

CYB - CYBERSECURITY

CYB 110 Introduction to Cybersecurity (3-0-3)

Offered Fall, Spring, and Summer Semesters

Prerequisites: AOT 162 or CPT 270 or IST 220

An introduction/broad overview course of cybersecurity knowledge domains including the need for cybersecurity, malicious activity, Internet and Internet of Things (IoT), access controls, security operations and administration, risk management, cryptography, network security, certification and law.

CYB 201 Cybersecurity Operations (3-0-3)

Offered Fall and Spring Semesters

Prerequisites: IST 110 or CYB 110 and IST 266

Co-requisite: IST 190

This course is a study of the concepts and technologies related to Security Operations Center teams that detect and respond to cybersecurity threats. Topics cover an in-depth review of security concepts and monitoring, host-based and network intrusion analysis, and security policies and procedures.

CYB 269 Digital Forensics (3-0-3)

Offered Fall and Spring Semesters

Prerequisites: IST 110 or CYB 110 and CPT 209, IST 190

This course examines advanced technical aspects of digital computer evidence to include detection, collection, identification, and preservation. Emphasis is placed on specific tools and methods for extracting deleted or destroyed computer-related evidence.

CYB 282 Security and Risk Analysis (3-0-3)

Offered Spring and Summer Semesters

Prerequisites: IST 110 or CYB 110 and IST 291 or CYB 294

An overview of risk management and its implication on infrastructure, compliance and organizational objectives. Risk to people, processes and technology is addressed. Modern frameworks for risk analysis and mitigation are used. Students will write security policy and create implementation plan.

CYB 293 Attack Vectors (Red Teaming) (3-0-3)

Offered Fall and Spring Semesters

Prerequisites: IST 267 or CYB 201

This course introduces methods for attacking and compromising various systems including authentication systems, passwords, networks, computers, people and peripheral devices (IoT). Students will develop skills necessary to participate in Red Team ethical hacking exercises and competitions.

CYB 294 Incident Response (Blue Teaming) (3-0-3)

Offered Fall and Spring Semesters

Prerequisites: IST 110 or CYB 110 and IST 266

Co-requisite: IST 190

This course introduces skills and techniques necessary to detect, respond and recover from cyber incidents. The goal is to learn how to integrate business continuity/ disaster recovery plans into the incident response process. Students will document/communicate impact of cybersecurity incidents.