

**NOVA COLLEGE-WIDE COURSE CONTENT SUMMARY
CSC 200 – INTRODUCTION TO COMPUTER SCIENCE (4 CR.)**

Course Description

Provides broad introduction to computer science. Discusses architecture and function of computer hardware, including networks and operating systems, data and instruction representation and data organization. Covers software, algorithms, programming languages and software engineering. Discusses artificial intelligence and theory of computation. Includes a hands-on instructional component. Lecture 4 hours per week.

General Course Purpose

This course is primarily intended for Computer Science majors. Tools for computer programming, problem analysis, algorithm development, and good programming style will be covered. A high-level computer language is introduced to implement solutions on a computer.

Course Prerequisites/Corequisites

Prerequisite: Placement into ENG 111 and placement into MTH 163 or MTH 166 or equivalent.

Course Objectives

Upon completion of this course, the student will be able to:

- Define basic concepts of computer system architecture, networks, operating systems and data representation and organization.
- Define basic concepts of software engineering, theory of computations, programming languages and artificial intelligence.
- Use a GUI programming environment and console to edit and test computer programs.
- Analyze a simple problem and develop an algorithm for its solution.
- Implement an algorithm in a high-level computer language, demonstrating good style and appropriate documentation using simple control structures, subprograms, and parameter passing.

Major Topics To Be Included

- Survey of Computer Science
 - Computer System Architecture
 - Computer Networks
 - Operating Systems
 - Data Representation and Organization
 - Software Engineering
 - Algorithm and Theory of Computation
 - Programming Languages
 - Artificial Intelligence and Other Topics

- II. Software Development
 - Problem Analysis and Algorithm Development
 - Programming Tools
 - Programming Style, Documentation and Program Testing
 - Data Types and Operations
 - Control Structures
 - Input/output
 - Subprograms and Parameters
 - Introduction to Object Oriented Programming

Suggested Time Allocation Per Topic

In order to standardize the core topics of CSC 200 so that a course taught at one campus resembles the same course taught at another campus, the following student-contact-hour minima per topic have been adopted. Of course, the topics cannot be followed sequentially. Many topics are taught best as an integrated whole, often revisiting the topic several times, each time at a higher level. There are normally 64 student-contact-hours per semester.

Ref	Topic	Hours	Percent
I	Survey of Computer Science	16	25.00%
II	Software Development	40	62.50%
	Exams and quizzes	8	12.50%
	Total	64	100.00%