Fundamentals of Safety, Health, Environmental Issues (G3)
Introduction to safety, health and environmental issues that impact people and workplaces. Includes the historical development of safety, the impact of accidents on society, a legislative overview and basic principles of personal risk assessment and management.

OSEN 179: 3 s.h.
Experimental

OSEN 220: 3 s.h.
Legal Aspects Environmental Safety
Legal issues relative to occupational safety and environmental health. Includes federal and state legislation, resolution of legal and ethical challenges, product safety and professional liability.

OSEN 221: 3 s.h.
Industrial Fire Prevention, Protection and Control
Basic principles, chemistry of fire, fire hazards determination, workforce notification, alarm and sprinkler systems, protective equipment, evacuation procedures and fire fighting methods.

OSEN 221H: 3 s.h.
Hon: Fire Prevention

OSEN 222: 3 s.h.
Construction Safety
Methodology for the anticipation, recognition, evaluation and control of safety and health hazards associated with construction industries. Topics include engineering principles and risks associated with multiple types of facilities and infrastructures. Prereq: OSEN 120

OSEN 279: 3 s.h.
Experimental

OSEN 300: 3-12 s.h.
Co-Op Ed Experience in OSEN
Co-Op Ed Experience in OSEN

OSEN 320: 3 s.h.
Safety Engineering Principles
Methods for the identification and analysis of industrial hazards. Emphasis on application of basic safety engineering principles for the control of losses in an industrial environment. Prereq: OSEN 120.

OSEN 321: 4 s.h.
Environmental & Industrial Hygiene I - Chemical and Biological Hazards
Course covers the anticipation, recognition, evaluation, and control of chemical and biological hazards in the workplace. Topics include: toxicology, gases, vapors, solvents, particulate matters, respiratory protection, fit testing, air sampling protocols and strategies, microbial and biological hazards, and government regulations. The challenging concerns of health hazards related to nano size particles in the workplace is addressed. Prereq: OSEN 120, CHEM 104, MATH 101 or Math 151 or Math 160 or Math 161, or permission of instructor.

OSEN 323: 3 s.h.
Human Factors in OSEN
Ergonomic study of interaction between people and their work. Emphasis on the application of biological sciences to engineering principles in an effort to optimize efficiency, productivity and safety. Topics include anthropometrics, biomechanics, design principles, physiological and cognitive capabilities and task-evaluation techniques. Prereq: OSEN 120 or permission of instructor.

OSEN 333: 3 s.h.
Introduction to System Safety
Qualitative and quantitative system safety methods used to analyze and control risk. Includes a variety of analytical engineering techniques that are applied to practical system-analysis problems. Prereq: OSEN 320 and MATH 130.

OSEN 379: 3 s.h.
Experimental

OSEN 400: 3-12 s.h.
Co-Op Ed Experience in OSEN
Co-Op Ed Experience in OSEN

OSEN 410: 3 s.h.
Safety and Hygiene Management
Principles and practices of occupational safety and environmental health management. Includes the development of safety objectives and policy, evaluation and management of risk, and program implementation and evaluation. Offered annually. Prereq: OSEN 220 and 320 or permission of instructor.

OSEN 422: 4 s.h.
Environmental & Industrial Health II - Physical Hazards
Fundamental theory and methods used in the anticipation, recognition, evaluation and control of the physical hazards of noise, ionizing/ nonionizing radiation, illumination, thermal stress, local exhaust ventilation, and dilution ventilation. Covers regulatory standards and control methods. Prereq: OSEN 120, MATH 101 or 151 or 160 or 161 and PHYS 103 or 104 or 131, or permission of instructor.

OSEN 430: 1 s.h.
Topics in Occupational Safety & Environmental Health
A review of industry specific hazards and operations related to Occupational Safety and Environmental Health. Topics vary according to the needs and interest of students involved. The course is intended to build on basic safety management concepts and an understanding of how these concepts are applied in specific sectors. Challenges and specific regulatory requirements, which may be unique to the business sectors covered, will be included. Emphasis is placed on leadership and mentorship of OSEN students. Reserved for Senior OSEN majors or by instructor permission.

OSEN 435: 3 s.h.
Environmental Health
Environmental health review of scientific and technical foundations, with an examination of problems, regulations and control strategies. Covers identification of pollution sources, evaluation strategies, engineering controls, federal and state regulatory and permitting processes. Emphasis is on practical information needed by environmental health professionals to resolve issues affecting industry. Prereq: OSEN 321 or ENVI 330 or permission of instructor.
OSEH 440: 6,12 s.h.
Internship
Students work full-time for nine weeks or more under the direct supervision of an OSEH professional in industry, insurance, government agencies or other approved location. University supervision, seminars and evaluation are provided. Students experience problems, practices and principles in the management of occupational safety and/or industrial hygiene programs. To be taken twice, concurrently or consecutively, with increased work and research responsibilities. Prereq: senior OSEH majors and permission of OSEH coordinator.

OSEH 479: 1-6 s.h.
Experimental

OSEH 489: 1-4 s.h.
Honors Course
Preparation of honors thesis proposal. For the definition of honors course and student eligibility, refer to the departmental honors section of this catalog. EDTE, AETM and OSEH majors may enroll in the Department of Applied Engineering, Safety & Technology honors program. Contact the department office for guidelines and an application.

OSEH 499: 1-3 s.h.
Departmental Honors