

CYBERSECURITY (PROFESSIONAL CERTIFICATE)

Award: Professional Certificate
Program of Study: Cybersecurity
Major Code: 1364

The certificate in Cybersecurity is designed to provide students with the knowledge and skills needed to engage in activities pertaining to protecting computer systems, networks, applications, and data. The program also prepares students for successfully completing internationally recognized certifications such as Certified Information Systems Security Professional (CISSP), CEH (Certified Ethical Hacker), etc.

All CMU certificate graduates are expected to demonstrate proficiency in specialized knowledge/applied learning, critical thinking, and personal and social responsibility. In addition to these campus-wide student learning outcomes, graduates of this major will be able to:

1. Identify strengths and weaknesses of competing cyber defense tools and defend a choice for a given situation. (Critical Thinking)
2. Write simple scripts in scripting languages (e.g., to automate system administration tasks). (Applied Learning)
3. Evaluate the security of computer systems, networks, and applications. (Applied Learning)
4. Demonstrate clear effective communication on the importance of cybersecurity. (Communication Fluency)
5. Demonstrate independent learning and use of new technologies in cybersecurity. (Specialized Knowledge)

Requirements

Each section below contains details about the requirements for this program. Select a header to expand the information/requirements for that particular section of the program's requirements.

To print or save an overview of this program's information, including the program description, learning outcomes, requirements, suggested course sequencing (if applicable), and advising and graduation information, scroll to the bottom of the left-hand navigation menu and select "Print Options." This will give you the options to either "Send Page to Printer" or "Download PDF of This Page." The "Download PDF of This Page" option prepares a much more concise presentation of all program information. The PDF is also printable and may be preferable due to its brevity.

Institutional Certificate Requirements

The following institutional requirements apply to all CMU Professional Certificates. Specific programs may have different requirements that must be met in addition to institutional requirements.

- Consists of 5-59 semester hours.
- Primarily 300-400 level courses.
- At least fifty percent of the credit hours must be taken at CMU.
- 2.00 cumulative GPA or higher in all courses taken to satisfy program requirements.

- A grade lower than "C" in the program of study will not be counted toward meeting the certificate's requirements.
- A course may only be used to fulfill one requirement for each degree/certificate.
- Pre-collegiate courses (usually numbered below 100) cannot be used for graduation.
- Capstone exit assessment/projects (e.g., Major Field Achievement Test) requirements are identified under Program-Specific Certificate Requirements.
- The Catalog Year determines which program sheet and certificate requirements a student must fulfill in order to graduate. Visit with your advisor or academic department to determine which catalog year and program requirements you should follow.
- See "Requirements for Undergraduate Degrees and Certificates" in the catalog for a complete list of graduation requirements.

Program Specific Certificate Requirements

(9 semester hours, must earn a grade of "C" or better in each course.)

Code	Title	Semester Credit Hours
Required Courses		
CSCI 370	Computer Security ¹	3
CSCI 420	Software Security	3
CSCI 465	Network/Application Security	3
Total Semester Credit Hours		9

¹ Consult with a Computer Science faculty advisor regarding prerequisite classes that might be necessary to take.

Suggested Course Plan

First Year		Semester Credit Hours
Fall Semester		
CSCI 370	Computer Security	3
Semester Credit Hours		3
Spring Semester		
CSCI 420	Software Security	3
Semester Credit Hours		3
Second Year		
Fall Semester		
CSCI 465	Network/Application Security	3
Semester Credit Hours		3
Total Semester Credit Hours		9

Advising and Graduation Advising Process and DegreeWorks

Documentation on the pages related to this program is intended for informational purposes to help determine what courses and associated requirements are needed to earn a certificate. Some courses are critical to complete in specific semesters while others may be moved around. Meeting with an academic advisor is essential in planning courses and discussing the suggested course sequencing. It is ultimately the

student's responsibility to understand and fulfill the requirements for their intended certificate.

DegreeWorks is an online degree audit tool available in MAVzone. It is the official record used by the Registrar's Office to evaluate progress towards a certificate and determine eligibility for graduation. Students are responsible for reviewing their DegreeWorks audit on a regular basis and should discuss questions or concerns with their advisor or academic department head. Discrepancies in requirements should be reported to the Registrar's Office.

Graduation Process

Students must complete the following in the first two months of the semester prior to completing their certificate requirements (for one-semester certificates, complete in the first week of class):

- Review their DegreeWorks audit and create a plan that outlines how unmet requirements will be met in the final semester.
- Meet with their advisor and modify their plan as needed. The advisor must approve the final plan.
- Submit the "Intent to Graduate" form to the Registrar's Office to officially declare the intended graduation date and commencement ceremony plans.
- Register for all needed courses and complete all requirements for each degree sought.

Submission deadlines and commencement details can be found on the [Graduation](#) web page.

If a student's petition for graduation is denied, it will be their responsibility to apply for graduation in a subsequent semester. A student's "Intent to Graduate" does not automatically move to a later graduation date.