

STATE UNIVERSITY OF NEW YORK
COLLEGE OF TECHNOLOGY
CANTON, NEW YORK



COURSE OUTLINE

SOET 349 – Industrial Safety and Health

Prepared By: Stephen E. Frempong

SCHOOL OF ENGINEERING TECHNOLOGY
ELECTRICAL ENGINEERING & ENGINEERING SCIENCE
DEPARTMENT
FALL 2017

SOET 349– Industrial Safety & Health

- A. TITLE : Industrial Safety & Health
- B. COURSE NUMBER: SOET 349
- C. CREDIT HOURS: 3
- D. WRITING INTENSIVE COURSE: No
- E. COURSE LENGTH: 15 Weeks
- F. SEMESTER(S) OFFERED: Fall
- G. HOURS OF LECTURE, LABORATORY, RECITATION, TUTORIAL, ACTIVITY: 3 lecture hours per week
- H. CATALOG DESCRIPTION: This course explores key issues of engineering safety and health in workplace environments. Topics covered include historical perspective; laws and regulations; the human element; hazard assessment; prevention; control; management of safety & health.
- I. PRE-REQUISITES: Junior level status or permission of instructor.
- J. ABET-Student Outcomes / Institutional Learning Outcomes

Course Objective	ABET – Student Outcomes	ISLO
1. Evaluate hazard assessment, prevention, and control	(f) An ability to identify, analyze, and solve broadly-defined engineering technology problems	Communication & Critical Thinking
2. Analyze ergonomic hazards, stress and safety, and health training		Communication & Critical Thinking
3. Demonstrate the knowledge of the Occupational Safety and Health laws and regulations, safety-first corporate culture, and competition in the global marketplace.	(j) Knowledge of the impact of engineering technology solutions in a societal and global context.	

K. TEXTS:

David L. Goetsch, and Oskaloosa-Walton,
Occupational Safety and Health for Technologists, Engineers, and Managers
8th Edition, Pearson education, Inc., Upper Saddle River, New Jersey 07458,
2015

L. EQUIPMENT: None

M. GRADING METHOD: A, B, C, D, F

N. MEASUREMENT CRITERIA/METHODS: Weekly Quizzes and Final Examination

O. DETAILED TOPICAL OUTLINE:

I. HISTORICAL PERSPECTIVE & OVERVIEW

- Safety and Health Movement
- Accidents and Their Effects
- Theories of Accident Causation
- Role of Professional Certifications
- Safety, Health, and Competition in the Global Marketplace

II. LAWS AND REGULATIONS

- The Occupational Safety and Health Act (OSHA), Standards, and Liability
- Workers Compensation
- Accident Investigation and Reporting
- Product Safety and Liability

III. HUMAN ELEMENT

- Ergonomic Hazards
- Stress and Safety
- Safety and Health Training
- Violence in the Workplace

IV. HAZARD ASSESSMENT, PREVENTION, AND CONTROL

- Mechanical Hazards and Machine Safeguarding
- Falling
- Hazards of Temperature Extremes
- Pressure Hazards
- Electrical Hazards
- Fire Hazards

- Industrial Hygiene
- Radiation Hazards
- Noise and Vibration Hazards
- Computers, Automation, and Robots

V. MANAGEMENT OF SAFETY AND HEALTH

- Preparing for Emergencies
- Ethics and Safety
- Hazard Analysis, Prevention and Safety Management
- Promoting Safety
- Environmental Safety and International Organization for Standardization (ISO) 14000 (Environmental Management)
- Total Safety Management (TSM)
- Establishing a Safety-First Corporate Culture