

# CYBERSECURITY COMPUTATIONAL FOUNDATIONS, MINOR

Requirements for a minor may be completed at any campus location offering the specified courses for the minor. Students may not change from a campus that offers their major to a campus that does not offer their major for the purpose of completing a minor.

## Program Description

The Cybersecurity Minor offered by the Department of Computer Science and Engineering is designed for students in computational majors who wish to acquire the technical depth to design and construct secure cyber systems. Building upon a core computer science foundation the minor includes courses in computer security, mobile and wireless security, software security and networking. Additional courses in the minor provide areas of application such as operating systems, database systems, and computer architecture, in which issues of security arise. The minor prepares students for careers as technical professionals working with secure cyber systems and for graduate study in computer, network and systems security.

## Program Requirements

Requirement	Credits
Requirements for the Minor	18

## Requirements for the Minor

To be ready to take the courses in the minor students must complete the following courses (or their equivalents): CMPSC 121 or CMPSC 131, CMPSC 122 or CMPSC 132, CMPSC 221, CMPSC 311, CMPSC 360, CMPEN 270/CMPEN 271, CMPEN 331, and STAT 318.

A grade of C or better is required for all courses in the minor, as specified by Senate Policy 59-10 (<https://senate.psu.edu/policies-and-rules-for-undergraduate-students/59-00-minors-and-certificates/#59-10>). In addition, at least six credits of the minor must be unique from the prescribed courses required by a student's major(s).

Code	Title	Credits
<b>Prescribed Courses</b>		
<i>Prescribed Courses: Require a grade of C or better</i>		
CMPEN 362	Communication Networks	3
CMPSC 443	Introduction to Computer and Network Security	3
CMPSC 473	Operating Systems Design & Construction	3
<b>Additional Courses</b>		
<i>Additional Courses: Require a grade of C or better</i>		
Select 3-6 credits from the following:		3-6
CMPEN 462	Wireless Communications Systems and Security	
CMPSC 447	Software Security	
<b>Supporting Courses and Related Areas</b>		
<i>Supporting Courses and Related Areas: Require a grade of C or better</i>		
Select 3-6 credits from the following: <sup>1</sup>		3-6
CMPEN 431	Introduction to Computer Architecture	
CMPSC 431		
CMPSC 461	Programming Language Concepts	

CMPSC 464 Introduction to the Theory of Computation

CMPSC 475 Applications Programming

## Academic Advising

The objectives of the university's academic advising program are to help advisees identify and achieve their academic goals, to promote their intellectual discovery, and to encourage students to take advantage of both in-and out-of class educational opportunities in order that they become self-directed learners and decision makers.

Both advisers and advisees share responsibility for making the advising relationship succeed. By encouraging their advisees to become engaged in their education, to meet their educational goals, and to develop the habit of learning, advisers assume a significant educational role. The advisee's unit of enrollment will provide each advisee with a primary academic adviser, the information needed to plan the chosen program of study, and referrals to other specialized resources.

READ SENATE POLICY 32-00: ADVISING POLICY (<https://senate.psu.edu/policies-and-rules-for-undergraduate-students/32-00-advising-policy/>)

## University Park

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## Contact

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