Computer Science

Degree Type
Bachelor of Science

Objective:

This program prepares one for further study in the technology and application of computing or a career in business, science, or industry. Selected job titles of graduates include: programmer, software engineer, network analyst, systems analyst, game programmer, system administrator, web developer, web designer.

Administrator: Chair, Department of Mathematics and Computer Science

Requirements: 62-72 credits, including 45-55 in computer science

Required Courses:

Item #	Title	Credits
COMP1220	Introduction to Computer Science	3
COMP2220	Computer Programming I	3
COMP2220L	Computer Programming I Laboratory	1
	COMP2040 or COMP2260/COMP2260L	3-4
COMP2630	Computer Architecture	3
COMP2750	Data Structures	3
COMP3330	Database Design and Programming	3
COMP3330L	Database Design and Programming Laboratory	1
COMP3370	Systems Analysis and Design	3
COMP3430	Operating Systems I	3
COMP3430L	Operating Systems I Laboratory	1
COMP3630	Networks and Data Communications I	3
COMP3970	Introduction to Senior Project	1
	COMP4680 or COMP4970 (4 required)	4
COMP4980	Senior Seminar/Capstone	1
MATH2310	Discrete Mathematics	3
MATH2510	Calculus I	4
MATH2520	Calculus II	4
MATH3240	Probability and Statistics I	3
MATH3320	Linear Algebra	3

COMP4980 must be taken at Northwest Nazarene University.

Complete at least one of the following concentrations:

Computer Science Core Concentration: 9 credits

Item #	Title	Credits
COMP3640	Networks and Data Communications II	3
COMP3750	Algorithm Analysis	3

Choose one 3 credit course from:

Item #	Title	Credits
	Any additional Computer Science course numbered 3000 or above	3
	Any additional Mathematics course numbered 3000 or above	3

Cybersecurity Concentration: 18 credits

Item #	Title	Credits
COMP3470	Cybersecurity Principles	3
COMP3480	Cyber Defense	3
COMP3640	Networks and Data Communications II	3
COMP4470	Cyber Warfare	3
COMP4480	Cyber Forensics and Recovery	3
	COMP4330 or COMP4340	3

Data Science Concentration: 18 credits

Item #	Title	Credits
COMP3750	Algorithm Analysis	3
COMP4330	Machine Learning	3

Choose four courses from:

Item #	Title	Credits
COMP3230	Introduction to Spatial Analysis	3
COMP3810	Parallel Computation	3
COMP4220	Artificial Intelligence	3
COMP4340	Advanced Database Design and Programming	3
MATH3250	Probability and Statistics II	3
	Total Credits	**62-72**