# **COMPUTER & INFORMATION SYSTEMS**

## CIS 2321, Systems Analysis and Design Systems Analysis and Design

### 3 hrs., 3 crs.,

(Offered spring). Prerequisite: Any programming language. An introduction to the preparation of a system solution to a data processing problem which includes documentation of inputs, outputs, data flow, and a general description of runs and logic; consideration of a gross schedule of events required from project approval through detailed design programming, testing, and the new system phase-in. Actual case studies will be emphasized.

# CIS 2352, Ethical Hacking I Ethical Hacking I

### 3 hrs., 3 crs.,

(Offered fall). Prerequisites: \*CTS1111, CTS1120, CTS1650. This hands-on course teaches students how to hack into information systems using ethical standards. Students will learn system and network penetration testing and techniques used to exploit vulnerabilities, conduct social engineering activities, and intercept and interrupt network communications as well as countermeasures and mitigation steps for defending those systems and data.

# CIS 2359, Ethical Hacking II Ethical Hacking II

#### 3 hrs., 3 crs.,

(Offered spring). Prerequisite: CIS2352 with a minimum grade of "C", instructor validation required. Continuation of CIS2352, Ethical Hacking I with an emphasis on advanced techniques.

# CIS 2381, Computer Forensics and Incident Response Computer Forensics and Incident Response 3 hrs., 3 crs.,

(Offered spring). Prerequisite: CTS1120. The student will design and develop strategies for inspecting potentially corrupted servers, networks and workstations as part of a Cybersecurity Incident Response Team. In this handson course the student will practice detecting possible intrusions, inspecting log files, tracking violators. Students will practice computer forensic exercises using detection tools and tracking methodologies.

# CIS 2949, COOP/Work Experience/Software Database COOP/Work Experience/Software Database 1 hr., 1 cr.,

1-3 crs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student?s major field of study. Requirements include online weekly, mid-term, and end-of-term reflection assignments.

# CIS 3083, Cloud Computing Foundations Cloud Computing Foundations

### 3 hrs., 3 crs.,

(Offered spring). Prerequisite: CTS1650. This course covers essential cloud computing principles, concepts, and architectures. In this course students will study cloud computing deployment and service models. Students will learn how to evaluate the business case for cloud computing and will be able to describe the risks associated with cloud computing. The course will also provide students with the opportunity to implement various cloud objects including servers and storage objects.

## CIS 3122, Cybersecurity Analyst Cybersecurity Analyst

### 3 hrs., 3 crs.,

(Offered summer). Prerequisite: CTS1120. Applies behavioral analytics to networks to improve the overall state of security by combating malware and advanced persistent threats (apts) and provides an enhanced threat visibility across a broad attack surface. Prepares the student for the TestOut security analyst pro exam and the CompTIA CYSA+ certification.

# CIS 4200, Penetration Testing and Vulnerability Analysis Penetration Testing and Vulnerability Analysis 3 hrs., 3 crs.,

(Offered fall). Prerequisites: CTS1120, CTS1651, CTS2145. The content of this course is designed to expose the student to groundbreaking methodologies in conducting thorough information security analysis, as well as advanced penetration testing techniques. Armed with the knowledge, along with hands-on experience, students will be able to perform the intensive assessments required to effectively identify and mitigate risks to the security of the organization?s infrastructure.

# CIS 4433, Secure System Integration and Architecture for IT (SecDevOps) Secure System Integration and Architecture for IT (SecDevOps)

### 3 hrs., 3 crs.,

(Offered fall). Prerequisites: COP2250, CTS2145. This course introduces the role of secure systems architecture in systems integration, performance, and effectiveness. Students learn the principles and concepts of "devops" (development operations) interplay between IT applications roll-out and related organizational processes. The students are also introduced to Application Security Engineer.