

# OCCUPATIONAL AND ENVIRONMENTAL SAFETY & HEALTH (SAFETY)

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## Courses

### SAFETY 201 PERSONAL AND PUBLIC SAFETY 3 Units

Presents a systematic account of the foundations of safety to students with little previous knowledge of the subject. It presents the accident problem, philosophical implications, concepts of accident causation and countermeasures, and an overview of specific areas of safety concern: fire, water safety, traffic, disasters, etc.

### SAFETY 210 INTRODUCTION TO OCCUPATIONAL SAFETY & HEALTH 3 Units

Students will review case studies of historical events, investigate professional OSH organizations, and learn to utilize OSH regulatory and consensus standards websites as an introduction to the basic practice of hazard identification and assessment, control strategies, and basic safety program development.

### SAFETY 220 PRINCIPLES OF ENVIRONMENTAL MANAGEMENT 3 Units

This course addresses the U.S. Environmental Protection Agency and Wisconsin Department of Natural Resources regulations and the related management responsibilities of safety, environmental and/or business professionals to ensure compliance with environmental requirements. Areas to be covered: compliance, management systems, managing emissions, waste, discharges, spills and remediation, environmental audits and site assessments, sustainability, ethics, etc.

### SAFETY 250 BEHAVIORAL ASPECTS OF ACCIDENT PREVENTION 3 Units

Selected theories of accident causation and countermeasures are studied. Examination of physiological, medical, psychological, and sociological factors which influence behavior, and methods for modifying unsafe behavior.

PREREQ: MINIMUM SOPHOMORE STANDING OR INSTRUCTOR CONSENT

### SAFETY 255 ALCOHOL AND OTHER DRUGS 3 Units

An investigation into the physiological, psychological and sociological problems presented by the use of alcohol and other drugs. Prevention and treatment programs will be examined. Other areas of study will include alcohol and traffic safety, alcohol and other drugs education and employee assistance programs.

### SAFETY 353 FUNDAMENTALS OF ENVIRONMENTAL LAW 3 Units

An examination of federal and state laws with judicial and regulatory interpretations having application to the management of the occupational and environmental safety and health responsibilities of private sector firms in the United States.

### SAFETY 368 ERGONOMICS 3 Units

Study of human capabilities and limitations (physical, perceptual and cognitive) as the basis for improving human interactions with products, workstations and jobs. Review of human anatomical, physiological, perceptual and psychomotor characteristics applied to human-machine systems to enhance worker comfort, safety, health and productivity.

### SAFETY 382 CONSTRUCTION SAFETY 3 Units

This course examines the practices and safety-related problems found in the construction industry. Construction methods and materials issues that impact construction safety programs are examined. Students will be introduced to specific construction safety hazards and countermeasures for correction through lectures and field experiences (or videos). Administrative and organizational issues that impact construction safety programs are examined. The course provides an overview of applicable OSHA standards (29 CFR 1926).

### SAFETY 383 EMERGENCY MANAGEMENT AND SECURITY 3 Units

A comprehensive overview of the discipline of Emergency Management and Security. Key components and processes of disaster preparedness, response, recovery, and mitigation, with specific attention to the physical, personnel, and informational aspects of security will be covered. Concepts of these areas will be integrated with safety management concepts and discussed in relation to industrial and business environments.

### SAFETY 384 CONSTRUCTION SAFETY STANDARDS AND APPLICATIONS 3 Units

A combination of principles and practices designed to provide a basis for understanding the nature of accident prevention, health preservation and loss reduction in construction operations. The topics to be examined include federal safety and health regulations, techniques of hazard control, strategies for minimizing injuries and losses, and sources of assistance in resolving safety and health problems.

PREREQ: SAFETY 382 OR INSTRUCTOR CONSENT

### SAFETY 388 OCCUPATIONAL SAFETY & HEALTH STANDARDS AND APPLICATIONS 3 Units

This course is designed to provide the student with a comprehensive understanding of occupational safety and health standards and their application for the management of workplace injury prevention and health promotion. Topics to be examined include federal regulations and their interpretations and accident investigation methodologies.

PREREQ: SAFETY 210

### SAFETY 389 HAZARDOUS MATERIALS MANAGEMENT 3 Units

This course provides a framework for understanding the nature of hazardous materials and how the risks from such materials may be reduced. The focus is on the properties and characteristics of hazardous materials and the life cycle of hazardous materials (manufacturing/importing, use, storage, transportation, disposal and remediation); emphasizing hazardous material minimization and the best practices of using and handling hazardous materials based on their properties and characteristics.

PREREQ: CHEM 102 OR CHEM 115 OR CHE 145 OR (UWX CH140 AND UWX CH144) OR INSTRUCTOR CONSENT

### SAFETY 479 PRINCIPLES AND METHODS OF INDUSTRIAL HYGIENE 5 Units

An introduction to the science and art of anticipating, recognizing, evaluating, and controlling the chemical, physical, and biological agents that affect the health and safety of workers. The laboratory provides working knowledge and hands-on experience with equipment for recognizing, analyzing, and evaluating occupational health hazards in industry.

PREREQ: (CHEM 102 OR CHEM 115 OR CHE 145 OR (UWX CH140 AND UWX CH144)) AND 2.50 MAJOR GPA

**SAFETY 481 ANALYSIS AND DESIGN FOR SAFETY IN INDUSTRIAL OPERATIONS 3 Units**

The course reviews interpretations and applications of occupational safety and health standards. Emphasis is placed on local, state, federal and trade standards to numerous applications including materials handling, machine guarding, metalworking, electrical hazards, and flammable liquids. Class visitations to selected industries will be scheduled to assist students in understanding industrial and plant processes and to recognize potential hazards.

PREREQ: SAFETY 388 AND SAFETY 368 AND 2.50 SAFETY MAJOR  
GPA COREQ: PRIOR COMPLETION OR CONCURRENT ENROLLMENT IN SAFETY 479

**SAFETY 483 OCCUPATIONAL SAFETY MANAGEMENT 3 Units**

Emphasis will be on the organizational and administrative problems that relate to risk assessments, occupational accidents, worker compensation management, safety committees and employee safety training programs. The course is designed for students majoring in the business related areas and future safety professionals who desire to develop an understanding of these management problems as well as applicable solutions.

PREREQ: (SAFETY 388 AND (ECON 245 OR STAT 230) AND 2.5 SAFETY MAJOR GPA) OR INSTRUCTOR CONSENT

**SAFETY 485 FIRE PROTECTION/PREVENTION 3 Units**

Control of fire through study of building construction to prevent fire spread, occupancy-hazard relationships, exposure to and from adjacent occupancies, lifesaving aspects, and the development of professional knowledge of flammable gases, liquids, combustible solids, dusts, chemicals, and explosives. Interpretation of appropriate codes will be covered.

PREREQ: CHEM 102 OR CHEM 115 OR CHE 145 OR (UWX CH140 AND UWX CH144) OR INSTRUCTOR CONSENT

**SAFETY 487 PRODUCT SAFETY 3 Units**

An analysis of the trends of the product liability problem and the agencies regulating products. Special emphasis will be given to legal theories related to product liability and landmark litigation providing the basis for case law. A substantial portion of the course will be devoted to examining the elements of product safety programming.

PREREQ: SAFETY 210 OR INSTRUCTOR CONSENT

**SAFETY 490 WORKSHOP Repeatable 1-6 Units**

Variable topics. Group activity oriented presentations emphasizing 'hands on' and participatory instructional techniques.

**SAFETY 491 TRAVEL STUDY Repeatable 3 Units**

Variable topics. Faculty-led courses abroad.

**SAFETY 492 FIELDWORK INTERNSHIP IN SAFETY 12 Units**

Offered on a satisfactory/no credit grade basis only. Students are required to secure their own internships. Hosting organizations must have a safety supervisor on-site, and the majority of internship activities be safety-related. Internships need to be pre-approved by the OESH coordinator. Students will be supervised by the organization's safety manager and an OESH instructor. Interns will document their field experiences.

PREREQ: CONSENT OF COORDINATOR OF FIELD EXPERIENCES, SUCCESSFUL COMPLETION OF ALL DEGREE COURSEWORK WITH A MAJOR GPA OF 2.50 OR HIGHER.

**SAFETY 496 SPECIAL STUDIES Repeatable 1-3 Units**

A course which offers study in special topics in safety which are not regularly included in the curriculum.

**SAFETY 497 EXCHANGE STUDY Repeatable 1-12 Units**

Variable topics

**SAFETY 498 INDEPENDENT STUDY Repeatable 1-3 Units**

Study of a selected topic or topics under the direction of a faculty member. May be taken for a maximum of 3 units in major/degree.

PREREQ: CONSENT OF INSTRUCTOR AND JUNIOR STATUS AND OCCUPATIONAL SAFETY MAJOR OR MINOR