Cybersecurity

Program Description:
Build foundational IT skills with focus on network security. Prepare for a career to assess the security needs of computer and network systems. Investigate deviations from acceptable configurations, identify computer and network security vulnerabilities, solve problems, make decisions to recommend the appropriate defensive countermeasures. Implement adequate measures to reduce risks to a level conferring to compliance regulations. Graduates build skills in problem-solving, attention to detail, communication, and teamwork. Note: Students must possess basic keyboarding/word processing skills prior to enrollment in the program.

For program costs and fees refer to the catalog TUITION AND FEES PAGE.

Program Learning Outcomes:
1. Communicate effectively with diverse audiences across all levels and demonstrate an understanding of the value of diversity and community.
2. Demonstrate critical thinking to support integrity, confidentiality, availability of data and information.
3. Communicate an understanding of professional and ethical responsibility as it relates to legal liability in information technology and business.
4. Identify governance, risk, and compliance.
5. Collect and analyze data from a variety of sources to identify and report events that occur or might occur within the network to protect data information systems and networks from vulnerabilities and threats.
6. Investigate deviations from acceptable configurations, identify security vulnerabilities, solve problems, make decisions to recommend appropriate defensive countermeasures.
7. Demonstrate technical proficiency with procedures to operate more securely, efficiently, and effectively using decision-making strategies to understand the needs and limitations of business and information technology.
8. Prepare for industry certification exams.

Cybersecurity AAS (105 credits)

Required Courses

<table>
<thead>
<tr>
<th>Quarter 1</th>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
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<tr>
<td></td>
<td>CYBR101</td>
<td>Security Professional Practices</td>
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<td></td>
<td>CYBR102</td>
<td>Operating System Fundamentals</td>
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<tr>
<td></td>
<td>CYBR104</td>
<td>IT Systems I</td>
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<td>CYBR109</td>
<td>Windows Server Administration</td>
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CYBR203  Advanced Operating Systems I   5
Quarter 4  CYBR103  Database / SQL Fundamentals   5
          CYBR201  Information Security I
          CYBR204  Advanced Operating Systems II   5  listed 2x in
          previous catalog
Quarter 5  CYBR202  Information Security II   5
          CYBR205  Mobile / Wireless Security   5
          CYBR206  Attack Vectors   5
Quarter 6  CYBR207  Network Attack Mitigation / Defense   5
          CYBR208  Network Scripting   5
          CYBR292  Independent Project Prior Coursework   5

General Education Requirements

Communications   5 credits required

ENGL175
ENGL&101  ENGLISH COMPOSITION I

Humanities/Social Sciences/Natural Sciences/Other   5 credits required

BIOL&160  GENERAL BIOLOGY
BIOL&175  HUMAN BIOLOGY WITH LAB
BIOL&241  ANATOMY & PHYSIOLOGY I
BIOL&242  HUMAN A&P II
BIOL&260  MICROBIOLOGY
CHEM&121  INTRODUCTION CHEMISTRY
CHEM&131  INTRODUCTION TO ORGANIC/BIOCHEMISTRY
CMST&102  INTRO TO MASS MEDIA
CMST&152  INTERCULTURAL COMMUNICATION
CMST&210  INTERPERSONAL COMMUNICATION
CMST&220  PUBLIC SPEAKING
ECON&201  MICROECONOMICS
NUTR&101  INTRO TO NUTRITION
POLS&101  INTRO TO POLITICAL SCIENCE
PSYC&100  GENERAL PSYCHOLOGY
PSYC&200  LIFESPAN PSYCHOLOGY
SOC&101  INTRO TO SOCIOLOGY

**Quantitative**  
5 credits required
MATH172  APPLIED BUSINESS MATH
MATH&141  PRECALCULUS I
MATH&142  PRECALCULUS II
MATH&146  INTRODUCTION TO STATISTICS
MATH&151  CALCULUS I
MATH&152  CALCULUS II

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

**Cybersecurity AAS-T (115 credits)**

**Required Courses**

Quarter 1  
CYBR101  Security Professional Practices  5
CYBR102  Operating System Fundamentals  5
CYBR104  IT Systems I  5

Quarter 2  
CYBR105  IT Systems II  5
CYBR106  Virtual Computing  5
CYBR107  Network Fundamentals I  5

Quarter 3  
CYBR108  Network Fundamentals II  5
CYBR109  Windows Server Administration  5
CYBR203  Advanced Operating Systems I  5

Quarter 4  
CYBR103  Database / SQL Fundamentals  5
CYBR201  Information Security I  5
CYBR204  Advanced Operating Systems II  5

Quarter 5  
CYBR202  Information Security II  5
CYBR205  Mobile / Wireless Security  5
CYBR206  Attack Vectors  5

Quarter 6  
CYBR207  Network Attack Mitigation / Defense  5
CYBR208  Network Scripting  5
CYBR292  Independent Project Prior Coursework  5

**General Education Requirements**

Communications  
5 credits required
ENGL175
ENGL&101  ENGLISH COMPOSITION I

**Humanities/Social Sciences/Natural Sciences/Other**  15 credits required *(Previously listed as 5)*

BIOL&160  GENERAL BIOLOGY  
BIOL&175  HUMAN BIOLOGY WITH LAB  
BIOL&241  ANATOMY & PHYSIOLOGY I  
BIOL&242  HUMAN A&P II  
BIOL&260  MICROBIOLOGY  
CHEM&121  INTRODUCTION CHEMISTRY  
CHEM&131  INTRODUCTION TO ORGANIC/BIOCHEMISTRY  
CMST&102  INTRO TO MASS MEDIA  
CMST&152  INTERCULTURAL COMMUNICATION  
CMST&210  INTERPERSONAL COMMUNICATION  
CMST&220  PUBLIC SPEAKING  
ECON&201  MICROECONOMICS  
NUTR&101  INTRO TO NUTRITION  
POLS&101  INTRO TO POLITICAL SCIENCE  
PSYC&100  GENERAL PSYCHOLOGY  
PSYC&200  LIFESPAN PSYCHOLOGY  
SOC&101  INTRO TO SOCIOLOGY

**Quantitative**  5 credits required

MATH172  APPLIED BUSINESS MATH  
MATH&141  PRECALCULUS I  
MATH&142  PRECALCULUS II  
MATH&146  INTRODUCTION TO STATISTICS  
MATH&151  CALCULUS I  
MATH&152  CALCULUS II

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

**Network System Support Certificate of Competency (60 credits)**

**Required Courses**

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Quarter 2
- CYBR105  IT Systems II  5
- CYBR106  Virtual Computing  5
- CYBR107  Network Fundamentals I  5

Quarter 3
- CYBR108  Network Fundamentals II  5
- CYBR109  Windows Server Administration  5
- CYBR203  Advanced Operating Systems I  5

General Education Requirements

Communications  5 credits required
- ENGL175
- ENGL&101  ENGLISH COMPOSITION I

Humanities/Social Sciences/Natural Sciences/Other  5 credits required
- BIOL&160  GENERAL BIOLOGY
- BIOL&175  HUMAN BIOLOGY WITH LAB
- BIOL&241  ANATOMY & PHYSIOLOGY I
- BIOL&242  HUMAN A&P II
- BIOL&260  MICROBIOLOGY
- CHEM&121  INTRODUCTION CHEMISTRY
- CHEM&131  INTRODUCTION TO ORGANIC/BIOCHEMISTRY
- CMST&102  INTRO TO MASS MEDIA
- CMST&152  INTERCULTURAL COMMUNICATION
- CMST&210  INTERPERSONAL COMMUNICATION
- CMST&220  PUBLIC SPEAKING
- ECON&201  MICROECONOMICS
- NUTR&101  INTRO TO NUTRITION
- POLS&101  INTRO TO POLITICAL SCIENCE
- PSYC&100  GENERAL PSYCHOLOGY
- PSYC&200  LIFESPAN PSYCHOLOGY
- SOC&101  INTRO TO SOCIOLOGY

Quantitative  5 credits required
- MATH172  APPLIED BUSINESS MATH
- MATH&141  PRECALCULUS I
- MATH&142  PRECALCULUS II
- MATH&146  INTRODUCTION TO STATISTICS
MATH&151  CALUCLUS I
MATH&152  CALCULUS II

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

### Computer Support Certificate of Training  30 credits

**Required Courses**

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