

# Computer Science

## Degree Type

Bachelor of Arts

## Objective:

This program is for students who wish to pursue a liberal arts degree with some specialization in computer science, but do not intend to enter graduate school in computer science. 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:** 61-62 credits including 35-37 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
COMP3630	Networks and Data Communications I	3
COMP3970	Introduction to Senior Project	1
	COMP4680 or COMP4970 (4 required)	4
COMP4980	Senior Seminar/Capstone	1
MATH2240	Elementary Statistics	3
MATH2310	Discrete Mathematics	3
	Any additional Computer Science course numbered 3000 or above	3

[COMP4980](#) must be taken at Northwest Nazarene University

**Concentration:** Twenty (20) credits in a specific area of concentration approved by the chair of the Department of Mathematics and Computer Science.

An additional major, co-major, or minor at NNU will qualify in fulfillment of an area of concentration.

## Cybersecurity Concentration

<b>Item #</b>	<b>Title</b>	<b>Credits</b>
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

Two (2) additional credits in either Computer Science or a discipline approved by the chair of the Department of Mathematics and Computer Science.

## Data Science Concentration

<b>Item #</b>	<b>Title</b>	<b>Credits</b>
COMP3750	Algorithm Analysis	3
COMP4330	Machine Learning	3

### Choose three courses from:

<b>Item #</b>	<b>Title</b>	<b>Credits</b>
COMP3230	Introduction to Spatial Analysis	3
COMP3810	Parallel Computation	3
COMP4220	Artificial Intelligence	3
COMP4340	Advanced Database Design and Programming	3

Five (5) additional credits in either Computer Science or a discipline approved by the chair of the Department of Mathematics and Computer Science.

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**Total Credits**

**58-60**