CYBER SECURITY (CYBR)

CYBR 110, FUNDAMENTALS OF INTERNET OF THINGS (IOT) 4 (6)
This course covers Internet of Things (IoT) topics, including: architecture; applications; monitoring and utilization; instrumentation; hardware and software connectivity and protocols; deployment strategies; security and cyber risks. Case studies will caver industrial internet of things (IoT), commercial IoT and consumer IoT. Laboratory required. (A special fee will be assessed.)
General Education: GEO1, GEO2, GEO6
Typically Offered: Summer, Fall and Spring Semesters

CYBR 220, PYTHON SCRIPTING AND PROGRAM CONCEPTS 3 (4)
This course offers an introduction to scripting languages with focus on Python. Topics presented in the course will prepare students to automate industry standard security tools using scripting developed in various programming and scripting languages. Laboratory required. (A special fee will be assessed.)
General Education: GEO1, GEO2
Typically Offered: Fall and Spring Semesters

CYBR 231, ETHICAL HACKING AND COUNTERMEASURES 4 (6)
This course is designed to cover topics required for the Certified Ethical Hacking Exam (CEH). Student will learn hacking methodology, techniques and countermeasures through lecture and hands on activities. Laboratory required. (A special fee will be assessed.)
General Education: GEO1, GEO2, GEO4
Typically Offered: Fall and Spring Semesters

CYBR 244, CYBERSECURITY STANDARDS, REGULATIONS AND COMPLIANCE 3 (5)
This is a capstone course that covers cybersecurity standards, regulations, and compliance. The student will learn how to research, assess, and implement cybersecurity frameworks to ensure organizations are aligned to meet regulatory and compliance standards.
General Education: GEO1, GEO2, GEO4, GEO6, GEO8
Course Entry Requirement(s): Prerequisite: CYBR 220 and CYBR 231
Typically Offered: Summer, Fall and Spring Semesters

CYBR 251, CYBER DEFENSE METHODS 3 (4)
This course introduces practices and techniques for building an integrated secure business network with a focus on incident handling techniques. IT security concepts are reviewed along with the current risks faced by most business with regard to IT security. Specific tools, practices and technologies are employed to build up a layered defense for business networks. Hands on labs allow students to learn how to harden Windows and Linux servers, routers and switches. The benefits of deploying firewalls and prevention tools complete the defense lab approach. The labs involve the use of tools that can evaluate and exploit security holes so that students can gauge their level of success in building a secure network. (A special fee will be assessed.)(CTAG, ITAG)
General Education: GEO1, GEO2, GEO4
Course Entry Requirement(s): Prerequisite: CISS 145 or CMNW 145
Typically Offered: Fall Semester

CYBR 252, IT SECURITY CONCEPTS 4 (4)
This course represents an overview of IT Security topics as defined by the 8 domains of the CISSP (Certified Information Systems Security Professional). This course is designed to give students an overview of the technical, legal and operational information technology issues in any organization. The coverage of the full range of IT Security topics is ideal for the IT professional. While this course is not a CISSP review course, it can serve as a good foundation for anyone pursuing the CISSP certification.
General Education: GEO1, GEO2
Typically Offered: Spring Semester

CYBR 287, WORK-BASED LEARNING I - CYBR 1-3 (1)
This course provides supervised work experience building on experience in Work-Based Learning with approved employer(s) in an area related to the student's program. Emphasis is placed on integrating classroom learning with work experience. Students will be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies. Activities are coordinated and evaluated by college personnel.
General Education: GEO1, GEO2, GEO6, GEO8
Course Entry Requirement(s): Prerequisite: Minimum 2.0 GPA overall and division approval
Typically Offered: Offer as required

CYBR 288, WORK-BASED LEARNING II - CYBR 1-3 (1)
Building on experiences from Work Based Learning I, this course provides supervised, paid work experience with approved employer(s) in an area related to the student's program. Emphasis is placed on integrating prior or concurrent classroom learning with work experience through career readiness competencies. Students will be able to evaluate career selection and satisfactorily demonstrate work-related competencies.
General Education: GEO1, GEO2, GEO6, GEO8
Course Entry Requirement(s): Prerequisite: CYBR 287
Typically Offered: Offer as required

CYBR 387, WORK-BASED LEARNING - CYBR 1-3 (1)
Building on experiences from Work Based Learning II, this course provides supervised, paid work experience with approved employer(s) in an area related to the student's program. Emphasis is placed on integrating prior or concurrent classroom learning with work experience through career readiness competencies. Students will be able to evaluate career selection and satisfactorily demonstrate work-related competencies.
General Education: GEO1, GEO2, GEO6, GEO8
Course Entry Requirement(s): Prerequisite: Admission to the Trusted and Assured Microelectric Solutions Bachelors program.
Typically Offered: Offer as required

CYBR 487, WORK-BASED LEARNING - CYBR 1-3 (1)
Building on experiences from CYBR 387, this course provides supervised, paid work experience with approved employer(s) in an area related to the student's program. Emphasis is placed on integrating prior or concurrent classroom learning with work experience through career readiness competencies. Students will be able to evaluate career selection and satisfactorily demonstrate work-related competencies.
General Education: GEO1, GEO2, GEO6, GEO8
Course Entry Requirement(s): Prerequisite: CYBR 387
Typically Offered: Offer as required