LSC Use Only No: LSC Action Date: UWGCC Use Only No: UWGCC Action Date:

Senate Action Date:

course proposal and for each

Principles of Safety I - General Industry

Current Course prefix, nu

Honors College Course Pan-African)

Program Title C Other

New Track

New Minor Program

Proposed program n Current program,

Chair(s)

Course Revision: SAFE 111 Principles of Safety I – General Industry

Part II. Description of the Curriculum Change

1. Syllabus of Record.

   The new syllabus of record for this revised course is attached in Appendix A.

2. A summary of the proposed revisions:

   a. Course name was changed to illustrate the focus on general industry.

   c. Course content was revised by adding coverage of walking and working surfaces, and hand and power tools and machine safety in with a unit on "Special Industry Machinery and

3. Justification/rationale for the revision.

The slight changes to this course were necessary because we are also revising SAFE 211 Principles of [redacted]

[redacted]

[redacted] has been responding to Alumni and our Advisory Committee suggestions that we cover construction [redacted]

SYLLABUS OF RECORD

I. Catalog Description

Course Title: SAFE 111 Principles of Safety I – General Industry
Prerequisites: SAFE 101

3 lecture hours
0 lab hours
3 credits
(3c-01-3cr)

Stresses an understanding of the complexity of the industrial hazard control problem by thoroughly examining elements of safety and health enumerated in the OSHA promulgated general industry standards and various consensus standards. Emphasis given to plant layout and design, powered industrial vehicles, boilers and unfired pressure vessels, working and walking surfaces, machine guarding, and an introduction to industrial processes.

II. Course Objectives

Students will be able to:

B. demonstrate competency in the legal aspects of safety by using the Occupational Safety and Health Administration (OSHA) standards to identify specific violations of current standards

D. Powered Industrial Vehicles (Week # 4-5)

[redacted]

4. Training of operators
5. Automatic guided vehicles

E. Boilers and Unfired Pressure Vessels (Week # 6)
1. Construction and installation
2. Inspection and maintenance

F. Walking and Working Surfaces (Week # 7)
1. Significance of exposure to employees and public
2. Slips and falls - coefficient of friction
3. [redacted]

IV. Evaluation Methods

The faculty person assigned to teach this course could be one of several faculty within the Safety Sciences Department. What follows is an example of the evaluation methods and weighting used by one of those faculty.

A. At least two examinations (60%)
All examinations will be announced and will be closed book except for the use of the Code of Federal

VIII. Special Resource Requirements

None

IX. Bibliography

Brauer, Roger L. Safety and Health for Engineers. New York: Van Nostrand Reinhold, 2006.

Appendix B Old Syllabus of Record

I. Catalog Description

Course Title: SAFE 111 Principles of Industrial Safety
Prerequisites: SAFE 101

3 credits
0 lab hours
3 semester hours

(3c-01-3sh)

Stresses an understanding of the complexity of the industrial hazard control problem by thoroughly examining elements of safety and health enumerated in the OSHA promulgated standards and various consensus standards. Emphasis given to plant layout and design, powered industrial vehicles, boilers and unfired pressure vessels, machine guarding, ratchet safety and an introduction to industrial processes.

II. Course Objectives

Students completing this course will be able to:

D. Powered Industrial Vehicles (6 Hours)
1. Classes of industrial trucks/vehicles
2. Safe operation of vehicles
3. Maintenance and inspection of vehicles
4. Training of operators
5. Automatic guided vehicles

F. Boilers and Unfired Pressure Vessels (3 Hours)
1. Construction and installation
2. Inspection and maintenance

F. General Requirements for Machine Guarding (4 Hours)
1. Point of operation guarding
2. Power transmission guarding
3. Administrative controls

G. Metal and Wood Working Machinery (6 Hours)
1. Grinders, shapers and sanding machines
2. Lathes and mills
3. Sawing machines
4. Drilling machines

H. Cold and Hot Forming Machinery (6 Hours)
1. Cold and hot metal process
2. Mechanical and hydraulic punch presses
3. Press brakes and shears
4. Forging hammers

I. Robotics Safety (4 Hours)
1. Types of robots
2. Uses for robots
3. Hazards associated with robots
4. Controls for robotics hazards

IV. Evaluation Methods

The faculty person assigned to teach this course could be one of several faculty within the Safety Sciences Department. What follows is an example of the evaluation methods and weighting used by one of those faculty.

The final grade in this class will be determined using a combination of the following:

A. At least two examinations (60%)

All examinations will be announced and will be closed book except for the use of the Code of Federal Regulations (29CFR 1910) during certain sections. Questions on exams will be short answer, multiple

C. Homework (15%)

[redacted]

identify hazards and possible control strategies.

2. Written chapter summaries from the text.

D. Individual and Group Projects (15%)

Projects will include [redacted] of industrial processes and the development of a crane inspection form.

[redacted]

VIII. General Course Outline

Unit 1 Occupational Safety and Health Standards (4 hours)

Students are familiarized with the current procedures for the development of OSHA standards including emergency and temporary standards, variances and appeal procedures. Enforcement methods are discussed in detail; inspections, penalties, imminent hazards and appeals. The student is introduced to Volume 29 of the Code of Federal Regulations via discussion of definitions, coverage, and the referencing of specific standards. The students are also introduced to consensus standards such as ANSI, NFPA, and FM.

Unit Objective

Students will demonstrate competency in using the OSHA and consensus standards by identifying specific standards violated via homework assignments and case studies. The student will also be able to identify the procedures for developing OSHA standards as well as enforcement methods.

Unit 2 Introduction to Industrial Processes (3 hours)

The students will be introduced to the most common processes used in industry. This will include

Unit 5 Boilers and Unfired Pressure Vessels (2 Hours)

The students are introduced to the basic operation of boilers and unfired pressure vessels. Laws covering construction, installation, inspection and maintenance are covered, with special emphasis on

Unit Objective: Students will be able to discuss the safety considerations involved in the construction, installation and maintenance of boilers and unfired pressure vessels.

Unit 6 General Requirements for Machine Guarding (4 Hours)

Important definitions for understanding machine guarding, such as point of operation (PO) and power transmission (PT) are discussed in detail. Students will be introduced to the common types of hazards associated with the PO and PT and will learn the variety of options available for safeguarding the PO

Unit 9 Robotics Safety (4 hours)

The student will be introduced to the types of industrial robots as well as their

common uses in industry. The basic components of industrial robots will be reviewed, along with a

Appendix C

Catalog Description

Course Title: SAFE 111 Principles of Safety I – General Industry
Prerequisites: SAFE 101

3 lecture hours
0 lab hours
3 credits
(3c-01-3cr)

[redacted]