

Aerospace and Occupational Safety (SFTY)

SFTY 201 Introduction to Occupational Safety and Health 3 Credits (3,0)

Basic health and safety concepts in industry and transportation; public, home, and workplace safety. Overview of legislative developments, statutes, regulations, hazard recognition, accident prevention, risk management, ergonomics, and ethical considerations in the profession.

Course Offered at: Daytona Beach, Prescott, Worldwide

SFTY 205 Principles of Accident Investigation 3 Credits (3,0)

Accident investigation methods; root cause analysis; Management Oversight Risk Tree (MORT); filing accident reports; applying corrective actions.

Course Offered at: Daytona Beach, Prescott, Worldwide

SFTY 299 Special Topics in Aerospace and Occupational Safety 1-6 Credit (1-6,0)

Individual, independent, or directed studies of selected topics in aerospace and occupational safety.

Course Offered at: Daytona Beach, Prescott, Worldwide

SFTY 311 Occupational Safety and Health 3 Credits (3,0)

Introduction to the Occupational Safety and Health (OSH) Act, general industry standards, employee rights, and employer responsibilities. Overview of frequently referenced standards, appeals process, recordkeeping, and voluntary protection programs.

Course Offered at: Daytona Beach, Prescott, Worldwide, Asia

SFTY 315 Environmental Compliance and Safety 3 Credits (3,0)

Health and safety matters relating to air, water quality, sanitation, hazardous materials, storage, transportation, waste management, and cleanup. Study of environmental laws and regulations for protecting workers involved in hazardous activities.

Prerequisites: SFTY 201 or AVSF 210

Course Offered at: Daytona Beach, Prescott, Worldwide

SFTY 316 Loss Control and Risk Management 3 Credits (3,0)

Risk management principles for workplace safety: risk identification, analysis, evaluation, and development of controls. Overview of workers' compensation laws, managing health hazards, and safety methods.

Prerequisites: SFTY 201 or AVSF 210

Course Offered at: Daytona Beach

SFTY 321 Occupational Ergonomics I 3 Credits (3,0)

Anthropometric principles in workspace and equipment design; human-machine systems; design of displays and controls; environmental factors affecting work.

Prerequisites: SFTY 201 or AVSF 210

Course Offered at: Daytona Beach, Prescott, Worldwide, Asia

SFTY 326 System Safety 3 Credits (3,0)

Specialized integration of safety skills into all phases of a system's lifecycle. Application of qualitative and quantitative tools for accident analysis, prevention, and mitigation.

Course Offered at: Prescott, Worldwide, Asia

SFTY 333 Aviation Maintenance Culture and Safety 3 Credits (3,0)

Provide students from different disciplines with a broad understanding of aviation maintenance workplace processes, both in flight line and FAA Repair Station environments, emphasizing maintenance discipline and adherence to standards and understanding of aviation safety, regulatory frameworks, human factors, and best practices. Introduce key concepts related to the origins of aviation, key FAA regulations, safety culture, documentation, and emergency procedures, ensuring that all personnel contribute effectively to safety and compliance.

Course Offered at: Worldwide

SFTY 341 Occupational Safety and Health Program Management 3 Credits (3,0)

Principles of developing and managing occupational safety and health programs. Topics: government regulations; hazard analysis; implementation of safety programs; safety movement history.

Course Offered at: Worldwide, Asia

SFTY 355 Industrial Hygiene and Toxicology 3 Credits (3,0)

Recognition, evaluation, and control of workplace hazards related to noise, vibration, radiation, chemicals, and biological substances. Use of engineering and non-engineering controls to comply with regulatory requirements.

Prerequisites: (SFTY 201 or AVSF 210 or SFTY 311) and (PHYS 113 or (CHEM 110 and CHEM 110L))

Course Offered at: Daytona Beach, Prescott, Worldwide, Asia

SFTY 365 Fire Protection 3 Credits (3,0)

Fire behavior, characteristics, and suppression methods. Emphasis on fire hazards and regulatory requirements associated with industry and transportation-related fire hazards. Fire detection and suppression systems.

Prerequisites: (SFTY 201 or AVSF 210 or SFTY 311) and (PHYS 113 or (CHEM 110 and CHEM 110L))

Course Offered at: Daytona Beach, Worldwide, Asia

SFTY 380 Internship I 3 Credits (3,0)

Hands-on safety, health, and environmental experience in industrial settings. Includes inspections, hazard evaluations, and report writing. Requires 12 credit hours of SF courses.

Prerequisites: SFTY 201 or AVSF 210

Course Offered at: Daytona Beach

SFTY 399 Special Topics in Aerospace and Occupational Safety 1-6 Credit (1-6,0)

Individual, independent, or directed studies of selected topics in aerospace and occupational safety.

Course Offered at: Daytona Beach, Prescott, Worldwide

SFTY 405 Applications in Industrial Hygiene 3 Credits (3,0)

Evaluation and measurement of workplace health hazards. Design and compliance of environments in office and manufacturing settings. Development and evaluation of industrial hygiene programs.

Prerequisites: SFTY 355

Course Offered at: Daytona Beach, Prescott, Worldwide

SFTY 415 Human Reliability and Safety Analysis 3 Credits (3,0)

Application of probability and human reliability techniques to safety analysis. Qualitative and quantitative tools for accident prevention and mitigation.

Course Offered at: Prescott, Worldwide

SFTY 420 Systems Design for Fire and Life Safety 3 Credits (3,0)

Building design principles for maximum life and property safety. Egress design, fire protection, building codes, and occupancy classifications.

Prerequisites: PHYS 102 and SFTY 311

Course Offered at: Worldwide

SFTY 421 Occupational Ergonomics II 3 Credits (3,0)

Extension of SFTY 321, exploring human factors, ergonomics, and workplace safety. Focus on predicting and designing safer industrial environments.

Prerequisites: SFTY 321

Course Offered at: Worldwide

SFTY 422 Safety Data Analysis 3 Credits (3,0)

Methods of data collection, practices, and algorithms in safety data analysis including quantitative methods used to analyze safety related events (injuries, illnesses, accidents, etc.) and their relationship to the workplace. Fundamentals and applications of big data analysis and management of safety data to respond to current and future demands of operators; modern techniques, skills and tools used for data collection and analysis from a variety of sources.

Prerequisites: SFTY 201 or AVSF 210 and MATH 210

Course Offered at: Daytona Beach, Prescott

SFTY 425 Human Factors and Ergonomics II 3 Credits (3,0)

Advanced study of human factors, biomechanics, work physiology, psychophysical methods, signal detection theory, human error analysis.

Prerequisites: SFTY 321

Course Offered at: Daytona Beach, Prescott

SFTY 426 System Safety Management 3 Credits (3,0)

Continuation of safety, health, and environmental fieldwork. In-depth inspections, hazard evaluations, and report writing in industrial settings.

Course Offered at: Worldwide, Asia

SFTY 441 Construction Safety and Health 3 Credits (3,0)

Detailed examination of OSHA standards (29 CFR 1926) for construction safety. Includes preparation for the OSHA 30-hour Construction card.

Daytona Beach Prerequisites: COMM 221 or COMM 223 and Junior Class Standing or higher

Prescott Prerequisites: COMM 221 or COMM 223 and Junior Class Standing or higher

Course Offered at: Daytona Beach, Prescott, Worldwide, Asia

SFTY 451 Loss Control and Insurance 3 Credits (3,0)

Principles of loss control, insurance, and financial risk management for Safety, Health, and Environmental (SHE) professionals. Coverage includes financial risk management, insurance operations, and personal risk management.

Course Offered at: Worldwide

SFTY 453 Construction Scheduling and Control 3 Credits (3,0)

Project planning and scheduling in construction management. Time, cost, and resource management principles. Overview of ethical issues and project planning software.

Course Offered at: Worldwide

SFTY 460 Internship II 3 Credits (3,0)

Continuation of safety, health, and environmental fieldwork. In-depth inspections, hazard evaluations, and report writing in industrial settings.

Prerequisites: SFTY 380

Course Offered at: Daytona Beach

SFTY 463 Legal Aspects of Occupational Safety and Health 3 Credits (3,0)

Legal issues in occupational safety and health. Overview of industry regulations and legislation, including governing bodies and their authority.

Course Offered at: Worldwide

SFTY 470 Advanced Occupational Safety and Health Technology 3 Credits (3,0)

Application of advanced occupational safety and health theories to real-world issues. Development of in-depth analysis of safety concerns in professional environments and culminating experience.

Prerequisites: SFTY 311 and SFTY 341 and SFTY 355

Course Offered at: Worldwide, Asia

SFTY 491 Applications of Safety Management Capstone 3 Credits (3,0)

Capstone experience exploring approaches to managing safety and health within organizations. Focus on methods for effective safety management.

Prerequisites: SFTY 201, SFTY 205, SFTY 311, SFTY 315, SFTY 321, SFTY 326, SFTY 355, SFTY 365, SFTY 426, SFTY 441, SFTY 451, EMGY 310, EMGY 405, STAT 222, CHEM 110, CHEM 110L, and RSCH 202

Course Offered at: Daytona Beach, Worldwide

SFTY 499 Special Topics in Aerospace and Occupational Safety 1-6 Credit (1-6,0)

Individual, independent, or directed studies of selected topics in aerospace and occupational safety.

Course Offered at: Daytona Beach, Prescott, Worldwide