



Catalog Description

SA 211 Principles of Industrial Safety II

(3c-31-4sh)

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Emphasis is placed on personal protective equipment, welding and cutting, walking and working surfaces, material handling, electrical safe work practices, and construction safety.

SYLLABUS OF RECORD

L Catalog Description

Prerequisites: SA111

3 lecture hours
3 lab hours
(3c-3l-4sh)

Stresses understanding the complexity of the industrial hazard control problem by thoroughly examining elements of safety and health enumerated in the OSHA-promulgated standards.

Emphasis is nlaced on personal protective equipment, welding and cutting walking and working

surfaces, material handling, electrical safe work practices, and construction safety.

IL. Course Objectives

Students completing this course will be able to:

- A. Identify the sources of safety standards such as OSHA and interpretations of those standards through the use of a computer database.
- B. Identify the need for programs to include personal protective equipment, its use, maintenance, and inspection.
- C. Demonstrate the knowledge of hazards for welding and cutting and their evaluation and control mechanisms.
- D. Define the selection methods for hazards and controls for the safe use of hand and

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G. Electrical Safety

(6 Hours)

- 1. Principles of electricity
- 2. Principles of electrical equipment
- 3. Electrical grounding as a safeguard
- 4. Electrical test equipment
- 5. Lockout/tagout procedures
- 6. Static electricity and it control

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H. Construction Safety

(8 Hours)

- 2. Trenching
- 3. Blasting
- 4. Tunneling
- 5. Steel erection
- 6. Electrical power transmission
- I. Special Industry Machinery and Processes

(2 Hours)

- 1. Special hazards of specialized equipment
- J. Laboratory Exercises

(42 Hours)

Exercises will be performed in a laboratory setting and are described below. A summary showing where these exercises fit into the course outline follows that description.

Introduction to laboratory equipment, methods of operation, and presentation of data and results.

Computer identification of standards and interpretations of standards

Needs assessment for Personal Protective Equipment (PPE); develop requirements for Safety Lab, including welding

Inspection of gas and electric welding operation; development of Hot Work Permit procedure

Determine the slip hazards by determining frictions on walking surfaces; use of slipometer

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	equipment in the Safety Lab must be locked out or tagged out and describe the devices to do such; prepare a lockout/tagout procedure for the lab.
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t.	equipment and perform a test on a series of samples: determine the sloping required for
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	a given trench conditions. Become familiar with a number of fall protection devices as
	used on a series of elevations and working surfaces; determine their advantages and/or
	shortcomings, and develop a fall protection plan.

		Quizzes will be similar in format to the examinations; however, they may not be announced. Quizzes will emphasize readings from the texts, CFR's, handouts, and current notes.
	C.	Homework (15%) Homework may include the following: 1. Industrial scenarios which require the use of OSHA, ANSI, etc. standards to identify hazards and possible control strategies. 2. Written chapter summaries from the text. 3. Individual and grown projects involving one studies of industrial suppose.
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-		4. Other problems requiring the use of material covered.
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B.

Quizzes (10%)

- Levitt, Raymond and Semelson, Nancy. <u>Construction Safety Management.</u> Second Edition. New York: McGraw-Hill, 1993.
- MacCollum, D.V. <u>Crane Hazards and Their Prevention</u>. Des Plaines, IL.: American Society of Safety Engineers, 1993.
- Laing, Patricia, M. Editor. <u>Accident Prevention Manual for Business & Industry-Administration and Programs</u>. 11 Edition. Chicago: National Safety Council, 1996.

Course Revision: SA 211 Principles of Industrial Safety II

Part II. Description of the Curriculum Change

- 1. The new syllabus of record for this course is attached.
- 2. What follows is a summary of the proposed changes to SA 211:

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previous content to be covered in other courses.

B. A 3 hour laboratory has been added to the class.

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Part III. Letters of Support



SYLLABUS OF RECORD

I. Catalog Description

· ·	SA-211 Principles of Industrial Safety 3c-01-3sh
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<i>:</i>	
<u></u>	Stresses understanding the complexity of the industrial hazard control problem by thoroughly examining elements of safety and health enumerated in the OSEA-promulgated standards. Emphasis on welding and cutting operations
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Edition, National Safety Council, Chicago, 1992. Taythock. Code of Federal Domilations 29-Dayte 1001 1 1910.999 (Volume 1), U.S. Government Printing

VI. Special Resources Required

None

VII. Bibliography

Asfahl, Ray C. Industrial Safety & Health Management 2nd