

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
COMP4750	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
COMP4750	Algorithm Analysis	3
COMP4330	Machine Learning	3

Choose four courses from:

Item #	Title	Credits
COMP3230	Introduction to Spatial Analysis	3
COMP4810	Parallel Computation	3
COMP4220	Artificial Intelligence	3
COMP4340	Advanced Database Design and Programming	3
MATH3250	Probability and Statistics II	3

Accelerated Master of Science Pathway

NNU undergraduate students wishing to begin coursework toward a Master of Science degree the final year of their bachelor's degree program have the following options. NNU in collaboration with Boise State University (BSU), is works with its students to apply for an accelerated master's degree program at BSU. This accelerated program gives bachelor's degree students a "fast-track" option to pursue their Master of Science degree at BSU. Upon successful completion of this 4+1 model, the student will have earned a Bachelor of Science degree from NNU and the potential of completing BSU's Master of Science (MS) in Computer Science in one additional year.

Prior to their final year in their bachelor's program, NNU students must apply by April 30 for admission to BSU's Accelerated Master of Science program. Students must also apply to NNU's graduate program as a non-degree seeking student.

Students who have been accepted into the BSU program will be able to apply two NNU graduate courses to the BSU Master of Science degree as well as their NNU Bachelor of Science degree. Students admitted into NNU's graduate program may choose to take additional 4000-level courses at the 5000-level.

Bachelor of Science Courses		CR	Approved Graduate Level Courses		CR
COMP4220	Artificial Intelligence	3	COMP5220	Artificial Intelligence	3
COMP4330	Machine Learning	3	COMP5330	Machine Learning	3
COMP4340	Advanced Database Design and Programming	3	COMP5340	Advanced Database Design and Programming	3
COMP4470	Cyber Warfare	3	COMP5470	Cyber Warfare	3
COMP4480	Cyber Forensics and Recovery	3	COMP5480	Cyber Forensics and Recovery	3
COMP4750	Algorithm Analysis	3	COMP5740	Algorithm Analysis	3
COMP4810	Parallel Computation	3	COMP5810	Parallel Computation	3

Total Credits

62-72
