TSEC Safety and Environmental Compliance

TSEC 5331G  Occupational Safety
3 Credit Hours.  3 Lecture Hours.  0 Lab Hours.
The technical aspects of developing and implementing occupational safety programs in manufacturing industries. Emphasis on hazard identification and control. Topics include: OSHA compliance, accident investigation, fire protection, machine guarding, noise abatement, and electrical safety. Graduate students will be given an extra assignment determined by the instructor that undergraduates will not be required to do. Cross Listing(s): TSEC 5331.

TSEC 5332G  Ergonomics
3 Credit Hours.  3 Lecture Hours.  0 Lab Hours.
The human machine interface in manufacturing industries as it relates to the well-being of workers and efficiency of production systems. The application of human factors from both physiological and psychological perspectives are examined. Emphasis is placed on regulatory compliance. Graduate students will be given an extra assignment determined by the instructor that undergraduates will not be required to do. Cross Listing(s): TSEC 5332.

TSEC 5333G  Industrial Hygiene and Ergonomics
3 Credit Hours.  3 Lecture Hours.  0 Lab Hours.
A study of the techniques used by health and safety professionals to anticipate, recognize, evaluate, and control those environmental factors or stresses arising in or from the workplace that adversely affect an employees' health, comfort, and performance. Ergonomic tool and work area design and work procedures are emphasized. Regulatory agencies, compliance, and program management issues are discussed. Graduate students are required to complete an advanced level assignment in addition to all undergraduate course requirements. Cross Listing(s): TSEC 5333.

TSEC 5334G  Hazardous Waste Management
3 Credit Hours.  3 Lecture Hours.  0 Lab Hours.
A study of hazardous waste substances as they are created by various industries and their proper management by combining planning, organizing, and controlling techniques with a knowledge of generating, storing, transporting, treating, recycling and disposing of hazardous materials. Issues of environmental impact, regulatory compliance, ethics, and program management are discussed from a technical management perspective. Graduate students will be given an extra assignment determined by the instructor that undergraduates will not be required to do. Cross Listing(s): TSEC 5334.

TSEC 5335G  Systems Safety in Manufacturing
3 Credit Hours.  3 Lecture Hours.  0 Lab Hours.
A study of the application of systems safety concepts to manufacturing and production systems. Emphasis is placed on the critical analysis of systems through modeling and the development of control strategies to reduce the frequency and severity of industrial accidents. Graduate students will be given an extra assignment determined by the instructor that undergraduates will not be required to do. Cross Listing(s): TSEC 5335.

TSEC 5336G  Environmental Law
3 Credit Hours.  3 Lecture Hours.  0 Lab Hours.
A course designed to provide an introduction and overview (for those without legal or specific scientific training) of the system through which our nation attempts to preserve the environment. The U.S. legal system, national, and international environmental policy is reviewed. Emphasis is placed on the control of air quality, water quality, toxic substances, and hazardous releases as it relates to environmental regulation of industry. Graduate students will be required to complete an additional project or assignment in addition to the undergraduate course requirements. Cross Listing(s): TSEC 5336.