Module Synopsis

PDC 1 Certificate in Industrial Control Systems and Cybersecurity Operations

Industrial Control Systems
The module covers various components and technologies in Advanced Manufacturing (Industry 4.0). Topic includes networking of Automation equipment using open communication standards to provide connectivity between machines and connectivity to Information Technology services. It includes configuring and programming of PLC system for automation tasks with web based and mobile apps information services. Concepts of secured coding, and condition monitoring with wireless sensors network will also be covered.

Cyber Security Operations
The aim of this module is to introduce the core security concepts and skills needed to monitor, detect, analyse and respond to cybercrime, insider threats, advanced persistent threats, regulatory requirements, and other cybersecurity issues facing organizations. It emphasizes on the practical application of the skills needed to maintain and ensure security operational readiness of secure networked systems. The module prepares candidates for Cisco CCNA Cyber Security Operations certification.

PDC 2 Certificate in Industrial Control Systems and Computer Network Security

Industrial Control Systems Security
This module aims to develop an understanding of importance of Industrial Control Systems (ICS) security, cyber threats to ICS and solutions available for cyber security. The module covers ICS architecture, ICS systems and devices, Information Technology (IT) and Operation Technology (OT) convergence, NIST Cyber Security Framework, ICS security vulnerabilities and defence solutions, testing and security monitoring. This module will allow students to comprehend the Purdue model for ICS infrastructure and ICS security mechanism implementation.

Computer Network Security
This module covers the concepts of computer networking, protocols and devices before going into security features of networking devices. It covers essential networking devices like network switch, router, wireless access point and firewalls. Students will know how to configure these devices and implement security features of these devices for network infrastructure security.