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, 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 on-campus 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. Rick 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 Fault 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

Members

Steven P. Pereira, CSP
President
Professional Safety Associates, Inc.
1027 North Range Avenue
Denham Springs, LA 70726

Telephone: 225-665-6000
spereira@professionalsafety.com

Richard N. Matherne, CIH
Industrial Hygiene Consultant
36102 Alligator Bayou Road
Prairieville, LA 70769

Telephone: 225-963-7424
richard.matherne@gmail.com

Don Jones PE, CSP, MBA
HSSE Managers - Jennings
BP Biofuels North America
P.O. Box 389
11107 Campbell Wells Road
Jennings, LA 70546

Telephone: 337-785-4577
donald.jones@bp.com

Wayne LaCombe, MSPH, CSP
ExxonMobil, MOH, Industrial Hygiene
500 W. St. Bernard, Bldg 8 Room 105
Chalmette, LA 70044

Telephone: 504-281-1956
wayne.m.lacombe@exxonmobil.com

William J. (James) Kerr, CSP
Health, Safety, and Environmental Supervisor
LBC Baton Rouge, LLC
1725 HWY 75
Sunshine, LA 70780

Telephone: 225-333-8430
j-kerr@lbctt.com

Dorinda Folse, OSHA Area Director
Occupational Safety & Health Administration
9100 Bluebonnet Centre Blvd, Suite 201
Baton Rouge, LA 70809

Telephone: 225-298-5458
Folse.Dorinda@dol.gov

Beth Inbau, President & CEO, South Louisiana Chapter (New Orleans)
National Safety Council
4200 S. I-10 Service Rd. Suite 224
Metairie, LA 70001

Telephone: 504-888-7618
beth@metrosafety.org

Rick Saizan, Safety Council LCA
8180 Siegen Lane
Baton Rouge, LA 70810

Telephone: 225-282-3291
rsaizan@safetylca.org
Dawn Bahm, CSP, President (2011-2012), ASSE New Orleans Chapter
Senior Loss Prevention Consultant
LWCC
27462 Country Club Ln
Folsom, LA 70437

Telephone: 985-796-3756
dbahm@lwcc.com

Lance Roux, CSP, Executive Board Member (2009-), President (2008-2009), ASSE Greater Baton Rouge Chapter
SafetyPro Resources, LLC
18161 East Petroleum Dr.
Baton Rouge, LA 70809

Telephone: 225-247-7011
lroux@safetyproresources.com

Alan J. Rovira, MS, MPH
Industrial Hygienist
Shell Health
15536 River Road
Norco, LA 70079

Telephone: 504-465-6893
Alan.Rovira@shell.com

Don Steadman, CWCP, CPSI
BREC Senior Risk Manager
6201 Florida Blvd.
Baton Rouge, LA 70806

Telephone: 225-413-5626
dsteadman@brec.org

Buddy Mincey Jr., Safety Director
Volks Construction
10983 Hwy. 1033
Denham Springs, LA 70726

Telephone: 225-673-5302
buddy@volksconst.com

Vladimir Alexander Appeaning, PhD
Deputy Secretary
Department of Environmental Quality
Office of the Secretary
P. O. Box 4301
Baton Rouge, LA 70821-4301

Telephone: 225-219-3951
alex.appeaning@la.gov

Michael Gautreaux, CSP
Instructor, Safety Technology
Department of Applied Sciences
P.O. Box 2148
Nicholls State University
Thibodaux, LA 70310

Telephone: 985-448-4740
michael.gautreaux@nicholls.edu

Michael A. Page, CSP
Director of Safety & Loss Prevention
LWCC
2237 S. Acadian Thruway
Baton Rouge, LA 70808

Telephone: 225-231-0874
mpage@lwcc.com

Owens O'Quinn, MSc, COSS, CSHO, IS
President/CEO

Telephone: 337-824-9000
ooquinn@evergreensol.com
Evergreen OHSSE Solutions, Inc.
103 Houssiere Road
Jennings, LA 70546

Connie P. Fabré, Executive Director
Greater Baton Rouge Industry Alliance, Inc. (GBRIA)
5800 One Perkins Place Dr., Ste. 5-A
Baton Rouge, LA 70808

Glenn Young, CSP
President
Glenn Young & Associates, LLC
5261 Highland Road, No. 193
Baton Rouge, LA 70808

Paul Higdon, COSS, CSST
Corporate Safety Coordinator
Cajun Industries, LLC
P.O. Box 104
Baton Rouge, LA 70821

Dale Towle
Safety & Health Manager
Ohmstede Industrial Services
4250 Hwy. 30
P.O. Box 76
St. Gabriel, LA 70776

Donny Latiolais
Watershed Coordinator
Capital RC & D Council
109 South Cate Street
Hammond, LA 70403

Charles D. Leonard, CIH, President (2011-2012), AIHA Deep South Section
4739 Loyola Drive
Baton Rouge, LA 70808

Student Members

Eric Miller
1334 Lotus Rd Ext
Mandeville, LA 70448

Joshua Sarran
30499 Wild St.
Springfield, LA 70462

Telephone: 225-769-0596
ConnieFabre@gbria.org

Telephone: 225-772-1588
g.young-g@gmail.com

Telephone: 225-754-0293
paulh@cajunusa.com

Telephone: 225-642-5057
dtowle@ohmstede.net

Telephone: 985-543-6570
donny.latiolais@gmail.com

Telephone: 225-335-7457
alchemist7@cox.net
Ethan Reames  
13811 Green Franklin Rd.  
Pride, LA 70770  
Telephone: 225-301-7131  
Ethan.Reames@selu.edu

Faculty Members

Mr. Lawrence Mauerman, MAS, PE, CSP  
Coordinator, OSH&E Degree Programs  
Department of Computer Science and Industrial Technology  
Southeastern Louisiana University  
SLU 10847  
Hammond, LA 70402  
Telephone: 985-549-3476  
lmauerman@selu.edu

Dr. Lu Yuan, ScD  
Assistant Professor  
Occupational Safety, Health, and Environment (OSH&E)  
Department of Computer Science and Industrial Technology  
Southeastern Louisiana University  
SLU 10847  
Hammond, LA 70402  
Telephone: 985-549-3925  
Lu.Yuan@selu.edu

Dr. Ephraim Massawe, ScD  
Assistant Professor  
Occupational Safety, Health, and Environment (OSH&E)  
Department of Computer Science and Industrial Technology  
Southeastern Louisiana University  
SLU 10847  
Hammond, LA 70402  
Telephone: 985-549-2243  
Ephraim.Massawe@selu.edu

Dr. Roy Bonnette, PhD  
Professor, Interim Department Head  
Department of Computer Science and Industrial Technology  
Southeastern Louisiana University  
SLU 10847  
Hammond, LA 70402  
Telephone: 985-549-2189  
rbonnette@selu.edu
## Appendix B

**OSH&E Advisory Committee**

### Semi-Annual Meeting Agenda

*April 27, 2012*

<table>
<thead>
<tr>
<th>Time</th>
<th>Issues</th>
<th>Actions</th>
</tr>
</thead>
</table>
| 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)                                                                 |                                  |
|                | 3. [Internship & Employment for OSH&E](#)  
(By Mr. Lawrence Mauerman)                                                     |                                  |
|                | 4. [Celebration of Retirement and Achievement](#)  
(By Dr. Lu Yuan)                                                               |                                  |
| 10:30 - 11:45 am | New Business  
1. [OSHE Course Syllabus Examination](#)  
(By All)                                                                        |                                  |
|                | 2. [ASSE Don Jones Scholarship](#)  
(By All)                                                                       |                                  |
|                | 3. [OSHA Education Center](#)  
(By Mr. Lawrence Mauerman)                                                      |                                  |
|                | 4. Others                                                                         |                                  |
| 11:45 - 12:00 pm | Portrait & Group Picture                                                        |                                  |
| 12:00 pm       | Lunch (Courtesy of Glenn Young & Associates LLC)                               |                                  |
## Appendix C

### Response Summary

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

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

<table>
<thead>
<tr>
<th>Response</th>
<th>Percent</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excellent</td>
<td>33.3%</td>
<td>4</td>
</tr>
<tr>
<td>Good</td>
<td>66.7%</td>
<td>8</td>
</tr>
<tr>
<td>Average</td>
<td>0.0%</td>
<td>0</td>
</tr>
<tr>
<td>Below Average</td>
<td>0.0%</td>
<td>0</td>
</tr>
<tr>
<td>Not Applicable</td>
<td>0.0%</td>
<td>0</td>
</tr>
</tbody>
</table>

- **answered question** 12
- **skipped question** 1

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

<table>
<thead>
<tr>
<th>Response</th>
<th>Percent</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematical and statistical knowledge</td>
<td>72.7%</td>
<td>8</td>
</tr>
<tr>
<td>Communication skills</td>
<td>90.9%</td>
<td>10</td>
</tr>
<tr>
<td>Multi-disciplinary teamwork ability</td>
<td>63.6%</td>
<td>7</td>
</tr>
<tr>
<td>Practical-oriented knowledge and skills</td>
<td>72.7%</td>
<td>8</td>
</tr>
<tr>
<td>Other (Please specify)</td>
<td>18.2%</td>
<td>2</td>
</tr>
</tbody>
</table>

- **answered question** 11
- **skipped question** 2

**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.**

<table>
<thead>
<tr>
<th>Agree</th>
<th>Don't know</th>
<th>Disagree</th>
<th>Not Applicable</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>83.3%</td>
<td>8.3%</td>
<td>8.3%</td>
<td>0.0%</td>
<td>12</td>
</tr>
</tbody>
</table>

1. 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
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. Using numbers from 1 to 5 where 1 means the least and 5 means the most, please rate the importance of each outcome.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Not</th>
<th>Response</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1. Ability to apply basic mathematical and statistical knowledge in the safety, health, and environment field</td>
<td>0.0% (0)</td>
<td>0.0% (0)</td>
<td>8.3% (1)</td>
<td>50.0% (6)</td>
<td>41.7% (5)</td>
<td>0.0% (0)</td>
<td>12</td>
</tr>
<tr>
<td>1.2. Understanding basic principles in chemistry, physics, and biology as it pertains to the practice of safety, health, and environment</td>
<td>0.0% (0)</td>
<td>8.3% (1)</td>
<td>8.3% (1)</td>
<td>33.3% (4)</td>
<td>50.0% (6)</td>
<td>0.0% (0)</td>
<td>12</td>
</tr>
<tr>
<td>1.3. Understanding basic principles in business management as it pertains to the practice of safety, health, and environment</td>
<td>0.0% (0)</td>
<td>16.7% (2)</td>
<td>16.7% (2)</td>
<td>50.0% (6)</td>
<td>16.7% (2)</td>
<td>0.0% (0)</td>
<td>12</td>
</tr>
<tr>
<td>2.A.1. Ability to understand occupational safety, health, and environment fundamentals</td>
<td>0.0% (0)</td>
<td>0.0% (0)</td>
<td>0.0% (0)</td>
<td>33.3% (4)</td>
<td>66.7% (8)</td>
<td>0.0% (0)</td>
<td>12</td>
</tr>
<tr>
<td>2.A.2. Ability to know legal aspects of safety, health, and environmental practices</td>
<td>9.1% (1)</td>
<td>9.1% (1)</td>
<td>0.0% (0)</td>
<td>36.4% (4)</td>
<td>45.5% (5)</td>
<td>0.0% (0)</td>
<td>11</td>
</tr>
<tr>
<td>2.A.3. Understanding the interactions of physical, chemical, biological, and ergonomic agents, factors, and/or stressors on the human body</td>
<td>0.0% (0)</td>
<td>0.0% (0)</td>
<td>8.3% (1)</td>
<td>41.7% (5)</td>
<td>50.0% (6)</td>
<td>0.0% (0)</td>
<td>12</td>
</tr>
<tr>
<td>2.A.4. Understanding the application of laws, regulations, standards, and codes to safety, health and environmental conditions</td>
<td>8.3% (1)</td>
<td>0.0% (0)</td>
<td>8.3% (1)</td>
<td>8.3% (1)</td>
<td>75.0% (9)</td>
<td>0.0% (0)</td>
<td>12</td>
</tr>
<tr>
<td>2.A.5. Ability to understand and use basic principles of fire prevention and protection in the workplace</td>
<td>0.0% (0)</td>
<td>8.3% (1)</td>
<td>25.0% (3)</td>
<td>41.7% (5)</td>
<td>41.7% (5)</td>
<td>0.0% (0)</td>
<td>12</td>
</tr>
<tr>
<td>2.A.6. Ability to know industrial and construction safety throughout the work processes</td>
<td>0.0% (0)</td>
<td>8.3% (1)</td>
<td>8.3% (1)</td>
<td>41.7% (5)</td>
<td>41.7% (5)</td>
<td>0.0% (0)</td>
<td>12</td>
</tr>
<tr>
<td>2.B.1. Ability to utilize basic laboratory instrumentations associated with safety, health, and environment</td>
<td>8.3% (1)</td>
<td>8.3% (1)</td>
<td>8.3% (1)</td>
<td>58.3% (7)</td>
<td>16.7% (2)</td>
<td>0.0% (0)</td>
<td>12</td>
</tr>
<tr>
<td>2.B.2. Ability to anticipate, identify and evaluate hazardous agents, conditions, and practices</td>
<td>0.0% (0)</td>
<td>8.3% (1)</td>
<td>0.0% (0)</td>
<td>25.0% (3)</td>
<td>66.7% (8)</td>
<td>0.0% (0)</td>
<td>12</td>
</tr>
</tbody>
</table>
2.B3. Understanding fundamental exposure assessment and environmental sampling techniques

2.B4. Ability to develop control designs, methods, procedures, and programs to eliminate or mitigate safety, health, and environmental hazards

2.B5. Ability to conduct accident/incident investigation and analysis

2.B6. Ability to implement and manage effective safety, health, and environmental programs

3.1. Ability to effectively express thoughts in oral and written communications

3.2. Understanding the techniques, skills, and modern behavioral tools necessary for the practice of safety, health, and environment

3.3. Ability to effectively function as a part of multi-disciplinary team

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.

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.

5. Using numbers from 1 to 5 where 1 means the lowest and 5 the highest, please 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. Understanding basic principles in business management as it pertains to the practice of safety, health, and environment

2.A1. Ability to understand occupational safety, health, and environment fundamentals

2.A2. Ability to know legal aspects of safety, health, and environmental practices

2.A3. Understanding the interactions of physical, chemical, biological, and ergonomic agents, factors, and/or stressors on the human body

2.A4. Understanding the application of laws, regulations, standards, and codes to safety, health and environmental conditions

2.A5. Ability to understand and use basic principles of fire prevention and protection in the workplace

2.A6. Ability to know industrial and construction safety throughout the work processes

2.B1. Ability to utilize basic laboratory instrumentations associated with safety, health, and environment

2.B2. Ability to anticipate, identify and evaluate hazardous agents, conditions, and practices

2.B3. Understanding fundamental exposure assessment and environmental sampling techniques

2.B4. Ability to develop control designs, methods, procedures, and programs to eliminate or mitigate safety, health, and environmental hazards

2.B5. Ability to conduct accident/incident investigation and analysis

2.B6. Ability to implement and manage effective safety, health, and environmental programs

3.1. Ability to effectively express thoughts in oral and written communications

3.2. Understanding the techniques, skills, and modern behavioral tools necessary for the practice of safety, health, and environment

3.3. Ability to effectively function as a part of multi-disciplinary team

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.

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.

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.

<table>
<thead>
<tr>
<th>Course Description</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Not Applicable</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSHE 111 Introduction to Occupational Safety, Health, and Environment</td>
<td>0.0% (0)</td>
<td>0.0% (0)</td>
<td>0.0% (0)</td>
<td>36.4% (4)</td>
<td>63.6% (7)</td>
<td>0.0% (0)</td>
<td>11</td>
</tr>
<tr>
<td>OSHE 121 Safety and Health Program Management and Administration</td>
<td>9.1% (1)</td>
<td>0.0% (0)</td>
<td>9.1% (1)</td>
<td>18.2% (2)</td>
<td>63.6% (7)</td>
<td>0.0% (0)</td>
<td>11</td>
</tr>
<tr>
<td>OSHE 311 Safety and Health Program Development</td>
<td>0.0% (0)</td>
<td>0.0% (0)</td>
<td>9.1% (1)</td>
<td>0.0% (0)</td>
<td>54.5% (6)</td>
<td>18.2% (2)</td>
<td>0.0% (0)</td>
</tr>
<tr>
<td>OSHE 322 Behavior Aspects of Safety</td>
<td>0.0% (0)</td>
<td>0.0% (0)</td>
<td>9.1% (1)</td>
<td>45.5% (5)</td>
<td>45.5% (5)</td>
<td>0.0% (0)</td>
<td>11</td>
</tr>
<tr>
<td>OSHE 323 Product Safety and Liability</td>
<td>0.0% (0)</td>
<td>18.2% (2)</td>
<td>27.3% (3)</td>
<td>36.4% (4)</td>
<td>27.3% (3)</td>
<td>0.0% (0)</td>
<td>11</td>
</tr>
<tr>
<td>OSHE 421 Measurement of Safety Performance and Accident Investigation and Analysis</td>
<td>0.0% (0)</td>
<td>9.1% (1)</td>
<td>0.0% (0)</td>
<td>18.2% (2)</td>
<td>72.7% (8)</td>
<td>0.0% (0)</td>
<td>11</td>
</tr>
</tbody>
</table>

http://www.surveymonkey.com/MySurvey_Responses.aspx?sm=bQ3mQh...
OSHE 451 Hazardous Materials Management  
0.0% (0)  0.0% (0)  9.1% (1)  54.5% (6)  36.4% (4)  0.0% (0)  11

OSHE 471 Education and Training Methods for Occupational Safety and Health  
0.0% (0)  10.0% (1)  10.0% (1)  10.0% (1)  70.0% (7)  0.0% (0)  10

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!

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

<table>
<thead>
<tr>
<th>Aspects</th>
<th>Excellent</th>
<th>Good</th>
<th>Average</th>
<th>Below Average</th>
<th>Not Applicable</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qualifications and competencies</td>
<td>75.0% (9)</td>
<td>25.0% (3)</td>
<td>0.0% (0)</td>
<td>0.0% (0)</td>
<td>0.0% (0)</td>
<td>12</td>
</tr>
<tr>
<td>Size of full-time faculty</td>
<td>25.0% (3)</td>
<td>50.0% (6)</td>
<td>16.7% (2)</td>
<td>8.3% (1)</td>
<td>0.0% (0)</td>
<td>12</td>
</tr>
</tbody>
</table>
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.

<table>
<thead>
<tr>
<th>Response</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Show Responses</td>
<td>7</td>
</tr>
</tbody>
</table>

- 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?

<table>
<thead>
<tr>
<th>Response</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>answered question</td>
<td>12</td>
</tr>
<tr>
<td>skipped question</td>
<td>1</td>
</tr>
</tbody>
</table>
March 1, 2012

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

cc:   L. Yuan,
     B. Clausen
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

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Instructor(s)</th>
<th>Syllabus Code(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSHE 111</td>
<td>Introduction to Occupational Safety, Health, and Environment</td>
<td>Dale Towle, Trey Rivet</td>
<td>OSHE 242, OSHE 441</td>
</tr>
<tr>
<td>OSHE 112</td>
<td>Design of Hazard Controls</td>
<td>Trey Rivet, Dale Towle</td>
<td>OSHE 231, OSHE 311</td>
</tr>
<tr>
<td>OSHE 121</td>
<td>Safety and Health Program Management and Administration</td>
<td>Dawn Bahm, Dorinda Folse</td>
<td>OSHE 341, OSHE 451</td>
</tr>
<tr>
<td>OSHE 141</td>
<td>Principles of Industrial Hygiene &amp; Toxicology</td>
<td>Charles Leonard, Alan Rovira</td>
<td>OSHE 242, OSHE 381</td>
</tr>
<tr>
<td>OSHE 231</td>
<td>Safety Laws, Regulations, and Standards</td>
<td>Dorinda Folse, Don Jones</td>
<td>OSHE 121, OSHE 231</td>
</tr>
<tr>
<td>OSHE 242</td>
<td>Ergonomics</td>
<td>Richard Matherne, James Kerr</td>
<td>OSHE 471</td>
</tr>
<tr>
<td>OSHE 251</td>
<td>Environmental Laws and Practices</td>
<td>Alex Appeaning, Donny Latiolais</td>
<td>OSHE 421, OSHE 424</td>
</tr>
<tr>
<td>OSHE 261</td>
<td>Fire Protection and Prevention</td>
<td>Lance Roux, Don Steadman</td>
<td>OSHE 121, OSHE 421</td>
</tr>
<tr>
<td>OSHE 311</td>
<td>Safety and Health Program Development</td>
<td>Don Jones, Lance Roux</td>
<td>OSHE 261, OSHE 311</td>
</tr>
<tr>
<td>OSHE 322</td>
<td>Behavior Aspects of Safety</td>
<td>Owens O'Quinn, Michael Page</td>
<td>OsHE 261, OSHE 311</td>
</tr>
<tr>
<td>OSHE 323</td>
<td>Product Safety and Liability</td>
<td>Michael Page, Owens O'Quinn</td>
<td>OsHE 261, OSHE 311</td>
</tr>
<tr>
<td>OSHE 341</td>
<td>Field Methods of Industrial Hygiene and Toxicology</td>
<td>Wayne LaCombe, Charles Leonard</td>
<td>OsHE 261, OSHE 311</td>
</tr>
<tr>
<td>OSHE 381</td>
<td>Safety in Chemical and Process Industries</td>
<td>James Kerr, Glenn Young</td>
<td>OsHE 261, OSHE 311</td>
</tr>
<tr>
<td>OSHE 382</td>
<td>Construction Safety</td>
<td>Paul Higdon, Buddy Mincey Jr.</td>
<td>OsHE 261, OSHE 311</td>
</tr>
<tr>
<td>OSHE 421</td>
<td>Measurement of Safety Performance and Accident Investigation and Analysis</td>
<td>Rick Saizan, Dawn Bahm</td>
<td>OsHE 261, OSHE 311</td>
</tr>
<tr>
<td>OSHE 424</td>
<td>System Safety Methodologies</td>
<td>Glenn Young, Rick Saizan</td>
<td>OsHE 261, OSHE 311</td>
</tr>
<tr>
<td>OSHE 441</td>
<td>Industrial Toxicology</td>
<td>Alan Rovira, Richard Matherne</td>
<td>OsHE 261, OSHE 311</td>
</tr>
<tr>
<td>OSHE 451</td>
<td>Hazardous Materials Management</td>
<td>Don Steadman, Wayne LaCombe</td>
<td>OsHE 261, OSHE 311</td>
</tr>
<tr>
<td>OSHE 452</td>
<td>Pollution Fundamentals &amp; Control Technologies</td>
<td>Donny Latiolais, Alex Appeaning</td>
<td>OsHE 261, OSHE 311</td>
</tr>
<tr>
<td>OSHE 471</td>
<td>Education and Training Methods for Occupational Safety and Health</td>
<td>Beth Inbau, Michael Gautreaux</td>
<td>OsHE 261, OSHE 311</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>OsHE 261, OSHE 311</td>
</tr>
</tbody>
</table>
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 Taxonomy 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 acknowledge the existence of these six categories, but question the existence of a sequential, hierarchical link as shown in the graphic below. 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.
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

  1. [^ Learning Domains or Bloom's Taxonomy - Donald R. Clark](http://en.wikipedia.org/wiki/Taxonomy_of_Educational_Objectives)
Instructor:
Lawrence A. Mauerman, MAS, PE, CSP
Office: Anzalone Hall, 110-3

Contacts:
SLU Office  985-549-3476
SLU E-mail  lmauerman@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:
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
- 1st Exam                    27 February, 2012
- 2nd 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:

<table>
<thead>
<tr>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
</tr>
</thead>
<tbody>
<tr>
<td>23</td>
<td>6</td>
<td>5</td>
<td>2</td>
<td>2nd Exam</td>
</tr>
<tr>
<td>30</td>
<td>13</td>
<td>12</td>
<td>9</td>
<td>Spring Break</td>
</tr>
<tr>
<td>20</td>
<td>19</td>
<td>26</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td></td>
<td>27</td>
<td></td>
<td></td>
<td>23 - Project due</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>30</td>
<td>Last class</td>
</tr>
</tbody>
</table>

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.

Exam Make-up Policy:  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.
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:

<table>
<thead>
<tr>
<th>Points (Percent)</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>461-500</td>
<td>(93 - 100)</td>
</tr>
<tr>
<td>421-460</td>
<td>(85 - 92)</td>
</tr>
<tr>
<td>381-420</td>
<td>(77 - 84)</td>
</tr>
<tr>
<td>341-380</td>
<td>(69 - 76)</td>
</tr>
<tr>
<td>0-340</td>
<td>(0 - 68)</td>
</tr>
</tbody>
</table>

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:
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 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:

- 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).

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!
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:
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:

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

2. Basis for assigning grades:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Points</th>
<th>Percent</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three exams</td>
<td>300</td>
<td>(60% of grade)</td>
<td></td>
</tr>
<tr>
<td>Five Assignments</td>
<td>100</td>
<td>(20% of grade)</td>
<td></td>
</tr>
<tr>
<td>Research Project</td>
<td>100</td>
<td>(20% of grade)</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>500</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
<th>Readings Due</th>
<th>Work Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jan. 17 &amp; 19</td>
<td>Introduction &amp; Hazard Control in General</td>
<td>Chapter 1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Jan. 24 &amp; 26</td>
<td>Buildings and Plant Layout</td>
<td>Chapter 2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Jan. 31 &amp; Feb. 2</td>
<td>Construction of Facilities (Assignment #1)</td>
<td>Chapter 3</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Feb. 7 &amp; 9</td>
<td>Maintenance of Facilities</td>
<td>Chapter 4</td>
<td>Assignment #1</td>
</tr>
<tr>
<td>5</td>
<td>Feb. 14 &amp; 16</td>
<td>Boilers and Unfired Pressure Vessels (Assignment #2)</td>
<td>Chapter 5</td>
<td></td>
</tr>
<tr>
<td>6A</td>
<td>Feb. 21</td>
<td>NO CLASS - Mardi Gras Holidays</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6B</td>
<td>Feb. 23</td>
<td>FIRST EXAM</td>
<td>Review Unit 1</td>
<td>Assignment #2</td>
</tr>
</tbody>
</table>

Unit 2: Workplace 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.
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.


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

Total _______________

41
Syllabus

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

Contacts:  Southeastern Office  985-549-3476
Southeastern E-mail  lmauerman@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:
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 class        Tuesday, 1 May, 2012
   • Final exam               Tuesday 8 May, 2012

Class dates are:

<table>
<thead>
<tr>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>1st day</td>
<td>6</td>
<td>3</td>
<td>1 - Last class</td>
</tr>
<tr>
<td>24</td>
<td>14 - 1st Exam</td>
<td>13</td>
<td>10</td>
<td>Spring Break</td>
</tr>
<tr>
<td>31</td>
<td></td>
<td>21</td>
<td>17</td>
<td>Project Due</td>
</tr>
<tr>
<td></td>
<td></td>
<td>28</td>
<td>27</td>
<td>2nd Exam</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>24</td>
<td></td>
</tr>
</tbody>
</table>

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:
   - 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

2. Grades will be assigned in accordance with the departmental code:
   - 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)

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.

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: 1\textsuperscript{st} 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: 2\textsuperscript{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
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. **CORPORATE SAFETY STATEMENT**  Develop a corporate safety statement that expresses the **Chief Executive Officer's and XKC's position** on Safety and Health.

2. **SAFETY STAFF**  Recommend what you will need for a safety staff, and where you and your organization should **fit within the Company organization** and why.

3. **PROCEDURE**  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. **OTHER HAZARDS**  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.”
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.
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!
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:


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

*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

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuesday</td>
<td>Thursday</td>
<td>Tuesday</td>
<td>Thursday</td>
<td>Tuesday</td>
</tr>
<tr>
<td>17th</td>
<td>19th</td>
<td>2nd</td>
<td>1st</td>
<td>3rd</td>
</tr>
<tr>
<td><strong>First Day of Class</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24th</td>
<td>26th</td>
<td>7th</td>
<td>9th</td>
<td>6th</td>
</tr>
<tr>
<td>31st</td>
<td>14th</td>
<td>16th</td>
<td>13th</td>
<td>15th</td>
</tr>
<tr>
<td></td>
<td>21st</td>
<td>23rd</td>
<td>20th</td>
<td>22nd</td>
</tr>
<tr>
<td></td>
<td><strong>No Class Mad Gras</strong></td>
<td><strong>Exam #1</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>28th</td>
<td>27th</td>
<td>29th</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**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/](http://www.selu.edu/admin/rec_reg/exam_sch/).

<table>
<thead>
<tr>
<th>Class Day(s)</th>
<th>Class Starts Time from</th>
<th>Class Starts Time to</th>
<th>Spring 2012 Exam Day</th>
<th>Exam Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>TTH</td>
<td>9:30 am</td>
<td>10:45 am</td>
<td>Mon., May 7</td>
<td>12:30 pm - 2:30 pm</td>
</tr>
</tbody>
</table>

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 unless 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 not 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 4/26/2012 at 9:30 am. Please note: if a term paper or other attachments required on the due date are submitted after this date it will be subjected to a penalty of 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. Students are encouraged to finish their term papers early to avoid last minute rush. Although students may 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 date and time 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 05-03-2012 beginning 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.

Validation of the Syllabus: 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 sign and hand over to the instructor a statement indicating that they have read and understood the contents herein of the entire syllabus! Please ask questions to clarify the content of the syllabus, including incorrect dates, grading schematic etc.

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

<table>
<thead>
<tr>
<th>Letter Grade</th>
<th>On the Basis of 100 %</th>
</tr>
</thead>
<tbody>
<tr>
<td>A, Superior</td>
<td>90 - 100</td>
</tr>
<tr>
<td>B, Very Good</td>
<td>80 – 89.9</td>
</tr>
<tr>
<td>C, Average</td>
<td>70 – 79.9</td>
</tr>
<tr>
<td>D, Below Average</td>
<td>60 – 69.9</td>
</tr>
<tr>
<td>F, Fail</td>
<td>0 – 59.9</td>
</tr>
</tbody>
</table>
## Grade Distribution Table

<table>
<thead>
<tr>
<th></th>
<th>On a 100 % Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>HW &amp; Class Assignments; Popup Quizzes</td>
<td>20</td>
</tr>
<tr>
<td>Term Paper**</td>
<td>20</td>
</tr>
<tr>
<td>Exam # 1</td>
<td>20</td>
</tr>
<tr>
<td>Exam # 2</td>
<td>20</td>
</tr>
<tr>
<td>Final Exam</td>
<td>20</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100 (%)</strong></td>
</tr>
</tbody>
</table>

### 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](http://www2.selu.edu/documents/policies/empl/p4_instructional_practices.pdf)

### Note:

1. **Dropping out of class:** Students may not 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. **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. **Students’ behavior/classroom decorum:** 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. LD50 and EC50
- 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)

Module 4: Hazard Evaluation and Control -Protecting the worker- (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
<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 9</td>
<td>Rental textbook pick-up begins for students who are paid.</td>
</tr>
<tr>
<td>January 9 –</td>
<td><strong>Freshman Orientation.</strong></td>
</tr>
<tr>
<td>January 10</td>
<td>Open Registration Ends at 5:00 p.m.</td>
</tr>
<tr>
<td>January 11</td>
<td><strong>No Registration or Schedule Adjustments during this time.</strong> Registration re-opens during Final Schedule Adjustment.</td>
</tr>
<tr>
<td>January 12 - 13</td>
<td><strong>Final Schedule Adjustment begins at 7:30 a.m. on Thursday, January 12th.</strong> 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.</td>
</tr>
<tr>
<td>January 13</td>
<td>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.</td>
</tr>
<tr>
<td>January 13</td>
<td>Last day for undergraduate students to remove &quot;I&quot; grades.</td>
</tr>
<tr>
<td>January 16</td>
<td>Martin Luther King Holiday.</td>
</tr>
<tr>
<td>January 17</td>
<td>First Day of Classes; Regular semester and Term I.</td>
</tr>
<tr>
<td>February 15</td>
<td>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.</td>
</tr>
<tr>
<td>February 16</td>
<td>Term I Classes: Last day to withdraw from classes.</td>
</tr>
<tr>
<td>February 20 - 22</td>
<td>Mardi Gras Holidays.</td>
</tr>
<tr>
<td>March 5</td>
<td>Term I Classes End.</td>
</tr>
<tr>
<td>March 6</td>
<td>Term I Classes: Final Examinations: T-TH schedule.</td>
</tr>
<tr>
<td>March 7</td>
<td>Term I Classes: Final Examinations: M-W schedule.</td>
</tr>
<tr>
<td>March 9</td>
<td>Regular Classes: Last day to withdraw or resign from the University. Deadline at 12:30 p.m.</td>
</tr>
<tr>
<td>March 12</td>
<td>Term II Classes Begin.</td>
</tr>
<tr>
<td>March 16</td>
<td>Term I grades due by 9:00 a.m.</td>
</tr>
<tr>
<td>March 19 - 23</td>
<td><strong>Priority Registration for Summer and Fall 2012 classes.</strong></td>
</tr>
<tr>
<td>April 6 - 13</td>
<td>Spring Break.</td>
</tr>
<tr>
<td>April 11-12</td>
<td>Early Orientation for Scholarship Recipients.</td>
</tr>
<tr>
<td>April 20</td>
<td>Term II Classes: Last day to withdraw from classes.</td>
</tr>
<tr>
<td>May 4</td>
<td>Last Day of Classes</td>
</tr>
<tr>
<td>May 5</td>
<td>Saturday Only Classes - Final Examinations.</td>
</tr>
<tr>
<td>May 7 - 11</td>
<td>Final Examinations</td>
</tr>
<tr>
<td>May 12</td>
<td>Commencement 10:00 a.m.</td>
</tr>
<tr>
<td>May 14</td>
<td>Grades due by 9:00 a.m. - Last day to return rental textbooks without a fine.</td>
</tr>
<tr>
<td>May 18</td>
<td>Student accounts will be charged for any rental books not returned by 12:30 p.m.</td>
</tr>
</tbody>
</table>

*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

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

Course Description:

Prerequisites: 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).


**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)**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>18th</td>
<td>1st</td>
<td>7th</td>
<td>4th</td>
<td><em>2nd</em></td>
</tr>
<tr>
<td><strong>First Day of Class</strong></td>
<td></td>
<td></td>
<td>Exam #2</td>
<td>Last Day of Class and Presentations Continue</td>
</tr>
<tr>
<td>25th</td>
<td>8th</td>
<td>14th</td>
<td>11th</td>
<td>9th</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><em>Spring Break</em></td>
<td>Final Exam</td>
</tr>
<tr>
<td>15th</td>
<td>21st</td>
<td></td>
<td><em>18th</em></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Final project due Presentations</td>
<td></td>
</tr>
<tr>
<td>22th</td>
<td>28th ++</td>
<td></td>
<td><em>25th</em></td>
<td>Presentations</td>
</tr>
<tr>
<td><em>Mardi Gras Holiday</em> No class</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29th</td>
<td></td>
<td></td>
<td></td>
<td>Presentations</td>
</tr>
</tbody>
</table>

**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 final exam date for this class.

<table>
<thead>
<tr>
<th>Class Day(s)</th>
<th>Class Starts Time from</th>
<th>Class Starts Time to</th>
<th>Spring 2012 Exam Day</th>
<th>Exam Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>MW</td>
<td>6:30 pm</td>
<td>7:45 pm</td>
<td>Wed., May 9</td>
<td>7:15 pm - 9:15 pm</td>
</tr>
</tbody>
</table>

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 may 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 may cover or may not 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).

Make up Exams Policy: In very exceptional cases, 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 prior arrangements with the instructor and approval was obtained. No exam make up will be allowed if a student merely decides not show up for the original exam date. If the approval for missing an exam is granted, then the make-up exam must be taken before the next scheduled class period without exception, please!

Term Paper or Project: There will be a short research project (term paper) which will require students to apply theoretical knowledge of the OSH Act (1970), regulations, codes and standards (29 CFR 1910) to a real-life situation [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 29 CFR 1910 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.

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
formal dressing  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.

Impromptu quizzes, class exercises or group work: The instructor reserves the right to give in-class exercises/assignments at any time and throughout the spring semester without prior or advance notice. These exercises are ad hoc (impromptu) and will depend on the lectures and discussions presented. Students who miss these assignments will not be allowed to make up 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.

Validation of Syllabus: 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:

<table>
<thead>
<tr>
<th>100 Points scale</th>
<th>Remarks (Final Grade)</th>
</tr>
</thead>
<tbody>
<tr>
<td>90 - 100</td>
<td>A, Superior</td>
</tr>
<tr>
<td>80 – 89.99*</td>
<td>B, Very Good</td>
</tr>
<tr>
<td>70 – 79.99*</td>
<td>C, Average</td>
</tr>
<tr>
<td>60 – 69.99*</td>
<td>D, Below Average</td>
</tr>
<tr>
<td>0 – 59.99*</td>
<td>F, Fail (FY or FN)**</td>
</tr>
</tbody>
</table>

*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:**

<table>
<thead>
<tr>
<th>Item to be Graded</th>
<th>On a 100 % scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignments (HW/Quizzes etc)</td>
<td>20</td>
</tr>
<tr>
<td>Term Paper</td>
<td>20</td>
</tr>
<tr>
<td>Exam # 1</td>
<td>20</td>
</tr>
<tr>
<td>Exam # 2</td>
<td>20</td>
</tr>
<tr>
<td>Final Exam</td>
<td>20</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100 (%)</strong></td>
</tr>
</tbody>
</table>

**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](http://www2.selu.edu/documents/policies/empl/p4_instructional_practices.pdf)

**Note:**

1. **Dropping out of class:** Students may not 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. **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. **Students’ behavior/classroom decorum:** 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***:

Module 1: 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) (note: we are skipping 1926 Construction and 1928 Agriculture)
   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)

4.5 Occupational Noise Exposure and Control – PELs; Audiograms; Rule of Thumb for Adding up Noise Levels \textit{29 CFR 1910: 95) - Guest Speaker (OSHA Area Director)}

4.6 Personal Protective Equipment (PPEs) – \textit{(29 CFR 1910: 132-138)}

4.7 Regulations on the Ventilation Systems – Engineering Controls - \textit{29 CFR 1910.84}

4.8 Hazardous Substances – Substances \textit{29 CFR 1910 Subpart H}

4.8.1 Flammables/Combustibles \textit{29 CFR 1910.106}


4.8.3 Hazardous Substances – Hazardous Waste Operations and Emergency Response (HAZWOPER) – SQG, Hazmat, LQG$^2$ etc \textit{(Subpart Z: 1910:120)}


4.12 The General Duty Clause - Addendums: e.g. In the absence of a regulation or standard, the \textit{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!!
# Academic Calendar - Spring 2012 (Attached for your convenience)

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 9</td>
<td>Rental textbook pick-up begins for students who are paid.</td>
</tr>
<tr>
<td>January 9 - 10</td>
<td>Freshman Orientation.</td>
</tr>
<tr>
<td>January 10</td>
<td>Open Registration Ends at 5:00 p.m.</td>
</tr>
<tr>
<td>January 11</td>
<td>No Registration or Schedule Adjustments during this time. Registration re-opens during Final Schedule Adjustment.</td>
</tr>
<tr>
<td><strong>January 12 - 13</strong></td>
<td><strong>Final Schedule Adjustment begins at 7:30 a.m. on Thursday, January 12th.</strong> 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.</td>
</tr>
<tr>
<td>January 13</td>
<td>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.</td>
</tr>
<tr>
<td>January 13</td>
<td>Last day for undergraduate students to remove &quot;I&quot; grades.</td>
</tr>
<tr>
<td>January 16</td>
<td>Martin Luther King Holiday.</td>
</tr>
<tr>
<td>January 17</td>
<td>First Day of Classes; Regular semester and Term I.</td>
</tr>
<tr>
<td>February 15</td>
<td>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.</td>
</tr>
<tr>
<td>February 16</td>
<td>Term I Classes: Last day to withdraw from classes.</td>
</tr>
<tr>
<td>February 20 - 22</td>
<td>Mardi Gras Holidays.</td>
</tr>
<tr>
<td>March 5</td>
<td>Term I Classes End.</td>
</tr>
<tr>
<td>March 6</td>
<td>Term I Classes: Final Examinations: T-TH schedule.</td>
</tr>
<tr>
<td>March 7</td>
<td>Term I Classes: Final Examinations: M-W schedule.</td>
</tr>
<tr>
<td>March 9</td>
<td>Regular Classes: Last Day to withdraw or resign from the University. Deadline at 12:30 p.m.</td>
</tr>
<tr>
<td>March 12</td>
<td>Term II Classes Begin.</td>
</tr>
<tr>
<td>March 16</td>
<td>Term I grades due by 9:00 a.m.</td>
</tr>
<tr>
<td>March 19 - 23</td>
<td>Priority Registration for Summer and Fall 2012 classes.</td>
</tr>
<tr>
<td>April 6 - 13</td>
<td>Spring Break.</td>
</tr>
<tr>
<td>April 11-12</td>
<td>Early Orientation for Scholarship Recipients.</td>
</tr>
<tr>
<td>April 20</td>
<td>Term II Classes: Last Day to withdraw from classes.</td>
</tr>
<tr>
<td>May 4</td>
<td>Last Day of Classes</td>
</tr>
<tr>
<td>May 5</td>
<td>Saturday Only Classes - Final Examinations.</td>
</tr>
<tr>
<td>May 7 - 11</td>
<td>Final Examinations</td>
</tr>
<tr>
<td>May 12</td>
<td>Commencement 10:00 a.m.</td>
</tr>
<tr>
<td>May 14</td>
<td>Grades due by 9:00 a.m. - Last day to return rental textbooks without a fine.</td>
</tr>
<tr>
<td>May 18</td>
<td>Student accounts will be charged for any rental books not returned by 12:30 p.m.</td>
</tr>
</tbody>
</table>

*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:
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 3RD. Projects turned in after that date will receive only partial credit.

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

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

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
<th>Readings Due</th>
<th>Work Due</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td><strong>Module 1: Ergonomics Basics</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Jan. 19</td>
<td>Introduction to Ergonomics</td>
<td>Introduction</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Jan. 26</td>
<td>Human Anatomy, Posture, and Biomechanics</td>
<td>Chapter 1 (pp 51-89)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Feb. 2</td>
<td>Anthropometry and Workstation Design (Homework #1)</td>
<td>Chapter 1 (pp 15-51)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Feb. 9</td>
<td>Standing VS. Sitting</td>
<td>Chapter 9</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Feb. 16</td>
<td>How the Mind Works</td>
<td>Chapter 3</td>
<td>Homework #1</td>
</tr>
<tr>
<td>6</td>
<td>Feb. 23</td>
<td>Human Senses (Homework #2)</td>
<td>Chapter 4</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Mar. 1</td>
<td>Interaction with the Environment</td>
<td>Chapter 5</td>
<td>Homework #2</td>
</tr>
<tr>
<td>8</td>
<td>Mar. 8</td>
<td>MID-TERM EXAM</td>
<td></td>
<td>Review Module 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Module 2: Ergonomics Applications and Interventions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Mar. 15</td>
<td>Manual Material Handling (Homework #3)</td>
<td>Chapter 11 &amp; Handouts</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Mar. 22</td>
<td>Manual Material Handling (cont.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Mar. 29</td>
<td>The Upper Body at Work &amp; Hand-Tool Design</td>
<td>Chapter 8</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Apr. 5</td>
<td>Ergonomic Job Analysis</td>
<td>Handouts</td>
<td>Homework #3</td>
</tr>
<tr>
<td>13</td>
<td>Apr. 12</td>
<td>NO CLASS - Spring Break</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Apr. 19</td>
<td>Whole-Body Exertion</td>
<td>Chap. 2 &amp; 6</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Apr. 26</td>
<td>Work Organization and Psychosocial Stress</td>
<td>Chapter 13</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>May 3</td>
<td>Research Project Presentation</td>
<td></td>
<td>Term Project</td>
</tr>
<tr>
<td>17</td>
<td>May 10</td>
<td>FINAL EXAM</td>
<td></td>
<td>Overview</td>
</tr>
</tbody>
</table>
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](http://www.apastyle.org)
    2) [http://www.ccc.commnet.edu/apa/](http://www.ccc.commnet.edu/apa/)
    3) [http://owl.english.purdue.edu/owl/resource/560/01/](http://owl.english.purdue.edu/owl/resource/560/01/)
    4) [http://www.uwsp.edu/PSYCH/apa4b.htm](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!
<table>
<thead>
<tr>
<th>Performance Consideration (Maximum Points)</th>
<th>Below Expectations 1</th>
<th>Progressing to Criteria 2</th>
<th>Meets Criteria 3</th>
<th>Exceeds Criteria 4</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical Report (90)</td>
<td>Content (60)</td>
<td>Inconsistent or few details that may interfere with the meaning of the text.</td>
<td>Some details but may include extraneous or loosely related material.</td>
<td>Provides adequate supporting detail to support solution/argument.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Organization (15)</td>
<td>Little evidence of organization or any sense of wholeness or completeness.</td>
<td>Little wholeness or completeness, though organization attempted.</td>
<td>Organization pattern is logical &amp; conveys wholeness and completeness with few lapses.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Presentation (15)</td>
<td>Limited or inappropriate vocabulary &amp; incorrect grammar and syntax for intended purpose.</td>
<td>Limited &amp; predictable vocabulary, perhaps not appropriate &amp; some grammar and syntax mistakes for intended purpose.</td>
<td>Uses effective language and appropriate word choices &amp; makes minor grammar and syntax mistakes for intended purpose.</td>
<td>Uses effective language, appropriate word choices, and correct grammar and syntax for intended purpose.</td>
</tr>
<tr>
<td>Quality (30)</td>
<td></td>
<td>Inconsistent or few details &amp; nothing worthy to keep.</td>
<td>Some details but may include extraneous or loosely related material &amp; no creative design or informative learning.</td>
<td>Provides adequate supporting detail to support solution/argument &amp; something worthy/new to learn.</td>
<td>Provides ample supporting detail to support solution/argument &amp; many creative designs and informative learning.</td>
</tr>
<tr>
<td>Professionalism (15)</td>
<td></td>
<td>Does not follow the rules of formal presentation &amp; standard English.</td>
<td>Generally does not follow the rules of formal presentation &amp; standard English.</td>
<td>Generally follows the rules of formal presentation &amp; standard English.</td>
<td>Consistently follows the rules of formal presentation &amp; standard English.</td>
</tr>
<tr>
<td>Time Control (15)</td>
<td></td>
<td>Finishes presentation in less than 5 minutes or more than 20 minutes.</td>
<td>Finishes presentation in less than 10 minutes or more than 15 minutes.</td>
<td>Finishes presentation within 10-15 minutes but has to either slow down or speed up as time elapses.</td>
<td>Finishes presentation within 10-15 minutes properly.</td>
</tr>
</tbody>
</table>

Total _______________ 70
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

Course Description: 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 (MUTARA), 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 Chemicals (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:

Optional but highly recommended: Government Documents (SIMS Library)
**First Day of Class:** First day of class: Thursday 18th 2011 at 9:30 am – 10:45 a.m. Venue: Fay Hall Room 218:

<table>
<thead>
<tr>
<th>August</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tue</td>
</tr>
<tr>
<td>18th</td>
</tr>
<tr>
<td>Thur</td>
</tr>
<tr>
<td>1st</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>September 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tue</td>
</tr>
<tr>
<td>1st</td>
</tr>
<tr>
<td>Thur</td>
</tr>
<tr>
<td>4th</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>October 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tue</td>
</tr>
<tr>
<td>6th</td>
</tr>
<tr>
<td>Thur</td>
</tr>
<tr>
<td>8th</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>November 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tue</td>
</tr>
<tr>
<td>1st</td>
</tr>
<tr>
<td>Thur</td>
</tr>
<tr>
<td>3rd</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>December 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tue</td>
</tr>
<tr>
<td>1st</td>
</tr>
</tbody>
</table>

**Last Day of Class:** November 29th 2011

*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.

**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/](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**
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.

Validation of the Syllabus: 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 sign and hand over to the instructor a statement indicating that they have read and understood the contents herein of the entire syllabus! Please ask questions that will clarify the content of the syllabus, including incorrect dates, grading schema etc.

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

<table>
<thead>
<tr>
<th>A Letter Grade</th>
<th>On the Basis of 100 %</th>
</tr>
</thead>
<tbody>
<tr>
<td>A, Superior</td>
<td>90 - 100</td>
</tr>
<tr>
<td>B, Very Good</td>
<td>80 – 89.9</td>
</tr>
<tr>
<td>C, Average</td>
<td>70 – 79.9</td>
</tr>
<tr>
<td>D, Below Average</td>
<td>60 – 69.9</td>
</tr>
<tr>
<td>F, Fail</td>
<td>0 – 59.9</td>
</tr>
</tbody>
</table>

Basis for assigning final grades:

<table>
<thead>
<tr>
<th>Academic Activity</th>
<th>Points</th>
<th>On a 100 % Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignments (quizzes; hw; class exercises etc)</td>
<td>100</td>
<td>20</td>
</tr>
<tr>
<td>Term Paper**</td>
<td>125</td>
<td>25</td>
</tr>
<tr>
<td>Exam # 1</td>
<td>75</td>
<td>15</td>
</tr>
<tr>
<td>Exam # 2</td>
<td>75</td>
<td>15</td>
</tr>
<tr>
<td>Final Exam</td>
<td>125</td>
<td>25</td>
</tr>
<tr>
<td>Total</td>
<td>500</td>
<td>100 points (%)</td>
</tr>
</tbody>
</table>

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](http://www2.selu.edu/documents/policies/empl/p4_instructional_practices.pdf)
Note:

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

*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 on 06/15/2011)
Instructor: Steven P. Pereira, CSP

1027 N. Range Ave.
Denham Springs, LA  70726

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

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”
2. Explain the Fire Triangle and Fire Tetrahedron
3. Explain various methods of fire and explosion control
4. List and explain the classes of fire
5. Describe characteristics of combustible solids such as wood, plastics, polymers and textiles
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
   - Halon
   - Dry Chemical
   - Dry Powder
   - Nitrogen
   - 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


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 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
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
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


Recommended Text Books (optional):

Class meets on **Wednesdays:**

**First day of class: 17th August, 2011** – at the Livingstone Literacy Center. Other dates as shown below

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>17th</td>
<td>7th</td>
<td>5th</td>
<td>2nd</td>
<td>7th</td>
</tr>
<tr>
<td>First Day of Class</td>
<td></td>
<td></td>
<td></td>
<td>Final Exam</td>
</tr>
<tr>
<td>24th</td>
<td>14th</td>
<td>12th</td>
<td>9th</td>
<td></td>
</tr>
<tr>
<td>31st</td>
<td>21st</td>
<td>19th</td>
<td>16th</td>
<td></td>
</tr>
<tr>
<td></td>
<td>28th</td>
<td>26th</td>
<td>#23rd</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Exam # 1</td>
<td></td>
<td>Term Papers or Project Due</td>
<td></td>
</tr>
<tr>
<td></td>
<td>#30th</td>
<td></td>
<td>Last Day of Class and presentations</td>
<td></td>
</tr>
</tbody>
</table>

*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/](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.

Validation of the Syllabus: 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 based on the 10-point scale:

<table>
<thead>
<tr>
<th>A Letter Grade</th>
<th>On the Basis of 100 %</th>
</tr>
</thead>
<tbody>
<tr>
<td>A, Superior</td>
<td>90 - 100</td>
</tr>
<tr>
<td>B, Very Good</td>
<td>80 – 89.9</td>
</tr>
<tr>
<td>C, Average</td>
<td>70 – 79.9</td>
</tr>
<tr>
<td>D, Below Average</td>
<td>60 – 69.9</td>
</tr>
<tr>
<td>F, Fail</td>
<td>0 – 59.9</td>
</tr>
</tbody>
</table>

Basis for assigning final grades:

<table>
<thead>
<tr>
<th></th>
<th>Points</th>
<th>On a 100 % Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignments (quizzes; hw; class work)</td>
<td>75</td>
<td>15</td>
</tr>
<tr>
<td>Term Paper</td>
<td>100</td>
<td>20</td>
</tr>
<tr>
<td>Exam # 1</td>
<td>100</td>
<td>20</td>
</tr>
<tr>
<td>Exam # 2</td>
<td>100</td>
<td>20</td>
</tr>
<tr>
<td>Final Exam</td>
<td>125</td>
<td>25</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>500</td>
<td></td>
</tr>
</tbody>
</table>

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 not 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 qualified student with a disability 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 document your disability with 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**

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

*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.*
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)
      1. 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

Contacts:  SLU Office ............................................................ 985-549-3476
           SLU E-mail ............................................................... lmauerman@selu.edu

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:

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
1st Exam .............................................................................. Thursday, 23 February, 2012
2nd Exam ............................................................................. Thursday, 27 March, 2012
Research Project Due ....................................................... 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:

<table>
<thead>
<tr>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>19</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>24</td>
<td>9</td>
<td>8</td>
<td>10</td>
<td>-</td>
</tr>
<tr>
<td>26</td>
<td>14</td>
<td>13</td>
<td>12</td>
<td>-</td>
</tr>
<tr>
<td>31</td>
<td>16</td>
<td>15</td>
<td>17</td>
<td>-</td>
</tr>
<tr>
<td>21</td>
<td>-</td>
<td>-</td>
<td>20</td>
<td>19</td>
</tr>
<tr>
<td>23</td>
<td>-</td>
<td>-</td>
<td>22</td>
<td>24</td>
</tr>
<tr>
<td>28</td>
<td>-</td>
<td>-</td>
<td>27</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>27</td>
<td>29</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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:

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

2. Basis for assigning grades:

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

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.

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
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:

Selected instructor handouts

Unit 1: Foundations   Exam: **23 February, 2012**

I  **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
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 receive 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.

! 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:** 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).

**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

---

1 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](http://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!
OSHE 323-51X
PRODUCT SAFETY AND LIABILITY

Syllabus

Instructor: Steven P. Pereira, CSP

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.
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:

2. Instructor handouts
Course Grades:

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

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

2. Basis for assigning grades:

   Two exams @ 100 points = 200 points
   Final Examination @ 100 points = 100 points
   Outside Report #1 = 25 points
   Outside Report #2 = 75 points
   TOTAL 400 points

Course Prerequisites:

None

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.

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


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

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

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.


*1 This syllabus is subject to change without notice and depending on various parameters
Optional Textbooks:


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)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>19th</td>
<td>2nd</td>
<td>1st</td>
<td>5th</td>
<td>3rd</td>
</tr>
<tr>
<td>First Day of Class</td>
<td></td>
<td></td>
<td>Exam # 2</td>
<td>Last Day of Class and Presentations</td>
</tr>
<tr>
<td>26th</td>
<td>9th</td>
<td>8th</td>
<td>12th</td>
<td>10th</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Spring Break</td>
<td>Final Exam</td>
</tr>
<tr>
<td>16th</td>
<td>15th</td>
<td>19th</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Exam # 1</td>
<td></td>
</tr>
<tr>
<td>23th</td>
<td>22nd</td>
<td></td>
<td>26th</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Final project due and Student Presentations</td>
<td></td>
</tr>
<tr>
<td></td>
<td>29th</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Students will present their term paper research findings to their colleagues*
Exams:

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

<table>
<thead>
<tr>
<th>Class Day(s)</th>
<th>Class Starts Time from</th>
<th>Class Starts Time to</th>
<th>Spring 2012 Exam Day</th>
<th>Exam Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>TH</td>
<td>6:30 pm</td>
<td>9:15 pm</td>
<td>Thurs., May 10</td>
<td>7:15 pm - 9:15 pm</td>
</tr>
</tbody>
</table>

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 only permitted to make-up an exam if they had made arrangements prior 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 26th April 2012, 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 formal 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 electronic version of all the documents listed in (1). Presentation dates are tentatively scheduled for two days: 04/26 and 05/03. Students should consult grading rubric on the blackboard.

Impromptu quizzes, class exercises or group work:

There will be in-class exercises/assignments throughout the semester. Some class exercises will be impromptu (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 not be allowed to make up 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 the 10-point scale below:

<table>
<thead>
<tr>
<th>100 Points scale</th>
<th>Remarks (Final Grade)</th>
</tr>
</thead>
<tbody>
<tr>
<td>90 - 100</td>
<td>A, Superior</td>
</tr>
<tr>
<td>80 – 89.99*</td>
<td>B, Very Good</td>
</tr>
<tr>
<td>70 – 79.99*</td>
<td>C, Average</td>
</tr>
<tr>
<td>60 – 69.99*</td>
<td>D, Below Average</td>
</tr>
<tr>
<td>0 – 59.99*</td>
<td>F, Fail (FY or FN)**</td>
</tr>
</tbody>
</table>

*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

Grade distribution for various assignments

<table>
<thead>
<tr>
<th>Assignments (HW/Quizzes etc)</th>
<th>20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Term Paper</td>
<td>20</td>
</tr>
<tr>
<td>Exam # 1</td>
<td>20</td>
</tr>
<tr>
<td>Exam # 2</td>
<td>20</td>
</tr>
<tr>
<td>Final Exam</td>
<td>20</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100 (%)</strong></td>
</tr>
</tbody>
</table>

**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](http://www2.selu.edu/documents/policies/empl/p4_instructional_practices.pdf)

**Note:**

1. **Dropping out of class:** Students may not 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. **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. **Students’ behavior/classroom decorum:** 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
  3 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
  1 Examples of instruments/equipment to be discussed in class are PID/FID/
  Detector Tubes; Adsorption Tubes; Passive Sampling etc

  B Sampling for Airborne Particulates
  1 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
  1 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)

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>January 9</strong></td>
<td>Rental textbook pick-up begins for students who are paid.</td>
</tr>
<tr>
<td><strong>January 9 – 10</strong></td>
<td>Open Registration Ends at 5:00 p.m.</td>
</tr>
<tr>
<td><strong>January 10</strong></td>
<td>No Registration or Schedule Adjustments during this time. Registration re-opens during Final Schedule Adjustment.</td>
</tr>
<tr>
<td><strong>January 11</strong></td>
<td>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.</td>
</tr>
<tr>
<td><strong>January 12 - 13</strong></td>
<td>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.</td>
</tr>
<tr>
<td><strong>January 13</strong></td>
<td>Last day for undergraduate students to remove &quot;I&quot; grades.</td>
</tr>
<tr>
<td><strong>January 16</strong></td>
<td>Martin Luther King Holiday.</td>
</tr>
<tr>
<td><strong>January 17</strong></td>
<td>First Day of Classes; Regular semester and Term I.</td>
</tr>
<tr>
<td><strong>February 15</strong></td>
<td>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.</td>
</tr>
<tr>
<td><strong>February 16</strong></td>
<td>Term I Classes: Last day to withdraw from classes.</td>
</tr>
<tr>
<td><strong>February 20 - 22</strong></td>
<td>Mardi Gras Holidays.</td>
</tr>
<tr>
<td><strong>March 5</strong></td>
<td>Term I Classes End.</td>
</tr>
<tr>
<td><strong>March 6</strong></td>
<td>Term I Classes: Final Examinations: T-TH schedule.</td>
</tr>
<tr>
<td><strong>March 7</strong></td>
<td>Term I Classes: Final Examinations: M-W schedule.</td>
</tr>
<tr>
<td><strong>March 9</strong></td>
<td>Regular Classes: Last Day to withdraw or resign from the University. Deadline at 12:30 p.m.</td>
</tr>
<tr>
<td><strong>March 12</strong></td>
<td>Term II Classes Begin.</td>
</tr>
<tr>
<td><strong>March 16</strong></td>
<td>Term I grades due by 9:00 a.m.</td>
</tr>
<tr>
<td><strong>March 19 - 23</strong></td>
<td>Priority Registration for Summer and Fall 2012 classes.</td>
</tr>
<tr>
<td><strong>April 6 - 13</strong></td>
<td>Spring Break.</td>
</tr>
<tr>
<td><strong>April 11-12</strong></td>
<td>Early Orientation for Scholarship Recipients.</td>
</tr>
<tr>
<td><strong>April 20</strong></td>
<td>Term II Classes: Last Day to withdraw from classes.</td>
</tr>
<tr>
<td><strong>May 4</strong></td>
<td>Last Day of Classes</td>
</tr>
<tr>
<td><strong>May 5</strong></td>
<td>Saturday Only Classes - Final Examinations.</td>
</tr>
<tr>
<td><strong>May 7 - 11</strong></td>
<td>Final Examinations</td>
</tr>
<tr>
<td><strong>May 12</strong></td>
<td>Commencement 10:00 a.m.</td>
</tr>
<tr>
<td><strong>May 14</strong></td>
<td>Grades due by 9:00 a.m. - Last day to return rental textbooks without a fine.</td>
</tr>
<tr>
<td><strong>May 18</strong></td>
<td>Student accounts will be charged for any rental books not returned by 12:30 p.m.</td>
</tr>
</tbody>
</table>

*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 ………………………………………….. lmauerman@selu.edu

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.
3. 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:

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
1st Project Due ................................................................. Tuesday, 13 September, 2011
1st Exam ........................................................................ Tuesday, 20 September, 2011
2nd Project Due ............................................................... Tuesday, 11 October, 2011
2nd Exam ........................................................................ Tuesday, 18 October, 2011
Term project due ............................................................. Tuesday, 22 November, 2011
Last day of class .............................................................. Tuesday, 29 November, 2011
Final exam ................................................................. Tuesday, 6 December, 2011

Class dates are:

<table>
<thead>
<tr>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
</tr>
</thead>
<tbody>
<tr>
<td>23</td>
<td>6</td>
<td>4</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>30</td>
<td>13</td>
<td>11</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>20</td>
<td>18</td>
<td>15</td>
<td>22</td>
<td>29</td>
</tr>
</tbody>
</table>

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:

<table>
<thead>
<tr>
<th>Points (Percent)</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>461-500</td>
<td>(93 - 100) =</td>
</tr>
<tr>
<td>421-460</td>
<td>(85 - 92) =</td>
</tr>
<tr>
<td>381-420</td>
<td>(77 - 84) =</td>
</tr>
<tr>
<td>341-380</td>
<td>(69 - 76) =</td>
</tr>
<tr>
<td>0-340</td>
<td>(0 - 68) =</td>
</tr>
</tbody>
</table>

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 = 100 points (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 49, Code of Federal Regulations, Parts 1-199--Research and Special Projects Administration.

Other Sources


**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)
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)


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)


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:
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:

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

2. Basis for assigning grades:

<table>
<thead>
<tr>
<th></th>
<th>Points</th>
<th>Percentage of Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two mid-term exams @ 100 points</td>
<td>200</td>
<td>(40% of grade)</td>
</tr>
<tr>
<td>Final Examination @ 150 points</td>
<td>150</td>
<td>(30% of grade)</td>
</tr>
<tr>
<td>Research Project @ 150 points</td>
<td>150</td>
<td>(30% of grade)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>500</td>
<td></td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
<th>Readings Due</th>
<th>Work Due</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Unit 1: Introduction to Construction Safety</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Jan. 17</td>
<td>Introduction &amp; Construction Safety in General</td>
<td>Chapter 1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Jan. 24</td>
<td>Construction Safety Program</td>
<td>Chapter 2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Jan. 31</td>
<td>Workers’ Compensation in Construction</td>
<td>Chapters 4 &amp; 5</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Feb. 7</td>
<td>Contractor Selection</td>
<td>Chapter 6</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Feb. 14</td>
<td>FIRST EXAM</td>
<td>Review Unit 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Unit 2: Safety Components and Legal Aspects</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Feb. 21</td>
<td>NO CLASS - Mardi Gras Holidays</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Feb. 28</td>
<td>Construction Substance-Abuse Programs &amp; Safety Incentives</td>
<td>Chapters 7 &amp; 8</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Mar. 6</td>
<td>Regulatory Requirements</td>
<td>Chapter 14</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Mar. 13</td>
<td>Prejob/Pretask Planning &amp; Accident Investigation and</td>
<td>Chapters 9 &amp; 10</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reconstruction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Mar. 20</td>
<td>Safety Training</td>
<td>Chapter 11</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Mar. 27</td>
<td>SECOND EXAM</td>
<td>Review Unit 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Unit 3: Technical Issues and Phase Planning</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Apr. 3</td>
<td>1) Phase Planning for Site Preparation</td>
<td>Chap. 21 &amp; 23</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2) Excavation, Concrete, and Steel Erection</td>
<td>Chap. 16, 20, &amp;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Term Project</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Apr. 10</td>
<td>NO CLASS - Spring Break</td>
<td>Chap. 15 &amp; 17</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Apr. 17</td>
<td>Fall Prevention and Protection</td>
<td>Chap. 22, 25, &amp;</td>
<td>Term Project</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Apr. 24</td>
<td>Hazardous Materials &amp; Confined Spaces</td>
<td>Chap. 18 &amp; 19</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>May 1</td>
<td>Mechanical Systems &amp; Electrical Safety</td>
<td>Overview</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>May 8</td>
<td>FINAL EXAM</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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](http://www.apastyle.org)
    2) [http://www.ccc.commnet.edu/apa/](http://www.ccc.commnet.edu/apa/)
    3) [http://owl.english.purdue.edu/owl/resource/560/01/](http://owl.english.purdue.edu/owl/resource/560/01/)
    4) [http://www.uwsp.edu/PSYCH/apa4b.htm](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!
<table>
<thead>
<tr>
<th>Performance Consideration (Maximum Points)</th>
<th>Below Expectations 1</th>
<th>Progressing to Criteria 2</th>
<th>Meets Criteria 3</th>
<th>Exceeds Criteria 4</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content (90)</td>
<td>Inconsistent or few details that may interfere with the meaning of the text.</td>
<td>Some details but may include extraneous or loosely related material.</td>
<td>Provides adequate supporting detail to support solution/argument.</td>
<td>Provides ample supporting detail to support solution/argument.</td>
<td></td>
</tr>
<tr>
<td>Organization (30)</td>
<td>Little evidence of organization or any sense of wholeness or completeness.</td>
<td>Little wholeness or completeness, though organization attempted.</td>
<td>Organization pattern is logical &amp; conveys wholeness and completeness with few lapses.</td>
<td>Organization pattern is logical &amp; conveys wholeness and completeness.</td>
<td></td>
</tr>
<tr>
<td>Presentation (30)</td>
<td>Limited or inappropriate vocabulary &amp; incorrect grammar and syntax for intended purpose.</td>
<td>Limited &amp; predictable vocabulary, perhaps not appropriate &amp; some grammar and syntax mistakes for intended purpose.</td>
<td>Uses effective language and appropriate word choices &amp; makes minor grammar and syntax mistakes for intended purpose.</td>
<td>Uses effective language, appropriate word choices, and correct grammar and syntax for intended purpose.</td>
<td></td>
</tr>
</tbody>
</table>

Total _______________
Syllabus

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

Contacts: 

Office Hrs: Southeastern Office: Monday and Wednesday, 8:00 am to 12:00 noon, and 1:00 to 4:00 pm. Tuesday & Thursday, 10:30 am to 12:00 noon. At other times by appointment

Course Description:
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:
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.
4. 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.
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:**

Instructor handouts

**Schedule:**
Class meets on Wednesday, from 6:30 pm to 9:20 pm at Anzalone Hall, Room 214.

- First day of class
- 1st Project Due
- Mardi Gras Holiday
- 1st Exam
- 2nd Exam
- Spring Break
- 1st Exam
- Term project due
- Last day of class
- Final Exam

<table>
<thead>
<tr>
<th>JAN</th>
<th>FEB</th>
<th>MAR</th>
<th>APR</th>
<th>MAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>1</td>
<td>7</td>
<td>4</td>
<td>2 - Last Day</td>
</tr>
<tr>
<td>22</td>
<td>8</td>
<td>14</td>
<td>11</td>
<td>9 - Final Exam</td>
</tr>
<tr>
<td>15</td>
<td>21</td>
<td>28</td>
<td>25</td>
<td>18 - 2nd Project due</td>
</tr>
<tr>
<td>22</td>
<td>Mardi Gras</td>
<td>28</td>
<td>2nd Exam</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>1st Exam</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**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.

**Exam Make-up Policy:** 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:

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

2. Basis for assigning grades:

- Mid Term Exams: 2 @ 100 points = 200 points (40% of grade)
- 1st Term Project: 50 points = 50 points (10% of grade)
- 2nd Term Project: 100 points = 100 points (20% of grade)
- Final Exam: 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.
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.
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:

Other Readings:
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:

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

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

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
<th>Readings Due</th>
<th>Work Due</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td><strong>Unit 1: Introduction to System Safety Methodologies</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Aug. 17</td>
<td>System Safety Methodologies in General</td>
<td>Brauer Chap. 36</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Aug. 24</td>
<td>Understanding Risk</td>
<td>Brauer Chaps. 35 &amp; 36</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Aug. 31</td>
<td>Scope of Hazard Evaluation and Preparation</td>
<td>CCPS Chap. 2</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Sep. 7</td>
<td>Hazard Evaluation Meetings and Results</td>
<td>CCPS Chap. 2</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Sep. 14</td>
<td>FIRST EXAM</td>
<td></td>
<td>Review Unit 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Unit 2: Hazard Identification Methodologies</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Sep. 21</td>
<td>Hazard Identification Methods in General</td>
<td>CCPS Chaps. 3 &amp; 4</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Sep. 28</td>
<td>Hazard and Operability Study (HazOp)</td>
<td>CCPS Chap. 5.3</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Oct. 5</td>
<td>HazOp Case Study Step 1</td>
<td>1) CCPS Chaps. 15 &amp; 19</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2) Instructor Handouts</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Oct. 12</td>
<td>HazOp Case Study Step 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Oct. 19</td>
<td>HazOp Case Study Step 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Oct. 26</td>
<td>SECOND EXAM</td>
<td></td>
<td>Review Unit 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Unit 3: Frequency and Consequence Assessment Methodologies</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Nov. 2</td>
<td>Fault Tree Analysis (FTA)</td>
<td>CCPS Chap. 5.5</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Nov. 9</td>
<td>FTA Case Study Part 1</td>
<td>1) CCPS Chap 16</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2) Instructor Handouts</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Nov. 16</td>
<td>FTA Case Study Part 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Nov. 23</td>
<td>NO CLASS – Thanksgiving Holiday</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Nov. 30</td>
<td>System Safety Analysis Overview</td>
<td>CCPS Chap. 5</td>
<td>Last Class</td>
</tr>
<tr>
<td>17</td>
<td>Dec. 7</td>
<td>FINAL EXAM</td>
<td></td>
<td>Review Unit 3</td>
</tr>
</tbody>
</table>
OSHE 441  
Industrial Toxicology  
Fall Semester, 2011  

Syllabus

Instructor: Lawrence A. Mauerman, MAS, PE, CSP

Phone:  
- Southeastern Office
- E-mail: lmauerman@selu.edu

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:

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
- 1st exam ........................................................................... Thursday, 22 September, 2011
- 2nd exam ........................................................................... Thursday, 27 October, 2011
- Thanksgiving Holiday ...................................................... Thursday, 24 November, 2011
- Project due & last day of class.......................................... Thursday, 1 December, 2011
- Final exam ......................................................................... Thursday, 8 December, 2011

Calendar:

<table>
<thead>
<tr>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>1</td>
<td>6</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>25</td>
<td>8</td>
<td>13</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>20</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>22</td>
<td>27</td>
<td>24</td>
<td></td>
</tr>
</tbody>
</table>

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:
   - 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

2. Grades will be assigned in accordance with the departmental code:
   - 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)

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 by 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 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. 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
3. 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
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:

- 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 your 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.

---

\(^1\)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](http://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

Contacts:  
● ............................................................................................................SLU Office
● E-mail: lmauerman@selu.edu

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:

Instructor handouts

Other Useful References:
Government Sources, Federal

EPA website:  [www.epa.gov](http://www.epa.gov)
DOT webssite:  [www.dot.gov](http://www.dot.gov)
OSHA website:  [www.osha.gov](http://www.osha.gov)
NIOSH website:  [www.cdc.gov/niosh](http://www.cdc.gov/niosh)

Other Sources

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 ............................................................................. Monday, 20 June, 2011
1st Exam ............................................................................................... Wednesday, 22 June, 2011
2nd Exam ............................................................................................... Wednesday, 6 July, 2011
3rd Exam ............................................................................................... Wednesday, 20 July, 2011
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:**

<table>
<thead>
<tr>
<th>June</th>
<th>July</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mon</td>
<td>Wed</td>
</tr>
<tr>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>13</td>
<td>15</td>
</tr>
<tr>
<td>20 - Proj. Due</td>
<td>22 - 1st Exam</td>
</tr>
<tr>
<td>27</td>
<td>29</td>
</tr>
</tbody>
</table>

**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:
   - Research Project = 60 points (12% of grade)
   - Two homework 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

2. Grades will be assigned in accordance with the departmental code:
   - 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)

**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 by 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
7. 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


Optional textbook:

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

Syllabus

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

Contacts:
SLU Office ........................................................ 985-549-3476
SLU E-mail ..................................................... lmauerman@selu.edu

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.
4. 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
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

1st Milepost: Thursday, 29 September, 2011

2nd Milepost: Tuesday, 1 November, 2011

Thanksgiving holiday: Thursday, 24 November, 2011

Last day of class: Thursday, 1 December, 2011

Training Sessions: Thur. 22 & Tues. 29 Nov; Thur. 1 Dec; & TBA, 2011

Class dates are:

<table>
<thead>
<tr>
<th>AUG</th>
<th>SEP</th>
<th>OCT</th>
<th>NOV</th>
<th>DEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>2nd Milepost</td>
</tr>
<tr>
<td>23</td>
<td>6</td>
<td>11</td>
<td>8</td>
<td>TBA - Training Sessions</td>
</tr>
<tr>
<td>25</td>
<td>8</td>
<td>13</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>15</td>
<td>18</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>20</td>
<td>20</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>25</td>
<td>22 - Training Sessions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>24 - holiday</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29 - 1st Milepost</td>
<td>29 - Training Sessions</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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:

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

2. Basis for assigning grades:

- 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

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.

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.”

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.
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.