



Course Description

EGN1949 | Co-Operative Work Experience 1 | 1.00-4.00 credits

This is a capstone course designed for students majoring in engineering programs. Students will learn to apply the skills and knowledge that they have acquired through their program of study in a real work environment. Prerequisite: Successful completion of required program course work and department approval.

Course Competencies

Competency 1: Students will demonstrate knowledge of the workplace by:

1. Summarizing the organization's purpose and goals
2. Describing the organizational structure including the purpose of individual departments within the organization
3. Defining the role of the employee mentor within the organization

Competency 2: Students will demonstrate knowledge of relevant industry regulations in the workplace environment by:

1. Defining the safety regulations of the organization
2. Describing how Occupational Safety and Health Administration worker safety regulations are addressed within the organization
3. Describing measures employed by the organization to address governmental regulations
4. Summarizing topics related to regulatory issues that influence the operation of the organization

Competency 3: Students will demonstrate knowledge of workplace practices and procedures by:

1. Explaining an organization's quality systems
2. Performing an organization's standard operating procedures
3. Describing the process for batch control
4. Executing an organization's verification, qualification, and validation protocols for multiple processes

Competency 4: Students will demonstrate knowledge of process control in an industrial workplace environment by:

1. Acquiring data to optimize processes and maintain process control
2. Utilizing tools, technology, and instruments to acquire data
3. Describing the computer systems and interfaces used to store and analyze data within the organization
4. Summarizing measures and statistical methods used to ensure consistency, accuracy and validation of data collected within the organization

Competency 5: Students will demonstrate knowledge of the specific skills-sets employed in an industrial workplace environment by:

1. Listing common techniques or skill-sets used within the organization
2. Demonstrating basic protocols and applications performed while working in the organization
3. Summarizing the purpose of standardized protocols and how they relate to the organization's goals
4. Analyzing the issues of personal or environmental protection and its importance within the organization

Competency 6: Students will demonstrate knowledge of workplace professionalism by:

1. Listing traits of workplace professionals in the chosen industry
2. Identifying skills necessary for effective work within the organization
3. Summarizing the importance of written and verbal communications skills within the organization
4. Performing tasks assigned by a supervisor according to organizational standards and practices
5. Generating a journal that documents the daily work schedule, tasks, and experiences
6. Writing reflections documenting specific learnings acquired from workplace experiences

7. Maintaining a time log document
8. Practicing professional appearance, demeanor, honesty, integrity, responsibility, initiative, respect, confidentiality, and ethical work habits
9. Adhering to the employee code of conduct

Learning Outcomes

- Communicate effectively using listening, speaking, reading, and writing skills
- Solve problems using critical and creative thinking and scientific reasoning
- Use computer and emerging technologies effectively