# Occupational Safety & Health (OSH)

## Courses

### OSH A101 Introduction to Occupational Safety and Health 3 Credits
Introduces regulatory, consensus and industrial standards applicable to the occupational safety and health profession. Examines the role of the safety professional and the philosophy of incident prevention in the workplace.

**Prerequisites:** WRTG A110 with a minimum grade of C or (Accuplacer-Reading Comp with a score of 080 and Accuplacer-Sentence Skills with a score of 090) or Accuplacer-Sum AASS + AARC with a score of 170 or SAT Critical Reading Score with a score of 530 or SAT Verbal Score with a score of 530 or Enhanced ACT English with a score of 22 or ACT English with a score of 22.

### OSH A108 Injury Prevention and Risk Management 3 Credits
Identifies safety, health and risk management, and incident prevention in the workplace. Emphasizes regulatory compliance. Examines workplace ergonomics, emphasizing types and sources of physiological stressors and their mitigation.

**Prerequisites:** (WRTG A111 with a minimum grade of C or WRTG A1W with a minimum grade of C) and (MATH A105 with a minimum grade of C or Accuplacer-Coll/Lvl Math with a score of 050) and OSH A101 with a minimum grade of C.

### OSH A111 Occupational Safety Training Needs and Methods 3 Credits
Introduces safety and health training needs in the workplace and includes development of training materials to conduct training sessions for diverse audiences. Emphasizes regulatory compliance.

**Prerequisites:** (WRTG A111 with a minimum grade of C or WRTG A1W with a minimum grade of C) and (MATH A105 with a minimum grade of C or Accuplacer-Coll/Lvl Math with a score of 050) and OSH A101 with a minimum grade of C.

### OSH A112 Introduction to Occupational Epidemiology 3 Credits
Introduces the principles of epidemiology and how they pertain to injury prevention. Stresses the collection of data, principles of injury prevention, and data evaluation.

**Prerequisites:** (MATH A105 with a minimum grade of C or MATH A151 with a minimum grade of C or MATH A152 with a minimum grade of C) and OSH A108 with a minimum grade of C and OSH A101 with a minimum grade of C.

### OSH A120 Safety Program Management and Recordkeeping 3 Credits
Discusses the role of safety in business and government. Emphasizes the philosophy of safety and health efforts by management. Examines the role of the safety professional, the types of safety management systems utilized in the workplace, and the techniques used for accurate recordkeeping.

**Prerequisites:** OSH A101 with a minimum grade of C and (MATH A105 with a minimum grade of C or Accuplacer-Coll/Lvl Math with a score of 050).

### OSH A160 Fundamentals of Industrial Hygiene 3 Credits
Provides a basic understanding of industrial hygiene. Focuses on introducing students to concepts, terminology, methodology and the roles of industrial hygienists.

**Prerequisites:** MATH A151 with a minimum grade of C and OSH A108 with a minimum grade of C.

### OSH A180 Introduction to Industrial Hygiene 4 Credits
Identifies acute and chronic health effects of exposures to chemical, physical, and biological agents in the workplace. Emphasizes types of exposures and biological effects, exposure guidelines, and basic workplace monitoring.

**Prerequisites:** (MATH A105 with a minimum grade of C or concurrent enrollment or MATH A151 with a minimum grade of C or concurrent enrollment or MATH A152 with a minimum grade of C or concurrent enrollment or MATH A155 with a minimum grade of C or concurrent enrollment) and OSH A101 with a minimum grade of C.

### OSH A201 Hazard Control: Inspections, Audits and Investigations 3 Credits
Covers assessment and evaluation of workplace hazards through inspections, audits and incident investigations. Includes practical applications and special emphasis on conducting incident investigations.

**Prerequisites:** OSH A108 with a minimum grade of C.

### OSH A211 Safety Management Systems 4 Credits
Examines the role of safety programs in the workplace. Emphasizes safety program standards, assessment, design, development, implementation and evaluation.

**Prerequisites:** WRTG A212 with a minimum grade of C and OSH A201 with a minimum grade of C.

### OSH A215 Environmental Issues for Safety and Health Professionals 3 Credits
Analyzes and interprets requirements for preventing air, surface water, ground water and soil contamination from industrial operations. Places special emphasis on petrochemical contamination of arctic lands and waters. Familiarizes occupational safety and health students with environmental regulations and requirements.

**Prerequisites:** OSH A108 with a minimum grade of C.

### OSH A230 Principles of Ergonomics 3 Credits
Examines workplace ergonomics, emphasizing types and sources of physiological stressors and their mitigation.

**Prerequisites:** BIOL A100 with a minimum grade of C or BIOL A102 with a minimum grade of C or BIOL A111 with a minimum grade of C.

### OSH A240 Workplace Monitoring: Instrumentation and Calibration 3 Credits
Examines the equipment used in performing measurements of environmental factors in the workplace, including noise, lighting, vibration, chemicals and heat stress. Emphasizes equipment types, applications and calibration. Evaluates environmental factors found in Alaska workplaces.

**Prerequisites:** OSH A108 with a minimum grade of C.

### OSH A250 Hazardous Materials Operations 3 Credits
Identifies the policies, procedures and equipment needed to manage hazardous materials emergency response and cleanup.

**Prerequisites:** OSH A108 with a minimum grade of C.
OSH A290 Selected Topics in Occupational Safety and Health 3
Credits
Covers current topics not normally taught on a scheduled basis in OSH. Course content determined by industry needs.
Special Note: May be repeated with change of subtitle.
Prerequisites: OSH A101.

OSH A305 Incident Investigation and Analysis 3 Credits
Analyzes the needs and responsibilities for reporting and investigating incidents; defines and discusses the types of incidents; explores various investigation techniques; and prepares students to interview witnesses, determine causes and corrective actions, and prepare reports.
Prerequisites: OSH A201 with a minimum grade of C.

OSH A310 Human Factors 3 Credits
Discusses the human factors that must be evaluated when designing and engineering work stations and job tasks. Explores and evaluates the basics of human perceptual, cognitive and motor abilities relevant to the workplace and their impact upon workers' safety and health.
Registration Restrictions: Junior or senior standing
Prerequisites: OSH A230 with a minimum grade of C.

OSH A360 Advanced Industrial Hygiene 3 Credits
Assesses acute and chronic health effects of exposures to chemical, physical, and biological agents in the workplace. Emphasizes data gathering and analysis for the performance of workplace monitoring.
Prerequisites: OSH A160 with a minimum grade of C.

OSH A375 Process Safety Management 3 Credits
Introduces the current theory and practice of process safety, with emphasis on petrochemicals. Explores the technical, legal and management concepts necessary for the prevention of toxic chemical releases and catastrophes.
Prerequisites: OSH A211 with a minimum grade of C and OSH A250 with a minimum grade of C and OSH A360 with a minimum grade of C.

OSH A390 Selected Topics in Occupational Safety and Health 1-3 Credits
Covers various topics not normally taught on a scheduled basis in OSH. Course content determined by industry needs.
Special Note: May be repeated for a maximum of 9 credits with change of subtitle.
Registration Restrictions: Department approval

OSH A405 Construction Industry Safety Management 3 Credits
Focuses on the recognition, control and management of hazards encountered in the construction industry. Analyzes safety and health hazards to develop plans and programs that mitigate or eliminate hazards. Includes a detailed discussion of 29 CFR Part 1926.
Prerequisites: CM A205 with a minimum grade of C or OSH A201 with a minimum grade of C.

OSH A420 Legal Aspects of Safety 3 Credits
Analyzes and evaluates the common legal, ethical and professional issues that safety and health professionals may encounter in the workplace. Topics explored include OSHA and AKOSH, EPA and ADEC, Bureau of Safety and Environmental Enforcement (BSSE), Mine Safety and Health Administration (MSHA), Workers' Compensation, and common liability issues.
Prerequisites: (PHIL A303 with a minimum grade of C or PHIL A304 with a minimum grade of C or PHIL A305 with a minimum grade of C) and OSH A215 with a minimum grade of C.

OSH A450 Risk Management for Safety and Health 3 Credits
Focuses on identification, evaluation and control of workplace hazards and risks using loss control techniques and the risk management process. Emphasizes integration of risk management strategies into daily operations.
Prerequisites: OSH A305 with a minimum grade of C and STAT A200 with a minimum grade of C.

OSH A460 Economic Value of Safety 3 Credits
Integrates professional, communication and analytical skills with general education knowledge to evaluate costs and savings associated with developing and maintaining health and safety programs. Assesses and calculates the effects of injuries and incidents on organizations' productivity and profits. Requires a comprehensive written report and an oral presentation at the end of the class.
Registration Restrictions: Junior or senior standing in the Community & Technical College
Prerequisites: OSH A450 with a minimum grade of C or concurrent enrollment.
Attributes: UAA Integrative Capstone GER.

OSH A495 Advanced Occupational Safety and Health Internship 3 Credits
Provides career development and exploration through experience by placement in a workplace safety position. Requires interns to perform duties directly related to occupational safety and health management functions.