grade)
Final Research Project @ 100 points	= <u>100 points</u> (20% of grade)
TOTAL	= 500 points

Course Requirements:

- 1. Adherence to departmental policies and procedures, a copy of which has been provided to you.
- 2. Regular class attendance as prescribed in the departmental requirements.
- 3. Read the material to be discussed in class prior to coming to class.
- 4. Complete and turn in research project by due deadline.

Other References:

Government Sources, Federal

- Title 29, Code of Federal Regulations, Part 1910--Occupational Safety and Health Standards. Washington, D.C.: U.S. Department of Labor.
- Title 40, *Code of Federal Regulations*, Parts 1-799--Environmental Protection Agency. Washington, D.C.: U.S. Environmental Protection Agency.
- Title 49, Code of Federal Regulations, Parts 1-199--Research and Special Projects Administration. Washington, D.C.: U.S. Department of Transportation.

Other Sources

- Bartknecht, W. *Explosions: Course Prevention Protection*. New York: Springer-Verlag, 1981.
- Bodurtha, Frank T. *Industrial Explosion Prevention and Protection*. New York: McGraw -Hill Book Company, 1980.
- Brown, David B. Systems Analysis & Design for Safety. Englewood Cliffs, New Jersey: Prentice Hall, 1976.
- Fawcett, Howard H. & Wood, William S. Safety and Accident Prevention in Chemical Operations. New York: John Wiley & Sons, 1982.
- Greenburg, Harris R. and Cramer, Joseph J. *Risk Assessment and Risk Management for the Chemical Process Industry.* New York: Van Nostrand Reinhold, 1991.
- King, Ralph. Safety in the Process Industries. Boston: Butterworth-Heinemann, 1990.
- Kletz, Trevor A. What Went Wrong?: Case Histories of Process Plant Disasters. Houston: Gulf Publishing Company, 1988.
- Pilborough L. Inspection of Chemical Plants. Houston: Gulf Publishing Company, 1982.
- Stallworthy, E. A. and Kharbanda, O. P. Safety in the Chemical Industry: Lessons from Major Disasters. Columbia, Maryland: GP Publishing, 1988.
- Wells, G. L. Safety in Process Plant Design. New York: John Wiley & Sons, 1980.

NOTE:

- 1. Students will NOT automatically be dropped from class. Students who choose to drop must do so by the semester deadline! The deadline is Friday, 21 October, 2011.
- 2. If you are a qualified student with a disability seeking accommodations under the Americans with Disabilities Act, you are required to self-identify with the Office of Student Life, Room 203, Student Union.
- 3. Students' behavior/classroom decorum: "Free discussion, inquiry, and expression is encouraged in this classroom. Classroom behavior that interferes with either (a) the instructor's ability to conduct the class, or (b) the ability of the students to benefit from the instruction is not acceptable. Examples may include routinely entering class late or departing early; use of beepers, cellular telephones, or other electronic devices; repeatedly talking in class without being recognized; talking while others are speaking; or arguing in a way that is perceived as 'crossing the civility line.' In the event of a situation where a student legitimately needs to carry a beeper/cellular telephone to class, prior notice and approval by the instructor is required."

4. Academic Integrity. The academic community relies upon a high standard of integrity in the relations among its members. To the extent that this standard is not maintained, the good of the community suffers, and injustice (sometimes serious injustice) may be done. One of the most important aspects of academic integrity concerns the just measure of each student's academic accomplishments. These are ordinarily evaluated through written examination or submitted work. For such modes of assessment to operate fairly, it is essential that the instructor be assured that the work used to evaluate the student's performance is genuinely the student's own. It is also the responsibility of the student to uphold the academic integrity of the University. The use of unauthorized material, communication with fellow students during an examination, attempting to benefit from the work of another student and similar behavior that defeats the intent of an examination or other class work is unacceptable to the University. Cheating on examinations, plagiarism, improper acknowledgment of sources in essays and the use of a single essay or paper in more than one course without permission are considered very serious offenses and shall be grounds for disciplinary action.

Course Outline & Reading Assignments:

Module 1: INTRODUCTION & FEDERAL PSM REGULATORY REQUIREMENTS: Exam: 20 September, 2011

- 1. Introduction (Crowl & Louvar, Chapter 1)
- 2. Federal Process Safety Management Regulations (29 CFR 1910.119)
- 3. Toxicology (Crowl & Louvar, Chapter 2)
- 4. Industrial Hygiene Principles (Crowl & Louvar, Chapter 3)
- 5. Source Models (Crowl & Louvar, Chapter 4)
- 6. Toxic Release and Dispersion Models (Crowl & Louvar, Chapter 5)

Module 2: FIRES, EXPLOSION & OVER-PRESSURIZATION HAZARDS: Exam: 18 October, 2011.

- 7. Characteristics of Flammable and Explosive Materials (Crowl & Louvar, Chapter 6)
- 8. Designs to Prevent Fires and Explosions (Crowl & Louvar, Chapter 7)
- 9. Causes of Over-pressurization
- 10. Introduction to Reliefs (Crowl & Louvar, Chapter 8)
- 11. Relief Sizing (Crowl & Louvar, Chapter 9)

Module 3: HAZARD IDENTIFICATION AND RISK ASSESSMENT: Final Exam: 6 December, 2011.

- 12. Hazard Identification Methodologies (Crowl & Louvar, Chapter 10)
- 13. Risk Assessment Methodologies (Crowl & Louvar, Chapter 11)
- 14. Accident Investigations (Crowl & Louvar, Chapter 12)

OSHE 382: CONSTRUCTION SAFETY Spring Semester, 2012

Syllabus

Instructor: Lu Yuan, Sc.D.
Office: Fayard Hall 327E
Phone: 985-549-3925
Email: Lu.Yuan@selu.edu

Office Hrs: Southeastern Office: Wednesday, 9:00 am to 12:00 pm; 1:00 pm to 5:00 pm.

Other times by special appointment.

McClimans Hall, Rm. 105 or Southeastern Livingston Center: Tuesday before

class from 6:00 pm to 6:30 pm.

Course Description:

Credit 3 hours. Prerequisites: Enrollment in or prior credit for OSHE 111 and OSHE 121. The course will address the application of management principles, communication and human relations factors, safety/health rules, industry and federal standards, accident investigation, and technical issues especially within the job planning phases in the construction environment.

Course Objectives:

At the conclusion of this course, students are expected to:

- 1. Understand construction safety in an increasingly challenging and changing environment.
- 2. Describe the roles of organizations and personnel involved in major construction projects and explain how each affects site safety.
- 3. Illustrate how contractors and subcontractors can be qualified and selected for a construction project.
- 4. Demonstrate how site safety programs can be coordinated among the many contractors on a construction site to provide the overall safety.
- 5. Explain the legal aspects including liability and regulatory requirements of construction safety.
- 6. Examine many technical issues in construction, particularly the requirements and applications of safety planning in the early job phases.

Course Text:

Hill, Darryl C. (2004) *Construction Safety Management and Engineering*. American Society of Safety Engineers, Des Plaines, Illinois.

Exams:

There will be two mid-term exams plus a final exam given during the semester to measure your progress and to provide a basis for your grade. Each of the three exams will consist of multiple choice, matching, fill-in-the-blank and, where applicable, short math problems. The two mid-term exams will cover the material studied during the period since the last exam. The final exam will be comprehensive, covering the entire course.

You will be permitted to make-up an exam ONLY if you have made arrangements PRIOR to the time the exam was originally administered. No make-up exam will be allowed if you merely have not shown up for the original exam and have not made arrangements to take a make-up. The make-up exam must be taken BEFORE the next scheduled class period.

NO EXCEPTIONS will be allowed.

Project:

There will be a short research project which will require you to analyze a specific safety and health issue/hazard in the construction industry and formulate changes to produce positive impacts. The project will be presented in a paper of 5 to 10 pages. The paper will be graded upon accuracy of analysis of the problem and the appropriateness of the corrective measures that are recommended. Good grammar and correct spelling will also be considered in grading the paper.

Projects are due on Tuesday, April 24th. Projects turned in after that date will receive only partial credit.

Course Grades:

1. Grades will be assigned in accordance with the Departmental Scale:

<u>Points</u>	(Percent)		<u>Grade</u>
461-500	(93 - 100)	=	A, Superior
421-460	(85 - 92)	=	B, Very Good
381-420	(77 - 84)	=	C, Average
341-380	(69 - 76)	=	D, Below Average
0-340	(0 - 68)	=	E, Fail

2. Basis for assigning grades:

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Two mid-term exams @ 100 points = 200 points (40% of grade)
Final Examination @ 150 points = 150 points (30% of grade)
Research Project @ 150 points = 150 points (30% of grade)

TOTAL = 500 points
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Course Requirements:

- 1. Adherence to departmental policies and procedures.
- 2. Regular class attendance as prescribed in the departmental requirements.
- 3. Read the material to be discussed in class prior to coming to class.
- 4. Complete and turn in research project by due deadline.

NOTE:

- 1. Students will NOT automatically be dropped from class. Students who choose to drop must do so by the semester deadline! The last day to withdraw or resign from the university is Friday, 9 March, 2012.
- 2. If you are a qualified student with a disability seeking accommodations under the Americans with Disabilities Act, you are required to self-identify with the Office of Disability Services, Rooms 172 and 173, Kinesiology and Health Studies building.
- 3. Students' behavior/classroom decorum: "Free discussion, inquiry, and expression are encouraged in this classroom. Classroom behavior that interferes with either (a) the instructor's ability to conduct the class, or (b) the ability of the students to benefit from the instruction is not acceptable. Examples may include routinely entering class late or departing early; use of beepers, cellular telephones, or other electronic devices; repeatedly talking in class without being recognized; talking while others are speaking; or arguing in a way that is perceived as 'crossing the civility line.' In the event of a situation where a student legitimately needs to carry a beeper/cellular telephone to class, prior notice and approval by the instructor is required."
- 4. Academic Integrity. The academic community relies upon a high standard of integrity in the relations among its members. To the extent that this standard is not maintained, the good of the community suffers, and injustice (sometimes serious injustice) may be done. One of the most important aspects of academic integrity concerns the just measure of each student's academic accomplishments. These are ordinarily evaluated through written examination or submitted work. For such modes of assessment to operate fairly, it is essential that the instructor be assured that the work used to evaluate the student's performance is genuinely the student's own. It is also the responsibility of the student to uphold the academic integrity of the University. The use of unauthorized material, communication with fellow students during an examination, attempting to benefit from the work of another student and similar behavior that defeats the intent of an examination or other class work is unacceptable to the University. Cheating on examinations, plagiarism, improper acknowledgment of sources in essays and the use of a single essay or paper in more than one course without permission are considered very serious offenses and shall be grounds for disciplinary action.

Course Outline & Reading Assignments (Revised 01/11/12)

Class meets on Tuesdays from 6:30 pm to 9:20 pm

Week	Date	Topic	Readings Due	Work Due
Unit 1: Introduction to Construction Safety				
1	Jan. 17	Introduction & Construction Safety in General	Chapter 1	
2	Jan. 24	Construction Safety Program	Chapter 2	
3	Jan. 31	Workers' Compensation in Construction	Chapters 4 & 5	
4	Feb. 7	Contractor Selection	Chapter 6	
5	Feb. 14	FIRST EXAM		Review Unit 1
Unit 2:	Safety Co	omponents and Legal Aspects		
6	Feb. 21	NO CLASS - Mardi Gras Holidays		
7	Feb. 28	Construction Substance-Abuse Programs & Safety Incentives	Chapters 7 & 8	
8	Mar. 6	Regulatory Requirements	Chapter 14	
9	Mar. 13	Prejob/Pretask Planning & Accident Investigation and Reconstruction	Chapters 9 & 10	
10	Mar. 20	Safety Training	Chapter 11	
11	Mar. 27	SECOND EXAM		Review Unit 2
Unit 3:	Technical	Issues and Phase Planning		
		1) Phase Planning for Site Preparation	Chap. 21 & 23	
12	Apr. 3	2) Excavation, Concrete, and Steel Erection	Chap. 16, 20, & 24	
13	Apr. 10	NO CLASS - Spring Break		
14	Apr. 17	Fall Prevention and Protection	Chap. 15 & 17	
15	Apr. 24	Hazardous Materials & Confined Spaces	Chap. 22, 25 & 26	Term Project
16	May 1	Mechanical Systems & Electrical Safety	Chap. 18 & 19	
17	May 8	FINAL EXAM		Overview

OSHE 382 Construction Safety Spring 2012 Guidelines for Final Project

Objectives and Tasks

The final project for *OSHE 382 Construction Safety* will be to analyze a specific safety and health issue/hazard in the construction industry and formulate changes to produce positive impacts.

Possible topics include, but are not limited to, the following:

- General issues and/or legal aspects, such as
 - ➤ Construction safety program essentials
 - ➤ Workers' compensation program
 - ➤ Construction safety training
 - > Reward/incentive program
- Technical issues and/or safety and health hazards, such as
 - > Fall prevention and protection
 - Confined space
 - > Electrical safety
 - > Industrial hygiene issues
 - > Ergonomic hazards

Case examples are encouraged if you can obtain access to specific construction companies and/or typical construction sites. Under that circumstance, pictures, videos, and interviews are advantageous if you can get permission. However, case examples are not required.

There are some rules about topic selection:

- 1) First "choose" first "determine": It's like *first come first serve*. You can write down your topic in the class roll sheet today, or send me an email, or come to my office, or let me know in the future classes. The idea is the sooner the better.
- 2) You will have to reselect your topic if there are too many people ahead of you that have selected the same topics. Again, it's good for me to know your topic as soon as possible so that you can even start right away.

The followings are some questions/concerns that may help you develop your paper:

- Traditional aspects regarding the selected issue
- The federal standards and industrial policies that are used to regulate the issue/hazard
- Typical barriers for implementing control programs/strategies
- Your own opinions and recommendations about solutions to the issue/hazard (The focus)

Writing Guidelines

- Format
 - ➤ Margins: One inch (1") top, bottom and sides
 - > Spacing: Double-spaced
 - Font: Times New Roman (Size 12) is preferred. Arial is also OK.
 - > Style, Punctuation and Reference: Please follow the *Publication Manual of the American Psychological Association (APA)*. You can purchase it in the university book store. Here are some useful websites that you can take a look as well:
 - 1) www.apastyle.org
 - 2) http://www.ccc.commnet.edu/apa/
 - 3) http://owl.english.purdue.edu/owl/resource/560/01/
 - 4) http://www.uwsp.edu/PSYCH/apa4b.htm
 - ➤ Cover page: Please try to be simple and include the information of project title, author's (your) name, class number and name, instructor's (my) name, and date of submission (Remember the due day is **APRIL 24, 2012**).
- Length Usually between 5 and 10 pages of text, not including: the cover page; large charts, tables and figures; and the reference page. Pages should be numbered, either in the upper right-hand corner or the bottom center. Do not number title pages and tables of content.
- **References** At least 5 references are required. Most should come from books, journals, magazines, newspapers, and other printed sources. No more than half of your sources should be obtained from the internet.

Grading Policies

- Content (60%) Quality of the work
- Organization (20%) Structure of the paper
- Presentation (20%) Spelling, grammar, and format

Please refer to the rubric on next page for project performance consideration!

Performance Consideration (Maximum Points)	Below Expectations 1	Progressing to Criteria 2	Meets Criteria 3	Exceeds Criteria 4	Score
Content (90)	Inconsistent or few details that may interfere with the meaning of the text.	Some details but may include extraneous or loosely related material.	Provides adequate supporting detail to support solution/argument.	Provides ample supporting detail to support solution/argument.	
Organization (30)	Little evidence of organization or any sense of wholeness or completeness.	Little wholeness or completeness, though organization attempted.	Organization pattern is logical & conveys wholeness and completeness with few lapses.	Organization pattern is logical & conveys wholeness and completeness.	
Presentation (30)	Limited or inappropriate vocabulary & incorrect grammar and syntax for intended purpose.	Limited & predictable vocabulary, perhaps not appropriate & some grammar and syntax mistakes for intended purpose.	Uses effective language and appropriate word choices & makes minor grammar and syntax mistakes for intended purpose.	Uses effective language, appropriate word choices, and correct grammar and syntax for intended purpose.	

Total		
LOTAL		

OSHE 421 MEASUREMENT OF SAFETY PERFORMANCE & ACCIDENT INVESTIGATION 7 ANALYSIS Spring Semester, 2012

Syllabus

_awrence A. Mauerman, MAS, PE, CSP		Office: 110-3 Anzalone Hall
		•
	Southeastern Office: Monday and We	

1:00 to 4:00 pm. Tuesday & Thursday, 10:30 am to 12:00 noon.

Course Description:

Instructor.

This course presents methods to objectively evaluate a company's safety progress. The course covers two distinct topics: (1) measuring safety performance, and (2) incident investigation and analysis. The first segment of the course addresses ways of measuring safety performance objectively and subjectively using safety audits, inspections, observations, performance appraisal systems, and injury/illness statistics. The second segment of the course addresses the causes of accidents, systematic ways of conducting investigations, documenting findings, causes and other significant data, and drafting recommendations.

Course Content:

The following topics will be presented as part of the content of course:

! At other times by appointment

- 1. The importance of being able to track and interpret the various indicators that describe an organization's performance in the areas of safety and health.
- 2. Selection, calculation and presentation of pertinent safety and health data.
- 3. Interpretation of safety and health data to provide accurate and balanced information that can be used to make improvements in performance.
- 4. Useful investigation methodologies and techniques that can be used to reveal the causes of accidents and incidents so that proper controls can be implemented to prevent a recurrence.

Course Objectives:

At the conclusion of this course, you will be able to:

- 1. Discuss the importance of maintaining accurate records to measure an organization's safety performance.
- 2. Identify the various parameters that can be used to track safety performance in the workplace.
- 3. Given raw sample data, be able to calculate statistical rates, trends and other indicators and to interpret the meanings of these results.
- Discuss both traditional methods and recent developments in acquiring, classifying, and recording the data collected from investigating safety and health incidents that occur in the workplace.

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5. Discuss the methods used to investigate safety and health incidents, and determining causal factors. Specifically discuss: insurance First Report of Injury forms, Root-Cause

Analysis, and other methodologies for determining accident causes.

Course Texts:

Ted S. Ferry. *Modern Accident Investigation and Analysis* (2nd ed.). New York: John Wiley & Sons, 1988.

Instructor handouts

Schedule:

Class meets on Wednesday, from 6:30 pm to 9:20 pm at Anzalone Hall, Ro	om 214.
1	First day of class
Class meets on Wednesday, from 6:30 pm to 9:20 pm at Anzalone Hall, Ro	1st Project Due
!!	Mardi Gras Holidav
1	1 st Exam
1	2 nd Exam
!	Spring Break
1	Term project due
1	Last day of class
	Final Exam

Class dates are:

JAN FEB MAR 18 1 7 22 8 14 15 - 1 st Project 21 22 - Mardi Gras 28 - 2 nd Exam 29 - 1 st Exam	APR 4 11 - Spring Break 18 - 2 nd Project due 25	MAY 2 - Last Day 9 - Final Exam
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Exams:

There will be two mid-term exams plus a final exam given during the semester to measure your progress and to provide a basis for your grade. Each of the three exams will consist of multiple choice, matching, fill-in-the-blank and, where applicable, short math problems. There will be no essay questions. The two mid-term exams will cover the material studied during the period since the last exam. Each mid-term exam will take approximately half of the class period to complete. The remainder of the period will be spent introducing new material. The final exam will be comprehensive, covering the entire course.

<u>Exam Make-up Policy</u>: You will be permitted to make-up an exam ONLY if you have made arrangements PRIOR to the time the exam was originally administered. No make-up exam will be allowed if you merely have not shown up for the original exam and have not made arrangements to take a make-up. The make-up exam must be taken BEFORE the next scheduled class period. **NO EXCEPTIONS will be allowed**.

Projects:

There will be two term projects. The first project will be given to the class the second week

of class and will be **due on 15 February, 2011.** The second project will be given to the class after the first mid-term exam and will be **due on 18 April, 2011.** Any projects turned in after their due date will not receive full credit.

Course Grades:

1. Grades will be assigned in accordance with the Departmental Scale:

Points (Percent)		<u>Grad</u>	<u>e</u>
	(93 - 100)=	A, Sı	uperior
421-460	(85 - 92)	=	B, Very Good
381-420	(77 - 84)	=	C, Average
341-380	(69 - 76)	=	D, Below Average
0-340	(0 - 68)	=	E, Fail

2. Basis for assigning grades:

```
Mid Term Exams: 2 @ 100 points = 200 points (40% of grade)

1<sup>st</sup> Term Project: 50 points = 50 points (10% of grade)

2<sup>nd</sup> Term Project: 100 points = 100 points (20% of grade)

Final Exam: 150 points = 150 points (30% of grade)

TOTAL = 500 points
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Course Requirements:

1. Adherence to departmental policies and procedures, a copy of which has been provided to you.

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- 2. Regular class attendance as prescribed in the departmental requirements.
- 3. Read the material to be discussed in class prior to coming to class.
- 4. Complete and turn in research project by due deadline.

IMPORTANT SOUTHEASTERN AND DEPARTMENT POLICIES:

- 1. Students will NOT automatically be dropped from class. Students who choose to drop must do so by the semester deadline! The last day for dropping class is Friday, 9 March, 2012.
- 2. If you are a qualified student with a disability seeking accommodations under the Americans with Disabilities Act you are required to self-identify with the Office of Student Life, Room 203, Student Union.
- 3. Students' behavior/classroom decorum: "Free discussion, inquiry, and expression are encouraged in this classroom. Classroom behavior that interferes with either (a) the instructor's ability to conduct the class, or (b) the ability of the students to benefit from the instruction is not acceptable. Examples may include routinely entering class late or departing early; use of beepers, cellular telephones, or other electronic devices; repeatedly talking in class without being recognized; talking while others are speaking; or arguing in a way that is perceived as 'crossing the civility line.' In the event of a situation where a student legitimately needs to carry a beeper/cellular telephone to class, prior notice and approval by the instructor is required."
- 4. The academic community relies upon a high standard of integrity in the relations among its members. To the extent that this standard is not maintained, the good of the community suffers, and injustice may be done. One of the most important aspects of academic integrity concerns the just measure of each student's academic accomplishments. These are ordinarily evaluated through written examination or submitted work. For such modes of assessment to operate fairly, it is essential that the instructor be assured that the work used to evaluate the student's performance is genuinely the student's own. It is also the responsibility of the student to uphold the academic integrity of the University. The use of unauthorized material, communication with fellow students during an examination, attempting to benefit from the work of another student, and similar behavior that defeats the intent of an examination or other classwork is unacceptable to the University. Cheating on examinations, plagiarism, improper acknowledgment or sources in essays and the use of a single essay or paper in more than one course without permission are considered very serious offenses and shall be grounds for disciplinary action.

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Course Outline & Reading Assignments:

Assignments for this class will follow the organization of the text for the class.

OSHE 424 SYSTEM SAFETY METHODOLOGIES Fall Semester, 2011

Syllabus

Instructor: Lu Yuan, Sc.D.
Office: Fayard Hall 327E
Phone: 985-549-3925
Email: Lu.Yuan@selu.edu

Office Hrs: Southeastern Office: Tuesday and Thursday, 1:00 pm to 4:00 pm; Wednesday,

9:00 am to 12:00 pm. Other times by special appointment.

Southeastern Livingston Center: Wednesday before class from 5:30 pm to 6:00

pm.

Course Description:

Prerequisites: Mathematics 241, OSHE 111, and OSHE 121. This course presents the concepts of Risk Management and Loss Control through the use of systematic approaches to hazard anticipation, identification, evaluation and control. Major topics include: an introduction to qualitative methods of evaluating the hazards and risks associated with systems, processes, equipment, and other entities. It also includes a review of techniques for mitigating or managing identified risks.

Course Objectives:

At the conclusion of this course, students will be able to:

- 1. Describe and compare the basic features of the following hazard evaluation techniques:
 - Safety Review
 - Checklist Analysis
 - Relative Ranking
 - Preliminary Hazard Analysis
 - What-if Analysis
 - What-if/Checklist Analysis
 - Hazard and Operability Analysis (HazOp)
 - Failure Modes and Effect Analysis
 - Event Tree Analysis (ETA)
 - Fault Tree Analysis (FTA)
 - Cause-Consequence Analysis
 - Human Reliability Analysis
- 2. Select the best hazard evaluation technique based on the conditions of the job and the desired output of the analysis.
- 3. Perform a simple hazard evaluation using one or more of the methods studied in the class.

Course Textbooks:

- 1) Brauer, R.L., Safety and Health for Engineers, 2nd Edition. New Jersey: John Wiley & Sons Inc., 2006.
- 2) Center for Chemical Process Safety, *Guidelines for Hazard Evaluation Procedures: Third Edition*. New York: John Wiley & Sons, Inc., 2008.

Other Readings:

- 29 CRF 1910.119, Process Safety Management of Highly Hazardous Chemicals. http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9760
- 2) Stephans, R.A. and Talso W.W., eds., *System Safety Analysis Handbook, 2nd Edition*. Unionville, VA: System Safety Society, 1997.
- 3) Stephans, R.A., System Safety for the 21st Century The Updated and Revised Edition of System Safety 2000. New Jersey, John Wiley & Sons Inc., 2004.
- 4) Instructor Handouts

Exams:

There will be two mid-term exams plus a final exam given during the semester to measure your progress and to provide a basis for your grade. Each of the three exams will consist of multiple choice, matching, fill-in-the-blank and, where applicable, short math problems. There will be no essay questions. Each exam will cover the material studied during each of the three units of the class.

You will be permitted to make-up an exam ONLY if you have made arrangements PRIOR to the time the exam was originally administered. No make-up exam will be allowed if you merely have not shown up for the original exam and have not made arrangements to take a make-up. The make-up exam must be taken BEFORE the next scheduled class period.

NO EXCEPTIONS will be allowed.

Projects:

The second and third portions of the class will involve the actual preparation and performance of two Process Hazard Analyses (PHAs) of an actual chemical plant. One PHA will be a Hazard and Operability Study (HazOp) and the other one will be a Fault Tree Analysis (FTA). Details of the project assignments and requirements will be handed out in a timely manner.

Course Grades:

1. Grades will be assigned in accordance with the Departmental Scale:

<u>Points</u>	(Percent)		<u>Grade</u>
461-500	(93 - 100)	=	A, Superior
421-460	(85 - 92)	=	B, Very Good
381-420	(77 - 84)	=	C, Average
341-380	(69 - 76)	=	D, Below Average
0-340	(0 - 68)	=	E, Fail

2. Basis for assigning grades:

Three exams @ 100 points = 300 points (60% of grade)
Two Practical Projects @ 100 points = 200 points (40% of grade)
TOTAL = 500 points

Course Requirements:

- 1. Adherence to departmental policies and procedures.
- 2. Regular class attendance as prescribed in the departmental requirements.
- 3. Read the material to be discussed in class prior to coming to class.
- 4. Complete and turn in research project by due deadline.

NOTE:

- 1. Students will NOT automatically be dropped from class. Students who choose to drop must do so by the semester deadline! The last day to withdraw or resign from the university is Friday, 21 October, 2011.
- 2. If you are a qualified student with a disability seeking accommodations under the Americans with Disabilities Act, you are required to self-identify with the Office of Disability Services, Room 111, Student Union.
- 3. Students' behavior/classroom decorum: "Free discussion, inquiry, and expression are encouraged in this classroom. Classroom behavior that interferes with either (a) the instructor's ability to conduct the class, or (b) the ability of the students to benefit from the instruction is not acceptable. Examples may include routinely entering class late or departing early; use of beepers, cellular telephones, or other electronic devices; repeatedly talking in class without being recognized; talking while others are speaking; or arguing in a way that is perceived as 'crossing the civility line.' In the event of a situation where a student legitimately needs to carry a beeper/cellular telephone to class, prior notice and approval by the instructor is required."
- 4. Academic Integrity. The academic community relies upon a high standard of integrity in the relations among its members. To the extent that this standard is not maintained, the good of the community suffers, and injustice (sometimes serious injustice) may be done. One of the most important aspects of academic integrity concerns the just measure of each student's academic accomplishments. These are ordinarily evaluated through written examination or submitted work. For such modes of assessment to operate fairly, it is essential that the instructor be assured that the work used to evaluate the student's performance is genuinely the student's own. It is also the responsibility of the student to uphold the academic integrity of the University. The use of unauthorized material, communication with fellow students during an examination, attempting to benefit from the work of another student and similar behavior that defeats the intent of an examination or other class work is unacceptable to the University. Cheating on examinations, plagiarism, improper acknowledgment of sources in essays and the use of a single essay or paper in more than one course without permission are considered very serious offenses and shall be grounds for disciplinary action.

Course Outline & Reading Assignments (Revised 08/15/11)

Class meets on Wednesdays from 6:00 pm to 8:50 pm

Week	Date	Topic	Readings Due	Work Due
Unit 1: Introduction to System Safety Methodologies				
1	Aug. 17	System Safety Methodologies in General	Brauer Chap. 36	
2	Aug. 24	Understanding Risk	Brauer Chaps. 35 & 36	
3	Aug. 31	Scope of Hazard Evaluation and Preparation	CCPS Chap. 2	
4	Sep. 7	Hazard Evaluation Meetings and Results	CCPS Chap. 2	
5	Sep. 14	FIRST EXAM		Review Unit 1
Unit 2:	Hazard Id	entification Methodologies		
6	Sep. 21	Hazard Identification Methods in General	CCPS Chaps. 3 & 4	
7	Sep. 28	Hazard and Operability Study (HazOp)	CCPS Chap. 5.3	
8	Oct. 5	HazOp Case Study Step 1	1) CCPS Chaps.	
9	Oct. 12	HazOp Case Study Step 2	15 & 19 2) Instructor	
10	Oct. 19	HazOp Case Study Step 3	Handouts	
11	Oct. 26	SECOND EXAM		Review Unit 2
Unit 3:	Frequenc	y and Consequence Assessment Methodolo	gies	
12	Nov. 2	Fault Tree Analysis (FTA)	CCPS Chap. 5.5	
13	Nov. 9	FTA Case Study Part 1	1) CCPS Chap.16	
14	Nov. 16	FTA Case Study Part 2	2) Instructor Handouts	
15	Nov. 23	NO CLASS – Thanksgiving Holiday		
16	Nov. 30	System Safety Analysis Overview	CCPS Chap. 5	Last Class
17	Dec. 7	FINAL EXAM		Review Unit 3

OSHE 441 Industrial Toxicology Fall Semester, 2011

Syllabus

Instructor:		Lawrence A. Mauerman, MAS, PE, CSP
Phone:		Southeastern Office
	•	E-mail: <u>lmauerman@selu.edu</u>
Hours:	•	Southeastern Office: Mon., 8:00 am to 11:30 am and 1:00 to 4:00 pm; and Tues. & Thurs., 10:30 am to 11:00 am.
	•	Livingston Parish Literacy & Technology Center, Tuesday and Thursday, 5:30 to 6:00 pm, before class, and 8:30 to 9:00 pm, after class
	•	At other times by appointment

Course Description:

This course examines the effects of industrial toxicants on the human body. Major topics include: the discipline of toxicology, acute and chronic exposures and effects, routes and characteristics of exposures, target organs and systems, dose and response, and carcinogenesis. It also discusses the toxic characteristics of various classes of toxic materials.

Course Objectives:

At the conclusion of this course, the student will be able to:

- 1. Describe and define the general principles of toxicology, including terminology; the dose response relationship; routes of entry; the absorption, distribution, and elimination of toxic agents; and biotransformation of substances in the body.
- 2. Describe the adverse effects caused by various toxic agents on specific tissues and organs including the liver, blood, kidneys, nervous system, skin, eyes, lungs, and immune system.
- 3. Discuss toxicological areas of special concern including reproductive toxicology and carcinogenesis.
- 4. Describe the role and application of toxicology in modern times, including risk assessment, public health, epidemiology, and control strategies.

Text:

Phillip L. Williams, Robert C. James and Stephen M. Roberts (Eds.). *Principles of Toxicology: Environmental and Industrial Applications* (2nd ed.). New York: John Wiley & Sons, Inc., 2000.

Instructor handouts

Schedule:

Class meets on Thursday, from 6:00 pm to 8:50 pm in room 118 of the Southeastern Louisiana University Livingston Parish Literacy and Technology Center at 9261 Florida Boulevard in Walker, Louisiana.

•	First day of class	Thursday, 18 August, 2011
		Thursday, 22 September, 2011
		Thursday, 27 October, 2011
		Thursday, 24 November, 2011
•		Thursday, 1 December, 2011
•	•	Thursday, 8 December, 2011

Calendar:

<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>		Dec
18		1	6 - Fall	Break 3	
	1 - projed	ct due			
25	8	3	13	10	8 -
			3 rd exam		
	15	20		17	
	22 - 1 st exam	27 - 2 nd exam	24 - holiday		
29			-		

Exams:

There will be three (3) exams and five (5) unannounced quizzes given during the semester to measure your progress and to provide a basis for your grade. The exams will be objective in nature and will include multiple choice, fill-in-the-blank, and matching questions. All exams will use the scantron (National Computer Systems [NCS]) test Answer Sheet, F. The scantron forms will be provided by the department. You must provide your own No. 2 lead pencil for the exam.

The five quizzes will cover subjects discussed during class and the reading assignments and will be administered at the beginning of the next class.

You will be permitted to make up an exam or a quiz ONLY if you have made arrangements PRIOR to the time it is originally administered. Make-ups will NOT be allowed if you merely missed the original exam or quiz and did not make arrangements to take a make-up. The make-up exam must be taken BEFORE the next scheduled class period. NO EXCEPTIONS.

Projects:

There will be a research project which will require you to demonstrate a mastery of the objectives of the course. You will be assigned a specific toxic chemical and will be required to write a research paper that describes that chemical in relation to each of the five objective stated above. There is no minimum limit as to the size of the paper, but it must be of sufficient length to cover the topic thoroughly. Otherwise, follow the *Guidelines for Term Papers*, attached to this syllabus.

Grades:

1. Basis for assigning grades:

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Three Exams @ 100 points = 300 points (60% of grade)
Five Quizzes Project @ 20 points = 100 points (20% of grade)
Research Project @ 100 points = 100 points (20% of grade)
TOTAL POINTS POSSIBLE = 500 points
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2. Grades will be assigned in accordance with the departmental code:

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461-500 pts (93%-100%) = A (Superior)

421-460 pts (85%-92%) = B (Very Good)

381-420 pts (77%-84%) = C (Average)

341-380 pts (69%-76%) = D (Below Average)

0-340 (0%-68%) = E (Failure)
```

Course Requirements:

- 1. Adherence to departmental policies and procedures, a copy of which has been provided to you.
- 2. Regular class attendance as prescribed in the departmental requirements.
- 3. Read the material to be discussed in class prior to coming to class.
- 4. Complete and turn in research project by due deadline.

NOTE:

- 1. Students will NOT automatically be dropped from class. Students who choose to drop must do so may the semester deadline, which is Friday, 21 October, 2011.
- 2. If you are a qualified student with a disability, seeking accommodations under the Americans with Disabilities Act, you re required to self-identify with the Office of Student Life, Room 203, Student Union.
- 3. Students' Behavior/Classroom Decorum: "Free discussion, inquiry and expression are encouraged in this classroom. Classroom behavior that interferes with either (a) the instructor's ability to conduct the class, or (b) the ability of the students to benefit from the instruction is not acceptable. Examples may include, but are not limited to, the following: routinely entering class late or departing early; use of beepers, cellular telephones or other electronic devices; repeatedly talking in class without being recognized; talking while others are speaking; or arguing in a way that is perceived as 'crossing the civility line.' In the event of a situation where a student legitimately needs to carry a beeper/cellular telephone to class, prior notice and approval by the instructor is required."
- 4. The academic community relies upon a high standard of integrity in the relations among it members. To the extent that this standard is not maintained, the good of the community suffers, and injustice may be done. One of the most important aspects of academic integrity concerns the just measure of each student's academic accomplishments. There are ordinarily evaluated through written

examination or submitted work. For such modes of assessment to operate fairly, it is essential that the instructor be assured that the work used to evaluate the student's performance is genuinely the student's own. It is also the responsibility of the student to uphold the academic integrity of the University. The use of unauthorized material, communication with fellow students during an examination, attempting to benefit from the work of another student, and similar behavior that defeats the intent of an examination or other class work is unacceptable to the University. Cheating on examinations, plagiarism, improper acknowledgment of sources in essays and the use of a single essay or paper in more than one course without permission are considered very serious offenses and shall be grounds for disciplinary action.

Course Outline & Reading Assignments

UNIT 1: CONCEPTUAL ASPECTS (Chapters 1 - 3) 1st Exam: Thursday, 22 September, 2011

- 1. GENERAL PRINCIPLES OF TOXICOLOGY
- 2. ABSORPTION, DISTRIBUTION AND ELIMINATION OF TOXIC AGENTS
- BIOTRANSFORMATION: A Balance Between Bioactivation and Detoxification.

UNIT 2: SPECIFIC AREAS OF CONCERN (Part 1) (Chapters 4 THROUGH 9) 2nd Exam: Thursday, 27 October, 2011

- 4. HEMATOTOXICITY: Chemically Induced Toxicity of the Blood
- 5. HEPATOTOXICITY: Toxic Effects on the Liver
- 6. NEPHROTOXICITY: Toxic Responses of the Kidney
- 7. NEUROTOXICITY: Toxic Responses of the Nervous System
- 8. DERMAL AND OCULAR TOXICITY: Toxic Effects of the Skin and Eyes
- 9. PULMONOTOXICITY: Toxic Effects in the Lung

UNIT 3: SPECIFIC AREAS OF CONCERN (Part 2) (Chapters 10 THROUGH 13) Final Exam: Thursday, 8 December, 2011

- 10. IMMUNOTOXICITY: Toxic Effects on the Immune System
- 11. REPRODUCTIVE TOXICITY
- 12. MUTAGENESIS AND GENETIC TOXICOLOGY
- 13. CHEMICAL CARCINOGENESIS

The following guidelines are provided to assist you in writing term papers for my classes. Part of the skills that you are expected to acquire in your studies in Occupational Safety, Health and Environment at Southeastern include being able to communicate effectively using the written word. You have probably noticed that your course of OSH&E studies requires you to take several English composition classes. This is also one of the reasons you are assigned to write a term paper. There are two major objectives:

Provide the opportunity to do research on a topic that is "above and beyond" the material that will be discussed in class. You will become acquainted with ideas and opinions of other writers on topics associated with our field of study. In short, you will expand your intellectual horizons.

Organize and present your research in an interesting and logical manner.

PART I

The first part of the guidelines outlines my requirements for the general layout of your term paper. I must emphasize that many of these are my preferences, and not necessarily universal, or university, standards. Nevertheless, they work well, and usually make for interesting and well-presented papers.

FORMAT

Margins: One inch (1") top, bottom and sides

Spacing: Single space text, double space between paragraphs.

Font: Face: Times New Roman is preferred. Arial is OK. Font size: 12

Style and Punctuation: The standard for the Department of Industrial Technology is the

Publication Manual of the American Psychological Association (APA).¹

LENGTH The length of the paper will vary, depending on the assignment. Generally, I specify that papers be between 5 and 10 pages of text, not including: the cover page; large charts, tables and illustrations; and the reference page. Such items which explain, expand, and illustrate your topic are welcomed - indeed, encouraged - but they do not count as pages of text. Pages should be numbered, either in the upper right-hand corner, or the bottom center of each page. Do not number title pages and tables of content.

RESOURCES Sources that you have consulted in writing your paper should be listed on the last page. I usually require no fewer than five sources for a 5 to 10 page paper. No more than half (50%) of you resources should be obtained from the internet. Most should come from books, journals, magazines, newspapers, and other printed sources. The reason is that the internet still does not contain all there is to know on a subject, and using it as your only font of information exhibits a kind of intellectual laziness. The APA manual should be consulted for the proper format to be used in listing the resources, including those from the internet.

¹The *Publication Manual of the American Psychological Association* is the style guide used by the Department of Industrial Technology for term papers, research papers, and theses. A copy of this manual is available in the IT department office. If you prefer, it can be purchased at the university Book Store. My copy cost \$23.95, but since I do a lot of writing, it is worth it to have a copy available any time I need it. The APA has extracted some material from the Publication Manual and included it on its website: www.apastyle.org. You may be able to get some of the information you need there, particularly regarding internet sources.

GRAMMAR, SPELLING, ETC. Carefully review your paper for grammatical errors, spelling mistakes, and typographical errors before you turn it in. If you are not good at this, find someone who is and have them do it for you. Do not leave the corrections for me to make for you as I will charge you more than you can afford.

SUBMISSION Papers should be submitted with a cover sheet which identifies the following:

- 1. Title or subject of your paper
- 2. The author: (you)
- 3. The class (number and name, ex.: OSH 115, Introduction to Occupational Safety and Health)
- 4. The instructor: (me)
- 5. Date: The date the paper was submitted

In most cases, I do not want you to submit your paper with any special kind of binding or cover. I appreciate your interest in making the paper "unique" but a fancy cover will never make up for a well-written paper. My preference is a single staple in the upper left-hand corner. In a rare case where a special binding, cover, or folder is expected, I will inform you of this requirement.

Papers should be submitted on or before the specified due date. They are acceptable up to midnight on that date. Papers submitted after the due date will be accepted, but they will not receive full credit.

PART II

Your term paper will be graded on the following points.

ORGANIZATION (25%) Does your paper flow in a natural, logical sequence? Do you start with basic principles, ideas, etc., and then build on them? Are important terms defined and explained? How much do you assume that your reader already knows, and what do you need to explain? Years ago, when I was serving in the military, I received some helpful, simple advice on how to make presentations. A good presentation, I was told, has three steps. They are: "(1) Tell 'em what you're going to tell 'em. (2) Tell 'em,! (3) Tell 'em what you told 'em." In case you missed it, this translates into: (1) Introduction; (2) Main body of the paper; (3) Summary. It's simple, but it works amazingly well.

CONTENT (50%) This, of course, is why you're writing your paper. It's the "meat" of your work. It should be based on a thorough examination of your assigned topic. Care should be taken to distinguish fact from opinion, although there is room for both. There is no place for fiction in our studies - that is the realm of the novelist. If the topic is controversial care should be taken to examine all sides of the issue. There is no problem assuming a position, yourself, but you have a solid base to support your stance.

PRESENTATION (25%) Presentation involves such things as spelling, grammar, neatness, and format. How does your paper look? Does it invite reading? Have you used proper form in citing and listing your references? Have you included aids to understanding such as charts, tables, and illustrations? In short, how professional is your work? At this stage in your studies, there is no place for sloppy work.

FINALLY

This guideline sets the standards for your work. Adherence to its standards should not only result in a work that is worthy of your time and effort, but also should imbue you with a sense of pride and self confidence. I'm anxious to see what you can do!

OSHE 451 HAZARDOUS MATERIALS MANAGEMENT Summer Semester, 2011

Syllabus

Instructor: Lawrence A. Mauerman, MAS, PE, CSP Office: 110-3 Anzalone Hall

• E-mail: <u>lmauerman@selu.edu</u>

Office Hrs: • SLU Office: Monday, 8:00 am to 12:00 noon, and other times by appointment.

 School of Nursing (Baton Rouge): Monday and Wednesday, before class from 5:30 to 6:00 pm, and after class from 8:30 to 9:00 pm,

Course Description:

This course examines acceptable policies, procedures and methods for the handling of oil and hazardous wastes produced by industry. Major topics include: advanced aspects of risk assessment; applicable environmental legislation; waste characterization and site assessment; waste minimization and recovery; chemical, physical, and biological waste treatment; thermal waste treatment; landfill disposal and injection well disposal. It also includes a section on the transportation of hazardous wastes.

Course Objectives:

At the conclusion of this course, the student will be able to:

- 1. Describe state and federal requirements for management of waste and hazardous waste materials, as found in 40 CFR 240 to 271.
- 1. Analyze an industrial facility's produced waste and develop a program to effectively and efficiently manage that waste.
- 2. Describe the operation of a treatment, storage and disposal (TSD) facility, and how to select a TSD facility to meet a company's waste disposal requirements.
- 3. Describe the various methods of treating or disposing of hazardous waste, i.e., incineration, injection, impoundment, etc., and give the advantages and disadvantages of each type.
- 4. Respond to a simulated emergency involving hazardous materials, demonstrating proper, safe methods for hazard identification, evaluation and control.

Text:

Woodside, Gayle. (2nd ed.). Hazardous Materials and Hazardous Waste Management. New York: John Wiley & Sons, Inc. 1999. Instructor handouts

Other Useful References:

Government Sources, Federal

Title 29, *Code of Federal Regulations*, Part 1910--Occupational Safety and Health Standards. Washington, D.C.: U.S. Department of Labor.

Title 40, Code of Federal Regulations, Parts 1-799--Environmental Protection Agency.

Washington, D.C.: U.S. Environmental Protection Agency.

Title 49, *Code of Federal Regulations*, Parts 1-199--Research and Special Projects Administration. Washington, D.C.: U.S. Department of Transportation.

EPA website: www.epa.gov

DOT webssite: www.dot.gov

OSHA website: www.osha.gov

NIOSH website: www.cdc.gov/niosh

Other Sources

Wagner, Travis P. *Hazardous Waste: Identification and Classification Manual*. New York: Van Nostrand Reinhold, 1990.

Wentz, Charles A. Hazardous Waste Management. New York: McGraw-Hill Publishing

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Schedule:

Class meets on Monday and Wednesday, from 6:00 - 8:50 pm, at the SLU School of Nursing, 4849 Essen Lane in Baton Rouge, Room 258.

First day of class	Wednesday, 6 June, 2011
Research Project due	
1 st Exam	Wednesday, 22 June, 2011
2 nd Exam	Wednesday, 6 July, 2011
3 rd Exam	
Practical exercise (Last day of class)	Monday, 25 July, 2011

Home Work Assignments:

There will be a research project and two home work assignments given during the course. The research project will be worth 60 points and each home work assignment will be worth 20 points. Each assignment will require research on a subject that is the current topic of discussion in class. Each assignment will be given with a due date and **no credit will be given for materials turned in after that date**.

Exams:

There will be three exams given during the semester to measure your progress and to provide a basis for your grade. Each of the exams will consist of multiple choice, fill-in-the-blank, and matching questions. There will be no essay questions. The exams will take half of the class period on the days they are given. The other half of the class period will be spent introducing the new material for the next topic. The final exam will follow the same format as the mid-term exams. The final exam is not comprehensive.

All exams will use the scantron (National Computer Systems [NCS]) test Answer Sheet, F. The scantron forms will be provided by the department. You must provide your own No. 2 lead pencil for the exam.

You will be permitted to make up an exam ONLY if you have made arrangements PRIOR to the time the exam is originally administered. Exam make-up will NOT be allowed if you merely missed the original exam and did not make arrangements to take a make-up. The make-up exam must be taken BEFORE the next scheduled class period. NO EXCEPTIONS.

Calendar:

<u>June</u>		<u>July</u>	
<u>Mon</u>	<u>Wed</u>	<u>Mon</u>	<u>Wed</u>
6	8	4 - Holid	lay 6 - 2 nd Exam
13	15	11	13
20 - Pro	oj. Due 22 - 1 st Exam	18	20 - 3 rd Exam
27	29	25 - Pract	cal Exercise

Research Project

The class will not meet on Monday the 9th and Wednesday the 11th of June. In place of these two class period, class members will complete individual research projects that will be assigned on the first day of class.

Practical Exercise:

There will be a practical exercise at the end of the semester which will count for 20% of your grade. Details regarding the exercise will be provided during the course.

Grades:

1. Basis for assigning grades:

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Research Project = 60 points (12 % of grade)
Two home work assignments @ 20 points = 40 points (8% of grade)
Practical Exercise = 100 points (20% of grade)
Three exams @ 100 points = 300 points (60% of grade)
TOTAL POINTS POSSIBLE = 500 points
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2. Grades will be assigned in accordance with the departmental code:

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461-500 pts (93%-100%) = A (Superior)

421-460 pts (85%-92%) = B (Very Good)

381-420 pts (77%-84%) = C (Average)

341-380 pts (69%-76%) = D (Below Average)

0-340 (0%-68%) = E (Failure)
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HAZWOPER Certification

Upon successful completion of the course (grade C, or better), each participant will receive a certificate indicating compliance with the training requirements of OSHA 29 CFR 1910.120, *Hazardous Waste Operations and Emergency Response* (HAZWOPER), paragraph (q), for Levels I through IV.

Course Requirements:

- 1. Adherence to departmental policies and procedures, a copy of which has been provided to you.
- 2. Regular class attendance as prescribed in the departmental requirements.
- 3. Read the material to be discussed in class prior to coming to class.
- 4. Participate, as assigned in the practical exercise.

NOTE:

- 1. Students will NOT automatically be dropped from class. Students who choose to drop must do so may the semester deadline, which is Friday, 24 June, 2011.
- 2. If you are a qualified student with a disability, seeking accommodations under the Americans with Disabilities Act, you re required to self-identify with the Office of Student Life, Room 203, Student Union.
- 3. Students' Behavior/Classroom Decorum: "Free discussion, inquiry and expression are encouraged in this classroom. Classroom behavior that interferes with either (a) the instructor's ability to conduct the class, or (b) the ability of the students to benefit from the instruction is not acceptable. Examples may include, but are not limited to, the following: routinely entering class late or departing early; use of beepers, cellular telephones or other electronic devices; repeatedly talking in class without being recognized; talking while others are speaking; or arguing in a way that is perceived as 'crossing the civility line.' In the event of a situation where a student legitimately needs to carry a beeper/cellular telephone to class, prior notice and approval by the instructor is required."
- 4. The academic community relies upon a high standard of integrity in the relations among it members. To the extent that this standard is not maintained, the good of the community suffers, and injustice may be done. One of the most important aspects of academic integrity concerns the just measure of each student's academic accomplishments. There are ordinarily evaluated through written examination or submitted work. For such modes of assessment to operate fairly, it is essential that the instructor be assured that the work used to evaluate the student's performance is genuinely the student's own. It is also the responsibility of the student to uphold the academic integrity of the University. The use of unauthorized material, communication with fellow students during an examination, attempting to benefit from the work of another student, and similar behavior that defeats the intent of an examination or other class work is unacceptable to the University. Cheating on examinations, plagiarism, improper acknowledgment of sources in essays and the use of a single essay or paper in more than one course without permission are considered very serious offenses and shall be grounds for disciplinary action.

Course Outline & Reading Assignments

UNIT 1: INTRODUCTION TO HAZARDOUS MATERIALS AND HAZARDOUS WASTES AND THE REGULATORY REQUIREMENTS (Chapters 1 - 7, 10) 1st Exam: Wednesday, 22 June, 2011

- 1. INTRODUCTION & OVERVIEW
 - 1. Housekeeping assignments and information
 - 2. Class and syllabus overview
- 2. ADMINISTRATIVE AND REGULATORY REQUIREMENTS
 - 1. RCRA
 - 2. HAZWOPER
 - 3. HazCom
 - 4. Others (DOE, DOT, etc.)
- 3. HAZARDOUS MATERIALS AND HAZARDOUS WASTES
 - 1. Defining HazMats and Hazardous Waste
 - 2. HazMat/Hazardous Waste Exposures
 - 3. Personal Protective Equipment Selection and Use
 - 4. Monitoring Methodologies

UNIT 2: HAZARDOUS WASTE MANAGEMENT (Chapters 9 - 17) **2nd Exam: Wednesday, 6 July, 2009**

- 4. WASTE MINIMIZATION
- 5. ON-SITE WASTE MANAGEMENT
- 6. WASTE TREATMENT AND DISPOSAL TECHNOLOGIES
- WASTE TRANSPORTATION

UNIT 3: HAZARDOUS WASTE OPERATIONS & EMERGENCY RESPONSE (Chapters 18 & 19) 3rd Exam: Wednesday, 20 July, 2009

- 8. EMERGENCY RESPONSE ORGANIZATION AND PLANNING
- 9. EMERGENCY RESPONSE METHODS
- 10. EMERGENCY RESPONSE EQUIPMENT

OSHE 452*: Pollution Fundamentals and Control Technologies

Second Draft By Ephraim Massawe

Course Description

Prerequisite: OSHE 251

This course explores the mechanisms of air, water and soil pollution and the steps to eliminate or minimize impacts on the ecology and human health and safety. The course is also designed to explore the existing pollution prevention and control technologies and the evaluation of their performance.

Course objectives

- Describe the biosphere and its components e.g. hydrological cycle
- Explain different categories and sources of air, water and soil pollution and analyze chemical and physical processes that transform or transport pollutants in the environment
- Evaluate the impacts of air, water and soil pollution on human health and welfare (e.g. buildings and aesthetics), living organisms and the ecosystem
- Classify the technologies for the treatment of drinking water; and the control of air, water and soil pollution
- Select the correct pollution control technologies for specific industrial applications to meet state and federal regulatory and standard requirements
- Evaluate the operation of various pollution control technologies for their effectiveness

Minimum Topics

- Sources of air, water and soil pollutants; and their health, ecological and safety concerns
- Air pollution control technologies e.g. cyclones, precipitators, electrostatic filters, etc.
- Water pollution control technologies e.g. biological treatment systems
- Soil pollution control technologies e.g. excavation and treatment
- Pollution prevention and cleaner production methods
- Performance of pollution control technologies e.g. use of modeling plumes and sampling and analysis
- Current methods of ground-level ozone pollution control methods

Required Textbook

Harrison, Roy M. (2005) Pollution: Causes, Effects and Control (4th Edition), Royal Society of Chemistry. ISBN 978-0-85404-621-8

Optional textbook:

S.S. Dara (2008). A Textbook of Environmental Chemistry and Pollution Control. S. Chand & Company Ltd. ISBN 8121908833

OSHE 471 EDUCATION & TRAINING METHODS FOR SAFETY Fall Semester, 2011

Syllabus

Instructor:

Lawrence A. Mauerman, MAS, PE, CSP Office: 110-3 Anzalone Hall

SLU E-mail<u>lmauerman@selu.edu</u>

Office Hrs: • SLU Office: Monday, 8:00 am to12:00 noon, and 1:00 to 4:00 pm.

Tuesday & Thursday, 10:30 am to 11:00 am.

Livingston Literacy & Technology Center: Tuesday & Thursday, before class from 5:00 to 6:00 pm, and after class from 8:30 to

9:00 pm.

At other times by appointment

Course Description:

This course introduces the concepts of adult training and education with emphasis on occupational safety and health. Major topics include: instructional system design, including performing a training needs assessment, task analysis, program design goals and objectives; performance evaluation; delivery methods and media; computer based training methods; systems to manage costs; and record keeping.

Course Content:

This course includes the analysis of performance deficiencies to determine if training is needed; methods to analyze job requirements to determine the knowledge and skills a worker must have to do a job; establishment of training objectives that will allow a trainer to conduct effective training; and criterion methods to determine effectiveness of training.

Course Objectives:

At the conclusion of this course, you will be able to:

- 1. Define and describe the differences between education and training.
- 2. Given a suitable training topic, develop a "map" for the steps in developing a training course
- 3. Given a suitable training topic, perform a skills analysis.
- Given an accurate skills analysis for a training topic, write a set of training objectives for that topic.
- 5. Given proper training objectives, develop a course of instruction designed to achieve the training objectives.
- 6. Develop a method of criterion testing that will demonstrate achievement of the objectives of the training.

Course Texts:

Mager, Robert F. and Pipe, Peter. *Analyzing Performance Problems: Or You Really Oughta Wanna* (3rd ed.). Atlanta: CEP Press, 1997.

Mager, Robert F. Preparing Instructional Objectives: A Critical Tool in the Development of Effective Instruction. Atlanta: CEP Press, 1997.

Instructor handouts

Other References:

Mr. Mager has established the Center for Effective Performance, Inc. where he makes his training and consulting services available to business and industry. You can visit it at: www.cepworldwide.com. (Check it out.)

He has also published a series of books on the topic of improving adult performance through training. Six of his books, including our course text, can be obtained as the "Mager Six Pack" (highly recommended). The "Six Pack" includes the following titles:

Preparing Instructional Objectives (our text)
Measuring Instructional Results
Analyzing Performance Problems
Goal Analysis
How to Turn Learners On . . . Without Turning Them Off
Making Instruction Work

Schedule:

Class meets on Tuesday and Thursday	, from 8:00 am to 9:15 am in Anzalone Hall, Rm
214.First day of class	Thursday , 18 August, 2011
1 st Milepost	Thursday, 29 September, 2011
2 nd Milepost	Tuesday, 1 November, 2011
	Thursday, 24 November, 2011
Last day of class	Thursday 1 December, 2011
Training Sessions Th	ur. 22 &Tues. 29 Nov; Thur. 1 Dec; & TBA, 2011

Class dates are:

ALIC	OED.	001		NOV	DEC
<u>AUG</u> 18	<u>SEP</u>	<u>OCT</u>	4	NOV 1 2nd	<u>DEC</u> Milepost 1 -
10	ı		4		raining Sessions
23	6		6 - Fall Break	3	TBA - Training essions
25	8	11		8	
30	13	13	3	10	
	15	18	15		
	20	20	17		
	22	25	22 - 7	Training Ses	ssions
	27	27	24 - h	noliday	
	29 - 1 st Milepo	st	29 - ٦	Fraining Ses	ssions

Exams:

There will be no exams for this course. There will be, however, several quizzes which will be given by the instructor throughout the semester to monitor student progress in mastering the concepts and skills presented in the course. A portion of the final grade will be determined by the scores attained on the quizzes.

Projects:

There will be a semester-long project which will consist of a fifteen to twenty-minute training session on a topic selected by the student in consultation with the instructor. The project will be presented to the class at the end of the course. Training design, content and presentation will be developed throughout the semester and checked at established "milestones" where specific progress will be formally prepared and turned in to the instructor.

Demonstrate complete professionalism in your presentation. Attention should be given to the use of visual aids, real-life examples, professional personal appearance, etc. The things will aid your presentation, and affect your grade. Your oral presentation should be accompanied by a one-page Executive Summary for each class member which summarizes your report. Refer to the handout on executive summaries which accompanies this syllabus for the proper format. Some questions on the Final Exam will be taken from the presentations and the handouts. Organize the handout so that it follows the four points, above. As always, you must use correct grammar and follow the principles of good English.

Projects will be presented as training sessions to the rest of the class on 24 & 29 November and 1 & at a date TBA December, 2011.

Course Grades:

1. Grades will be assigned in accordance with the Departmental Scale:

<u>Points</u>	(Percent)		<u>Grade</u>
	(93 - 100) (85 - 92)	=	A, Superior B, Very Good
381-420	(77 - 84)	=	C, Average
341-380	(69 - 76)	=	D, Below Average
0-340	(0 - 68)	=	E, Fail

2. Basis for assigning grades:

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Quizzes: 4 @ 25 points = 100 points (20% of grade)
Milestone Materials: 2 @ 100 points = 200 points (40% of grade)
Training Presentation @ 200 points = 200 points (40% of grade)
TOTAL = 500 points
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Course Requirements:

- Adherence to departmental policies and procedures, a copy of which has been provided to you.
- 2. Regular class attendance as prescribed in the departmental requirements.
- 3. Read the material to be discussed in class prior to coming to class.

4. Complete and turn in research project by due deadline.

IMPORTANT SOUTHEASTERN AND DEPARTMENT POLICIES:

- 1. Students will NOT automatically be dropped from class. Students who choose to drop must do so by the semester deadline! The last day for dropping class is Friday, 21 October, 2011.
- 2. If you are a qualified student with a disability seeking accommodations under the Americans with Disabilities Act you are required to self-identify with the Office of Student Life, Room 203, Student Union.
- 3. Students' behavior/classroom decorum: "Free discussion, inquiry, and expression are encouraged in this classroom. Classroom behavior that interferes with either (a) the instructor's ability to conduct the class, or (b) the ability of the students to benefit from the instruction is not acceptable. Examples may include routinely entering class late or departing early; use of beepers, cellular telephones, or other electronic devices; repeatedly talking in class without being recognized; talking while others are speaking; or arguing in a way that is perceived as 'crossing the civility line.' In the event of a situation where a student legitimately needs to carry a beeper/cellular telephone to class, prior notice and approval by the instructor is required."
- The academic community relies upon a high standard of integrity in the relations 4. among its members. To the extent that this standard is not maintained, the good of the community suffers, and injustice may be done. One of the most important aspects of academic integrity concerns the just measure of each student's academic accomplishments. These are ordinarily evaluated through written examination or submitted work. For such modes of assessment to operate fairly, it is essential that the instructor be assured that the work used to evaluate the student's performance is genuinely the student's own. It is also the responsibility of the student to uphold the academic integrity of the University. The use of unauthorized material, communication with fellow students during an examination, attempting to benefit from the work of another student, and similar behavior that defeats the intent of an examination or other classwork is unacceptable to the University. Cheating on examinations, plagiarism, improper acknowledgment or sources in essays and the use of a single essay or paper in more than one course without permission are considered very serious offenses and shall be grounds for disciplinary action.

Course Outline & Reading Assignments:

Assignments for this class will follow the organization of the text for the class, and assignments will be given in each class to be prepared for the next session.