I.T.C. Industrial Cybersecurity Engineering Technology

(1 Year)

Program Objectives:

1. Identify and respond to security concerns relating to operational cyber-physical systems.
2. Coordinate among key stakeholders for matters dealing with the security of cyber-physical systems.
3. Promote stakeholder awareness and education relating to cyber-physical systems security.
4. Establish optimal policies for managing risk in cyber-physical systems.
5. Use security criteria to influence technology selection and deployment.

Student Outcomes:

1. Apply the fundamental principles of cyber-physical systems.

2. Explain the need and purpose of securing cyber physical systems.

3. Identify common weaknesses in cyber physical systems.

4. Evaluate the security of cyber physical systems by applying pertinent recognized standards.

5. Propose practices for managing cyber physical systems risk.

6. Implement techniques for defending cyber physical systems.

Program Admissions Requirements

Students must meet with the Program Coordinator prior to beginning course work.

Students must have completed a previous degree relating to Computer Science or Information Technology Systems and meet ESTEC acceptance requirements.

Students are required to meet with the Program Coordinator before beginning course work. Students entering from other programs may be able to waive or substitute courses.

Placement Test	Math
ACT	19
SAT	460
ALEKS	30

Major Requirements

Code	Title	Credits
Required Courses:		
ESET 1120	Introduction to Energy Systems	2
ESET 1120L	Introduction to Energy Systems Laboratory	1
ESET 1162	Industrial Safety and Regulations	2
ESET 1182	Information Technology Fundamentals	3
ESET 2205	Fundamentals of Control Logic	3
ESET 2222 & ESET 2226	Process Control Theory and Process Control Devices Laboratory	2-4
or ESET 2242	Practical Process Measurements and Control	
ESET 2282	Introduction to Networking	3
CYBR 3383	Security Design for Cyber-Physical Systems	3
CYBR 3384	Risk Management for Cyber-Physical Systems	3
CYBR 4481	Defending Critical Infrastructure and Cyber Physical Systems	3
CYBR 4486	Network Security for Industrial Environments	3
CYBR 4487	Professional Development and Certification	3
INFO 4411	Intermediate Information Assurance	3
Total Credits		**34-36**

Major Academic Plan (MAP)