FIRE SAFETY & EXPLOSION PROTECTION (FSEP)

FSEP 5000 Master's Thesis
Prerequisites: Consent of instructor.
Description: Methods used in research and thesis writing. Offered for variable credit, 1-6 credit hours, maximum of 18 credit hours.
Credit hours: 1-6
Contact hours: Contact: 1-6 Other: 1-6
Levels: Graduate
Schedule types: Independent Study
Department/School: Engineering Technology

FSEP 5013 Research Design & Methodology
Prerequisites: Consent of instructor.
Description: Overview of research design methods and skills necessary for conducting research projects, including: conceptualization and operationalization, literature review, deductive and inductive theorizing, hypothesis testing, quantitative and qualitative data collection and analysis, maintaining research records, experiment design, data validation, result presentation, and research ethics. Same course as FEMP 5013 and MERO 5013. Previously offered as GENT 5013.
Credit hours: 3
Contact hours: Lecture: 3 Contact: 3
Levels: Graduate
Schedule types: Lecture
Department/School: Engineering Technology

FSEP 5023 Project Management
Prerequisites: Consent of instructor.
Description: Methods and skills needed to successfully improve your employability and advancement in today's dynamic workforce. Understanding of the responsibilities of project leader and become better prepared to apply these knowledge/skills to the project environment. Previously offered as GENT 5023.
Credit hours: 3
Contact hours: Lecture: 3 Contact: 3
Levels: Graduate
Schedule types: Lecture
Department/School: Engineering Technology

FSEP 5033 Risk Analysis
Prerequisites: Consent of instructor.
Description: Identification of various risks and analytical treatment of those risks in various work settings, such as energy, mechanical and construction. Previously offered as GENT 5033.
Credit hours: 3
Contact hours: Lecture: 3 Contact: 3
Levels: Graduate
Schedule types: Lecture
Department/School: Engineering Technology

FSEP 5113 Fire and Explosion Hazard Recognition
Prerequisites: 30 credit hours of STEM coursework or instructor consent.
Description: Fundamentals principles of combustion, fire and explosion. The thermodynamics and physical phenomena of fire and explosion.
Credit hours: 3
Contact hours: Lecture: 3 Contact: 3
Levels: Graduate
Schedule types: Lecture
Department/School: Engineering Technology

FSEP 5123 Fire and Explosion Detection and Mitigation
Prerequisites: 30 credit hours of STEM coursework or instructor consent.
Description: Chemistry and physics of energetic materials and their relationship to their surroundings. The requirements for detection, suppression, and mitigation of energetic materials.
Credit hours: 3
Contact hours: Lecture: 3 Contact: 3
Levels: Graduate
Schedule types: Lecture
Department/School: Engineering Technology

FSEP 5133 Principles of Process Safety
Prerequisites: 30 credit hours of STEM coursework or instructor consent.
Description: Fundamentals of chemical release, dispersion, toxicity, fire, and explosion. Process safety design to mitigate consequences of catastrophic fire and explosion.
Credit hours: 3
Contact hours: Lecture: 3 Contact: 3
Levels: Graduate
Schedule types: Lecture
Department/School: Engineering Technology

FSEP 5143 Structural Design for Fire and Life Safety
Prerequisites: 30 credit hours of STEM coursework or instructor consent.
Description: Building construction standards and codes to assure maximum life and property safety from fires, explosions and natural disasters. Egress design specifications, human factors and fire and explosion protection requirements for building construction and materials.
Credit hours: 3
Contact hours: Lecture: 3 Contact: 3
Levels: Graduate
Schedule types: Lecture
Department/School: Engineering Technology

FSEP 5153 Critical Infrastructure Vulnerability and Risk
Prerequisites: 30 credit hours of STEM coursework or instructor consent.
Description: Identification of critical infrastructure and the societal risk caused by its vulnerability. Methods of analyzing the hazards and threats facing critical infrastructure components and the methods of minimizing those risks.
Credit hours: 3
Contact hours: Lecture: 3 Contact: 3
Levels: Graduate
Schedule types: Lecture
Department/School: Engineering Technology

FSEP 5163 Principles of Industrial, Physical and Building Security
Prerequisites: 30 credit hours of STEM coursework or instructor consent.
Description: Introduction to homeland security and the concept of integrated physical protection. Principles of industrial and building security, security management systems, security standards, and securing against asymmetrical threats.
Credit hours: 3
Contact hours: Lecture: 3 Contact: 3
Levels: Graduate
Schedule types: Lecture
Department/School: Engineering Technology
FSEP 5383 Fire and Evacuation Modeling
Prerequisites: FSEP 5113.
Description: Fundamentals of fire dynamics and occupant egress and their numerical approaches for computer models. Practical knowledge of how to use fire and evacuation modeling tools: CFAST, FDS, Pyrosim, and Pathfinder, and how to analyze modeling results.
Credit hours: 3
Contact hours: Lecture: 3 Contact: 3
Levels: Graduate
Schedule types: Lecture
Department/School: Engineering Technology

FSEP 5990 Special Topics
Prerequisites: Consent of instructor.
Description: Individual report topics in fire safety and explosion protection involving processes, equipment, experiments, literature search, theory, computer use or combinations of these. Offered for variable credit, 2-4 credit hours, maximum of 4 credit hours.
Credit hours: 2-4
Contact hours: Contact: 2-4 Other: 2-4
Levels: Graduate
Schedule types: Independent Study
Department/School: Engineering Technology