

# Computer Science Program Assessment Plan

## Mission

Our mission to our majors and minors is to spark a life-long interest in learning and to provide them with

- a spirit of fellowship and a learning community in which they are able to develop their mathematical and computing abilities to their full potential,
- the foundation necessary to begin a career in computer science and related fields, and
- an understanding of how a liberal arts education will enhance their careers and their lives

In addition, we impart on our computer science majors

- programming and problem solving skills that transcend specific environments and tool sets, • the ability to use those skills to design and implement solutions to complex problems, and • the ability to succeed in graduate school and career positions.

## Goals

Graduating senior computer science majors should be able to

1. develop a software project in a group, choosing appropriate hardware and tools,
2. understand computer code written by others,
3. solve complex problems by developing software solutions, and
4. present their work convincingly orally and in writing.

## Learning Outcomes

Upon completion of a degree in computer science, students should demonstrate

1. the ability to construct software to solve complex problems,
2. a basic understanding of the core theoretical constructs of computer science,
3. the ability to learn new languages and computing systems, and
4. the ability to apply modern software development tools and techniques.

## Matrices mapping courses to learning outcomes

Expected levels of mastery per class (M=mastery, P=proficient, D=developing, B=beginner)

	LO 1	LO 2	LO 3	LO 4
CSCI 152 Fundamentals of Programming	x (B)		x (B, D)	
CSCI 241 Discrete Mathematics		x (B)		
CSCI 251 Intro to Computer Science	x (B, D)		x (B, D)	x (B, D)

CSCI 261 Data Structures	x (B, D)		x (B, D)	x (B, D)
CSCI 262 Algorithms	x (B, D)	x (B,D)	x (B, D)	
CSCI 277 Application Development I	x (B, D)		x (B, D)	
CSCI 282 Foundations of Game Dev	x (B, D)		x (B, D)	
CSCI 310 Simulation and Game Programming	x (B,D)		x (D, P)	
CSCI 315 Advanced Game Dev	x (D, P)		x (D, P)	
CSCI 340 Numerical Analysis	x (D, P)			
CSCI 342 Computer Systems Concepts		x (D)	x (D,P)	
CSCI 357 Application Development II	x (P, M)		x (P,M)	x (P ,M)
CSCI 371 Software Engineering	x (P, M)			x (P, M)
CSCI 395 Applied Projects	x (D, P)			
CSCI 453 Formal Language Theory		x (P,M)		
CSCI 454 Compiler Theory		x (P,M)	x (P,M)	
CSCI 461 Artificial Intelligence	x (P, M)	x (P,M)		
CSCI 475 Game Dev Practicum	x (P, M)			x (P, M)
CSCI 495 Research and Development	x (P, M)			x (P, M)

### Three-Year Assessment Plan

We assess all learning outcomes during each three-year period. The schedule for mathematics appears below.

Year 1 – assess learning outcomes 2

Year 2 – assess learning outcomes 3

Year 3 – assess learning outcome 1 and 4

The academic year 2025-26 academic Year 1 in this cycle.