Instructor Information
Instructor: Dr. Mandara Savage
Class Meeting Times: TTR 9:35 – 10:50
Course Location: ENGR A219
Office Hours: by appointment
Office Phone: 618-536-3396
E-mail: msavage@siu.edu
Course Webpage: SIU D2L

Course Objective
This course covers the aspects of safety relating to the occupational environment. This course will also cover accident statistics and costs, the recognition of industrial hazards, the OSHAct, and various OSHA federal regulations relating to man-machine interface in the occupational environment. Methods used in the development of a mature safety culture will also be covered.

• To develop an awareness of the need for occupational accident prevention and safety procedures.
• To develop an understanding of the factors which contribute to and cause hazardous conditions in industrial plants, shops, and laboratories. Safety factors in machine and equipment design.
• To develop an understanding of industrial accident analysis procedures in the investigation of accidents.
• To develop an understanding of the essential elements of effective safety organizations.
• Familiarize the student with activities and practices that are used to develop safe work procedures and habits.
• Familiarize the student with the importance of top management leadership, in addition to, buy-in by supervisors and the active employee participation in the safety and health program

Course Format:
This course is primarily lecture and is complemented with a blend of video lectures and online instruction.

Course Materials
Method of Evaluation:

- Homework: 25%
- Quizzes: 30%
- Exams: 45% (3@15% each)

Note: Quizzes cannot be taken if missed during time scheduled. This includes all reasons for missing quiz (late, absent, excused or unexcused)
Homework will NOT be accepted late. No make-up exams unless prior approval of instructor.

Grading Scale as a percentage
- A: 90 - 100%
- B: 80 - 89%
- C: 70 - 79%
- D: 60 – 69%
- F: < 60%

Grading Policy:
1. Successful completion of this course will require students to complete all of the following: homework assignments, examinations, quizzes and projects.
   a. All assignments are due on or before the due date. No late assignments will be accepted unless the instructor gives PRIOR approval. Failure to receive prior approval results in a 10%/day penalty.
   b. No make-up quizzes will be administered.
   c. No make-up examinations will be administered unless the instructor gives PRIOR approval. Failure to receive prior approval results in a 10%/day penalty.
2. Class attendance is mandatory for successful completion of this course.
   a. If possible, students should give PRIOR notice of an excused absence.

Academic Conduct:
Cheating on examinations or submitting course work, which was completed by another student as your work is considered to be plagiarism. This will result in penalties, which range from receiving an F on the assignment or examination to a more severe penalty to be pursued depending on the severity of the offence. All electronic devices (all phones, electronic devices (tablets), except a calculator, will not be allowed during examinations.
**Class Schedule:** This is a traditionally offered course with some aspects of blended instruction. Students are required to complete all reading assignments, homework, and quizzes during the scheduled time. Although the instructor will announce upcoming class activities and due dates, it is the students responsibility to keep track of submission dates for the class.

**IT 305 Course Timeline, Important Dates & Assignment Information for Spring 2014**

<table>
<thead>
<tr>
<th>Week</th>
<th>Course Dates</th>
<th>Chapters</th>
<th>Assignment Required</th>
<th>Assignment Due Dates (Due by midnight on Date indicated)</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>1/13/2014</td>
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<tr>
<td>2</td>
<td>1/14/2014</td>
<td>Chapter 1 &amp; 2</td>
<td>HW 1 &amp; 2</td>
<td>1/22/2014</td>
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<tr>
<td>3</td>
<td>1/21/2014</td>
<td>Chapter 2 &amp; 3</td>
<td>HW 3 &amp; 4</td>
<td>1/29/2014</td>
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<td>1/28/2014</td>
<td>Chapter 4 &amp; 5</td>
<td>HW 5</td>
<td>2/5/2014</td>
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<td>5</td>
<td>2/4/2014</td>
<td>Chapters 5 &amp; 6</td>
<td>HW 6</td>
<td>2/12/2014</td>
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<tr>
<td>6</td>
<td>2/11/2014</td>
<td>Chapters 6 &amp; Exam 1</td>
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<tr>
<td>7</td>
<td>2/18/2014</td>
<td>Chapter 7</td>
<td>HW 7 &amp; 8</td>
<td>2/26/2014</td>
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<tr>
<td>8</td>
<td>2/25/2014</td>
<td>Chapter 8</td>
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<td>10</td>
<td>Spring Break</td>
<td>Spring Break</td>
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<tr>
<td>11</td>
<td>3/18/2014</td>
<td>Chapters 10</td>
<td>HW 10</td>
<td>3/19/2014</td>
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<td>4/1/2014</td>
<td>Chapters 12</td>
<td>HW 12</td>
<td>4/2/2014</td>
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<td>14</td>
<td>4/8/2014</td>
<td>Exam 2 &amp; Chapter 13</td>
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<td>15</td>
<td>4/15/2014</td>
<td>Chapter 14 &amp; 15</td>
<td>HW 13 &amp; 14</td>
<td>4/16/2014</td>
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<tr>
<td>17</td>
<td>4/29/2014</td>
<td>Chapter 17 &amp; 18</td>
<td>HW 16,17,18</td>
<td>4/30/2014</td>
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<td></td>
<td>Finals Week</td>
<td>Finals Week</td>
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Note: Instructor reserves the right to modify this schedule due to unforeseen events or occurrences and will make every attempt to make adjustments in the best interest of all course participants.
Student Learning Objectives

At the end of the course, the student should be able to:

• Identify and define the provisions of the health and morals of apprentices act
• Identify the state with the 1st effective workers compensation law
• List government and non-government agencies responsible for safety
• List the primary reasons behind the passage of the OSHAct of 1970
• Describe the unions role pertaining to the fellow servant rule
• Name diseases suffered by workers attributed to coal mining
• Define accident and differentiate an accident from injury.
• Explain what is meant by the “3 E’s of Safety”
• List the 4 categories in which unintentional injuries are grouped
• Identify and explain the most widely known theories of accident causation
• List the most common cause of depression as it contributes to accidents
• Summarize management’s contributing role to the occurrence of accidents in the workplace
• Define work-relatedness when determining an injury's recordability on the OSHA 300 log
• List the requirements for the issuance of a temporary standard
• Construct 300A and 301 recordkeeping log from the 300 log
• Identify the responsible party for paying WC premiums
• Define the elements that affect the cost of workers compensation
• Differentiate between injury categories used to establish benefits for injured workers
• Define an employee under the provision of WC
• List methods used by companies to establish W.C. coverage
• Differentiate between CTD and Carpal Tunnel
• Identify the most frequently injured body part on the job
• Explain the significance of using anthropometric data when designing a workspace
• Define physiology
• Differentiate between OSHA compliance and safety.
• Identify both the direct cost of accidents and the larger but real indirect cost.
• List several CTDs
• Define stress
• List the 3 stages of stress response
• Explain the concept of “Difficult to reflect” used in machine guarding
• List common mechanical injury hazards
• Differentiate between the LO/TO standard 1910.147 and the machine guarding standard
• Explain when a tag out system is sufficient to be used to de-energize equipment
• List the types of energy sources that must be addressed and locked out
• List the kinds of falls
• Define coefficient and friction
• Demonstrate when fall protection (restraint system) must be used
• Demonstrate when guarding is needed to provide fall protection
• Define and explain the use of toe boards on platforms
• Differentiate between 1st, 2nd, 3rd, degree burns
• Classify the stages of heat stress
• List the elements that affect the rate and severity at which a person will burn
• List the 3 categories of heat transfer
• Define heat stress
• Define pressure
• Define hyperoxia and hypoxia
• Define dysbarism
• Identify Ohms Law
• Define electricity, insulator, conductor, grounding, bonding.
• Explain the operation of a GFCI
• Describe a typical over current device
• List the four main types of electrical injuries
• Define pyrolosis and vaporization, fire
• Explain the fire tetrahedron
• Differentiate between flash and fire point
• List the 4 classifications of fire
• Explain the use of the MSDS
• List the routes of entry by toxic material into the body
• Define industrial hygiene
• Outline the major components of the SARA or Right to Know
• Explain the purpose of HAZWOPER
• List the elements that effect the level of toxicity experienced by a person or animal
• Distinguish between a permit and non-permit required confined space
• Define threshold of hearing, sound, threshold of pain
• Explain the provisions of the Hearing Conversation Amendment
• List the hazards associated with noise in the industrial place
• Calculate TWAN for a specific industrial setting
• Calculate TWA for a specific industrial setting
• List the elements of emergency preparation
• List 4 major components of (SARA) Superfund Amendments and Reauthorization Act of 1986. Also know as the Emergency Planning and Community Right –to-Know Act.
Mobile Technology Policy

Netiquette: Please observe professional courtesy and etiquette at all times. Whether you are taking this as online course, there are still certain courtesies expected of you as a student. Please refer to the Top Five Rules of Netiquette in an Online Course prior to class.

SIU Email Policy
Official SIU Student Email Policy: http://policies.siu.edu/policies.email.htm