

COURSE OUTLINE

Revision: Mike Steffancin, February 2008

DEPARTMENT:	Academic Programs
CURRICULUM:	Computer Science
COURSE TITLE:	Intro to Computer Programming
COURSE NUMBER:	CSC 110
TYPE OF COURSE:	Academic Transfer
Special Requirement Met:	Quantitative/Symbolic Reasoning
COURSE LENGTH:	1 quarter
CREDIT HOURS:	5
LECTURE HOURS:	55
LAB HOURS:	0
CLASS SIZE:	25
PREREQUISITES:	MATH 098 or MATH 106

COURSE DESCRIPTION:

Overview of computer program design and problem solving. Topics include problem analysis, development, debugging and testing. Other topics include using decision and loop structures, to develop a variety of programs to solve scientific and technical problems. Programming language may vary.

STUDENT LEARNING OUTCOMES ADDRESSED:

1. Critical Thinking and Problem Solving – These skills are developed by utilizing multiple analysis and design techniques throughout the course.
2. Computation – Computation and algorithm analysis are used to study programming and general computer science.
3. Technology and Information Literacy – These are foundational components to this course, as the students must use current technology (both hardware and software) while accessing information from a variety of resources.

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STUDENT LEARNING OUTCOMES ADDRESSED: (cont.)

4. Personal Responsibility – Achievement is stressed throughout the course by enabling and assisting the students in the development of software systems, and encouraging students to take pride in their accomplishments.

GENERAL COURSE OBJECTIVES:

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

1. An acquired knowledge of fundamental principles, themes, and issues central to the field of computer science.
2. Modern programming techniques and methods.
3. Applications of both the structured and object-oriented paradigms.
4. Ability to identify and classify control structures common to all programming languages.
5. Proficiency in writing programs using Visual Basic, Matlab or other language by understanding procedures and modular design, controlled repetition, arrays, sequential and random-access files, displaying data graphically, and an overview of the object-oriented paradigm.

TOPICAL OUTLINE:

I. Intro to Computers	2
II. Introduction to programs	8
III. Variables, constants and calculations	6
IV. Conditionals	6
V. Control Structures and the Structured Paradigm	8
VI. Procedures, menus	7
VII. Classes	7
VIII. Loops, lists	7
IX. Arrays	4
Total hours	55

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CSC 110 CO
 Course Prefix and Number: CSC 110
 Course Title: Introduction to Computer Programming

SLO #	Included in Course Objective Number	SSCC Student Learning Outcomes
SLO 1.1		Communication - Read and listen actively
SLO 1.2		Communication - Speak and write effectively
SLO 2.1	2	Computation - Use mathematical operations
SLO 2.2	2	Computation - Apply quantitative skills
SLO 2.3	2	Computation - Identify, interpret, and utilize higher level mathematical and cognitive skills
SLO 3.1		Human Relations - Use social interactive skills to work in groups effectively
SLO 3.2		Human Relations - Recognize the diversity of cultural influences and values
SLO 4.1	1	Critical Thinking and Problem Solving -
SLO 5.1	3	Technology - Select and use appropriate technological tools
SLO 6.1	4	Personal Responsibility - Be motivated and able to continue learning and adapt to change
SLO 6.2	4	Personal Responsibility - Value one's own skills, abilities, ideas and art
SLO 6.3	4	Personal Responsibility - Take pride in one's work
SLO 6.4		Personal Responsibility - Manage personal health and safety
SLO 6.5		Personal Responsibility - Be aware of civic and environmental issues
SLO 7.1	3	Information Literacy - Access and evaluate information
SLO 7.2	3	Information Literacy - Use information to achieve personal, academic, and career goals, as well as to participate in a democratic society

PREPARED BY: Mike Steffancin
 DATE: August 2009