# Cybersecurity A.A.S.

Career Community:  Computer Technology and Networking
Curriculum Code: 1832
Effective: Fall 2022 – Summer 2027

## Description

This program is designed to provide the knowledge and skills needed to analyze security vulnerabilities, create a comprehensive incident-response plan, and implement the equipment, policies and procedures that protect a network and its related resources from unauthorized intrusion, information damage, or theft.  Behaving ethically, writing policies and procedures, security operating systems, installing, and administering contemporary intrusion detection systems, and firewalls, implementing network defenses and countermeasures, responding to intrusions, and utilizing system-wide, multi-layered, compliance-based approaches are emphasized. Students completing this curriculum may also be eligible to apply for certificates of completion in Cybersecurity Foundations Certificate (1833). Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

## Milestone

In addition to the required General Education courses in Math and English, completion of CITN 280 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

## Additional Information

To be awarded this degree, students must earn a minimum grade of 2.0 in each course.

## Contact Information

Contact the Computer Information Technologies Program in the West Campus Building, Room M103, telephone number 517-267-6406 or Student Services West Campus, West Campus Building, Room M016, telephone number 517-267-5452.

## General Education – Applied Degrees, Recommended Courses

(For the full list of options, see General Education)

- English Composition or Applied English – *Select one*
  ENGL 127, Business Writing, 3 credits / 3 billing hours

- English Composition (second course)/Communications or Applied Communications – *Select one*
  CITS 110, Help Desk Support Specialist, 3 credits / 3 billing hours
  COMM 110, Communication in the Workplace, 3 credits / 3 billing hours
  COMM 120, Dynamics of Communication, 3 credits / 3 billing hours
  COMM 130, Fundamentals Public Speaking, 3 credits / 3 billing hours

- Humanities and Fine Arts or Social Sciences or Applied Social Sciences – *Select one*
  MGMT 234, Diversity in the Workplace, 3 credits / 3 billing hours

- Mathematics or Applied Mathematics – *Select one*
  STAT 170, Introduction to Statistics, 4 credits / 4 billing hours

- Natural Sciences Lab or Applied Science and Technology Lab – *Select one*
  ISCI 131, Integrated Physical Science, 4 credits / 6 billing hours

## Program of Study Required Courses

| Course Code | Course Title | Credit / Billing Hours |
|---|---|---|
| CITC 282 | Ethical Hacking | 3 / 3 |
| CITC 285 | System Defense | 3 / 3 |
| CITC 287 | Cybersecurity Incident Response | 3 / 3 |
| CITC 290 | Cybersecurity Risk Management | 4 / 4 |
| CITF 140 | Information Technology Ethics | 3 / 3 |
| CITF 240 | IT Project Management | 3 / 3 |
| CITN 230 | Linux/UNIX Operating System | 3 / 3 |
| CITN 250 | Microsoft Network Server | 3 / 3 |
| CITN 280 | IT Security Foundations | 3 / 3 |
| CITP 110 | Intro to Programming – Python | 4 / 4 |
| CITS 125 | Computer Support: A+ Cert Prep | 6 / 6 |
| CITS 225 | Networking for PC Technicians | 3 / 3 |
| CITS 230 | Computer Virtualization | 3 / 3 |

## Program of Study Required Courses, Limited Choice – *Select one*

| Course Code | Course Title | Credit / Billing Hours |
|---|---|---|
| CITN 115 | IoT & Automation Fundamentals | 5 / 6 |
| CITN 222 | Wireless Networking & Security | 3 / 3 |
| CITS 285 | IT Professional Internship | 3 / 3 |

## Minimum Total Credit Hours
64 credits / 66 billing hours

**Recommended Course Sequence**

| Semester I |
| --- |
| Gen Ed – English Composition or Applied English |
| Gen Ed – Mathematics or Applied Mathematics |
| CITP 110 |
| CITS 125 |

| Semester II |
| --- |
| Gen Ed – English Composition (Second Course)/Communications or Applied Communications |
| CITF 140 |
| CITN 250 |
| CITS 225 |
| CITS 230 |

| Semester III |
| --- |
| Gen Ed - Natural Sciences Lab or Applied Science and Technology Lab |
| CITF 240 |
| CITN 230 |
| CITN 280 – Milestone course |
| Limited Choice |

| Semester IV |
| --- |
| Gen Ed - Humanities and Fine Arts or Social Sciences or Applied Social Sciences |
| CITC 282 |
| CITC 285 |
| CITC 287 |
| CITC 290 |

*LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.*