

# SAFETY STUDIES (SAFE)

## SAFE-110 Applied Safety Science (4 Credits)

Introductory course for SOHAS students to learn basic skills, preparing them for future SOHAS courses including calculations and exercises such as concentrations of airborne contaminants, pressures in vessels, explosion and combustion hazards, and selection of proper protective equipment. All examples and exercises will be based on real-life safety situations. Students are encouraged to take MATH-120 as their IQL course.

**Offered:** All, Every Year

## SAFE-200 Safety Internship (2-8 Credits)

Career related work learning experience. Placement arranged, supervised and evaluated by Safety faculty. Elective credit only (cannot be applied to credits in the Major) maximum Internship credits 16 hours per degree program. Minimum twelve weeks per semester required. (120 hours, 2 credits) (240 hours, 4 credits) (360 hours, 6 credits) (480 hours, 8 credits). Graded Pass/Fail.

**Prerequisite(s):** 16 SAFE credits earned, 2.0 cumulative GPA, and permission of instructor

**Offered:** All, Every Year

## SAFE-202 Occupational Safety (4 Credits)

The application of scientific and engineering principles to the analysis of processes, equipment products, facilities and environments in order to optimize safety and health effectiveness. Topics include legislative overview, problem identification, control concepts, and basic engineering principles, including a review of basic geometry and mathematical calculations and conversion factors.

**Prerequisite(s):** Take ISSAFE-101

**Offered:** All, Every Year

## SAFE-205 Construction Methods (4 Credits)

This course provides a basic understanding of construction methods, processes, equipment and project management tools. It explores their use and impact on risk management in construction.

**Prerequisite(s):** CMGT and CSS majors and minors only

**Offered:** Spring, Every Year

## SAFE-208 Construction Boot Camp I (4 Credits)

Utilizing subject matter experts/OSHA instructors, this course explores a series of subjects and most frequent causes of accidents and fatalities on construction sites. Topics include: electrical safety, excavation/trenching, confined space hazards, incident investigation. Course meets for 2 weeks synchronously with remainder of work online through summer.

**Prerequisite(s):** CSS majors and minors only

**Offered:** Summer, Every Year

## SAFE-209 Construction Boot Camp II (4 Credits)

Utilizing subject matter experts/OSHA instructors, this course explores a series of subjects and most frequent causes of accidents and fatalities on construction sites. Topics include: electrical safety, excavation/trenching, confined space hazards, incident investigation. Course meets for 2 weeks in the classroom with remainder of work online through summer.

**Prerequisite(s):** CSS majors and minors only

**Offered:** Summer, Every Year

## SAFE-210 Construction Internship 1 (4 Credits)

Internship I serves as the first opportunity to gain professional experience in the construction safety field. Students will attain program learning objectives through hands-on application of classroom theory, collaboration with professionals and mentors in the field as well as faculty on campus. This internship is 200 hours of on-site work.

**Prerequisite(s):** Permission of internship program coordinator, CSS majors only and SAFE-202, SAFE-205, SAFE-206

**Offered:** Summer, Every Year

## SAFE-215 Human Factors in Safety (4 Credits)

This course will provide students with the understanding of the importance of ergonomic design and evaluation of workplaces and the work environment to enable the student to understand physiological and psychological stresses, human capabilities and limitations, and their importance in designing work spaces, processes, tools, equipment and products.

**Prerequisite(s):** SAFE-202 or IISPD-151, Must be Safety, Construction Safety or Sustainable Product Innovation and Design major or Healthcare Safety Minor

**Offered:** All, Every Year

## SAFE-216 Safety Standards & Regulations (4 Credits)

Occupational Safety & Health Administration General Industry and Construction standards will form the basis of this course. Through the study of OSHA regulations, hazard identification, and methods of abatement, students will be prepared to assist employers in their efforts to manage a safety program and comply with the law.

**Prerequisite(s):** SAFE-202 or permission of instructor

**Offered:** All, Every Year

## SAFE-222 Introduction to Traffic Safety (3 Credits)

Elements that compose driving and the highway transportation system. Emphasis on human performance, traffic engineering, and related research. For educators and those whose responsibilities include motor fleet safety. Due to the extensive content, students can expect considerable out of class assignments. Additional driving time will be scheduled with the instructor

**Prerequisite(s):** State of NH Driver Education Teacher certification requires driver license possession for five consecutive years, high school diploma or GED; valid operators license and acceptable driving record

## SAFE-290 Topics in Safety (1-4 Credits)

Study of a selected topic in the Safety Studies program. May be repeated as topics change.

**Prerequisite(s):** Vary as topics change

**Offered:** All, Every Year

## SAFE-298 Independent Study (1-4 Credits)

An opportunity for a qualified student to explore work in an area of individual interest, in Safety, selected and pursued in consultation with a faculty member. Consent is required from the instructor who will supervise the independent study. Repeatable to a total of 4 credits.

## SAFE-301 Risk Management (4 Credits)

Introduces key Risk Management and Loss Prevention principles through exploration of allied consensus standards including OSHA's Voluntary Protection Program, OHSAS 18001 Safety Management System, LEAN Management and Environmental Management Systems ISO 14001.

**Prerequisite(s):** SOHAS or Construction Safety Majors or Minors only

**Offered:** All, Every Year

**SAFE-305 Health Hazard Identification (4 Credits)**

Reviews health hazards in industry and their effects on humans. Study of hazards involved with chemical, physical and biological stressors at work. Explores methods of hazard identification recognition and control.

**Prerequisite(s):** SOHAS or CSS major or minor

**Offered:** All, Every Year

**SAFE-306 Systems & Behavioral Sciences (4 Credits)**

The course will cover past, current and new innovations that have been used through the history of occupational safety and health systems. Topics that students can expect to cover may include Behavioral Sciences, Human Performance, Organizational Performance, Serious Injury and Fatality Research, Safety Differently, Emerging Technologies and more.

**Prerequisite(s):** 20 credits in SOHAS

**Offered:** All, Every Year

**SAFE-307 Safety Management Systems (4 Credits)**

Examination of principles underlying management of organizational activities in accordance with occupational health and safety systems. Emphasizes ANSI Z10 standard. Explores ethical leadership, psychology, training, communication, metrics, human resources, cost benefit analysis, and project management. (Membership in the American Society of Safety Engineers required.)

**Prerequisite(s):** SAFE-206 or SAFE-216

**Offered:** All, Even Years

**SAFE-308 Construction Safety Practices (4 Credits)**

An overview of best safety practices in the construction industry through course work and guest presentations by national professional experts in construction safety. A systematic approach to occupational safety and health management systems into the organizational structure and operations of construction companies will be examined.

**Prerequisite(s):** Take SAFE-206 or SAFE-216

**Offered:** Fall, Every Year

**SAFE-309 Construction Emergency Action Plans (4 Credits)**

Emergency Action Plans (EAP) are required by construction sites. Effective EAP requires pre-planning, analysis, and preparation for on site emergencies such as medical, fire, chemical spill, and communications. This course surveys applicable regulations and best practices including incident prevention, training, regulatory requirements, emergency procedures and response in the construction environment.

**Prerequisite(s):** SOHAS and CSS majors or minors only, or permission of instructor

**Offered:** Spring, Every Year

**SAFE-311 Safety and Environmental Law (4 Credits)**

Introduction to federal and state authorities and laws governing safety in industry and the environment. Develops an understanding of the system of laws/regulations that protect the environment, human health, and natural resources. Discusses ethical dilemmas, professional responsibilities, and liability and legal ramifications of accidents, spills, and releases. Offering: Fall and Spring.

**Prerequisite(s):** SAFE 216

**Offered:** All, Every Year

**SAFE-317 Construction Health Hazards (4 Credits)**

Examination of chemical hazards and introduction to physical health hazards that fall under the occupational health discipline. Covers industrial hygiene concepts related to electricity, radiation, noise, climate conditions, illumination, vibration, and noise. Principles of anticipation, recognition, evaluation, and control as applied to the unique exposure scenarios in construction are emphasized.

**Prerequisite(s):** SAFE-202 and either MATH-120 or INPHYS-131

**SAFE-319 Fire & Hazmat Response (4 Credits)**

An overview of the National Fire Protection Association Codes which apply to occupational exposures. The safe handling, storage, and use of hazardous materials for industrial, commercial, transportation, and public service operations are covered in detail. Fire and accident prevention measures, training, regulatory requirements, emergency procedures and response are studied.

**Prerequisite(s):** SOHAS or CJS Major or Minor

**Offered:** All, Every Year

**SAFE-329 Safety Training Methods (4 Credits)**

Safety Training Methods seeks to prepare future safety leaders in the workplace. The course will focus on training and education methods, via adult learning theory and techniques, as well as communication skills, such as negotiation skills and conflict resolution, and group/organizational dynamics.

**Prerequisite(s):** SAFE-306 and SAFE-216 or SAFE-206

**Offered:** All, Every Year

**SAFE-333 Driver Education Methods (3 Credits)**

Professional preparation to meet the traffic and safety needs of schools and communities. Focus on methods of classroom and laboratory teaching. State and national standards are recommended for teaching driver and traffic safety education. (Includes laboratory experience.) Students can expect considerable out of class assignments.

**Prerequisite(s):** State of NH Driver Education Teacher certification requires driver license possession for five consecutive years, high school diploma or GED; valid operators license and acceptable driving record; access to Internet and email; and successful completion of SAFE-222

**SAFE-400 Advanced Safety Internship (2-8 Credits)**

Sequential work learning experience related to career interests. Compensation may be received. Placements arranged, supervised and evaluated by full time Safety faculty. Open elective credit only (cannot be applied to elective credits in the Major) (Maximum Intern credits 12 hours per degree program) (120 hours, 2 credits) (240 hours, 4 credits) (360 hours, 6 credits)(480 hours, 8 credits) Graded Pass/Fail.

**Prerequisite(s):** Declaration of major, junior standing 32 credit hours in the major, 2.5 cumulative GPA, and permission of instructor

**Offered:** All, Every Year

**SAFE-401 Industrial Hygiene (4 Credits)**

This course will familiarize students with the various techniques and procedures involved in the practice of the profession of Industrial Hygiene. Course work and laboratory exercises illustrate the equipment and methodologies commonly used by Industrial Hygienists in the anticipation, recognition, evaluation, and control of occupational health hazards in today's workplace.

**Prerequisite(s):** SAFE-305 and SAFE-216 or SAFE-206

**Offered:** All, Every Year

**SAFE-402 Critical Incident Response (4 Credits)**

The emergency planning process includes planning, preparing, responding and recovering from an emergency. This course will introduce the key activities in the emergency planning process such as; vulnerability analysis, incident command and asset protection.

**Prerequisite(s):** SAFE-319 and SAFE 216 or SAFE-206

**Offered:** Spring, Every Year

**SAFE-403 Construction Industrial Hygiene (4 Credits)**

Familiarizes students with the various techniques and procedures involved in the practice of the profession of industrial hygiene as related to the construction environment. Laboratory exercises will illustrate the equipment and methodologies commonly used by industrial hygienists in the recognition and control of occupational health hazards in today's construction worksite.

**Prerequisite(s):** INSAFE-213, SAFE-305, CSS majors or minors only, or permission of the instructor

**Offered:** Spring, Every Year

**SAFE-408 Construction Safety Practices 2 (4 Credits)**

Students will engage in activities involving leadership, problem solving, critical thinking, high pressure situations, public speaking, and conflict resolution. The course will encourage safety leadership practices through Virtual, Immersive and Augmented reality tools. Discussion and simulation on topics relating construction safety management, contractor and sub-contractor conflict, teamwork, organizational behavior.

**Prerequisite(s):** SAFE-216, SAFE-307, and SAFE-308

**SAFE-410 Construction Internship 2 (4 Credits)**

The course builds on SAFE 210, providing an increased contributory role for the student in applying safety and health concepts on a construction worksite. This internship is 200 hours of construction on-site safety work, typically over a 5 to 6 week period.

**Prerequisite(s):** Permission of internship program coordinator, Take SAFE-210, SAFE-302, SAFE-307, SAFE-309, and CSS majors only

**Offered:** Summer, Every Year

**SAFE-411 Physical Health Hazards (4 Credits)**

This course builds on SAFE-305 and SAFE-401 by focusing on physical health hazards in the workplace (i.e. noise, heat & cold stress as well as ionizing and non-ionizing radiation). Course and laboratory work illustrate the equipment and methodologies used in the evaluation and control of these health hazards.

**Prerequisite(s):** SAFE-305, SOHAS majors/minors only

**SAFE-420 Safety Research Methods (4 Credits)**

Familiarizes students with strategies for identifying, analyzing, and evaluating safety research. Examines advanced concepts in qualitative and quantitative analysis techniques commonly used in safety research. Explores research design in preparation for a culminating safety project.

**Prerequisite(s):** SAFE-329 and SAFE-401, and senior standing

**Offered:** All, Every Year

**SAFE-444 In Vehicle Driver Ed Methods (3 Credits)**

Examines methods for delivering a sequential in vehicle phase of a driver education program to novice drivers. Includes program organization, route and lesson design, instructional delivery, and assessment of behind the wheel lessons in a dual controlled vehicle. Requires in vehicle demonstrations by staff and students. Students can expect considerable out of class assignments.

**Prerequisite(s):** State of NH Driver Education Teacher certification requires driver license possession for five consecutive years, high school diploma or GED; valid operators license and acceptable driving record; successful completion of Introduction to Classroom Safety SAFE-222 and Driver Education Methods SAFE-333

**SAFE-490 Special Topics in Safety (1-4 Credits)**

Study of a selected topic in the Safety program at an advanced level. May be repeated as topics change.

**Prerequisite(s):** Vary as topics change

**Offered:** All, Every Year

**SAFE-491 Honors Research (4-8 Credits)**

Participation in ongoing programmatic research in the Safety Honors Program. Graded Pass/Fail. May be repeated up to a total of 8 credits.

**Prerequisite(s):** Admission to the Safety Honors Program

**SAFE-495 Safety Seminar (1-4 Credits)**

Group discussion of problems and issues in Occupational Safety and Health. May be repeated as topics change.

**Prerequisite(s):** Vary as topics change

**Offered:** All, Every Year

**SAFE-497 Innovative Safety Leadership (4 Credits)**

Instructional and administrative aspects of comprehensive safety programs. Analysis of personal and environmental safety factors in real world application based settings. Emphasizes the application of classroom and field experiences accumulated during completion of prerequisite coursework.

**Prerequisite(s):** SAFE-420

**Offered:** All, Every Year

**SAFE-498 Independent Study (1-4 Credits)**

Advanced independent study of various fields of Safety through independent reading, writing, laboratory work, or field investigation. Requires a written report. May be repeated for a total of 4 credits.

**Prerequisite(s):** Permission of instructor