

COMPUTER SCIENCE: CYBERSECURITY

Requirements

Degree Requirements

This major is available as a bachelor of arts or bachelor of science degree, as defined in the section on degree requirements (<https://catalog.linfield.edu/degrees-and-programs/undergraduate/ba-bs-bsn/>) for all majors in this catalog.

Major Requirements

40 COMP credits, plus an additional 12-13 MATH credits, for a combined total of 52-53 credits.

Code	Title	Credits
COMP 160	BEG. PROGRAMMING AND PROBLEM-SOLVING	4
COMP 161	BEGINNING PROGRAMMING: OBJECTS	4
COMP 260	DATABASE MANAGEMENT SYSTEMS	4
COMP 262	DATA STRUCTURES AND ALGORITHMS	4
COMP 377	COMPUTER ARCHITECTURE	4
COMP 430	COMPUTER SECURITY	4
COMP 431	ADVANCED NETWORK COMMUNICATION & SECURITY	4
COMP 490	CAPSTONE PROJECT	4
MATH 170	CALCULUS I	5
MATH 230	DISCRETE MATHEMATICS	4
Select an additional 8 credits from the following		8
COMP 305	SOFTWARE ENGINEERING	
COMP 370	ADVANCED TOPICS IN ALG, COMPLEX, INTELL	
COMP 375	MOBILE DEVELOPMENT	
COMP 405	PLATFORM-BASED SOFTWARE DEVELOPMENT	
COMP 480	INDEPENDENT STUDY	
COMP 485	ADVANCED TOPICS IN COMPUTER SCIENCE	
COMP 487	SOFTWARE ENGINEERING INTERNSHIP	
Select one of the following:		3-4
MATH 175	CALCULUS II	
MATH 220	INTRODUCTION TO PROOFS	
MATH 250	LINEAR ALGEBRA	
Total Credits		52-53

- ability to develop in-depth understanding of at least one specialty area of computer science through independent research and, wherever possible, internships;
- ability to understand and function well in an industrial or commercial environment through attachments or internship;
- teamwork, planning, time management skills, problems solving and decision-making skills.

Student Learning Outcomes

- understanding of the fundamental principles and concepts of computer science;
- in-depth knowledge of software development, networks and systems development and administration, and information management;
- ability to plan, design, implement, and maintain a hardware, software, or networked project both individually and as part of a group;
- ability to work in multiple programming environments, software development languages, and design paradigms;
- ability to communicate and present information orally and to write with clarity;