

**SU DEPARTMENT OF MATHEMATICS & COMPUTER SCIENCE**  
**SYLLABUS (Tentative)**  
**COSC 117 Programming Fundamentals**

**Description:** A first course for students interested in computer programming, which involves solving problems by designing, implementing, and testing algorithms. Implementation will be done in opensource object-oriented languages. Emphasis throughout the course is on problem solving and learning to develop computer programs that are readable, well-documented, efficient, cross- platform and correct. Students will also be introduced to Internet applications. (Three hours lecture and two hours lab per week.)

**Prerequisite:** None

**Texts:** See Instructor for Textbook Information.

	Weeks
<b>Introduction to Programming</b>	
Integrated Development Environment, Software Development Method with emphasis on Object Oriented Design. Algorithms and story boards.	2.0
<b>Object-Oriented Design &amp; Programming</b>	6.0
Top-down design. Class and Method Definitions, Program Design with Methods, Fundamental instructions, Objects, control flow.	
<b>Control Flow &amp; Data Structures</b>	3.0
Loops & repetition. If statements and branching, Lists and Arrays.	
<b>Internet Applications and Graphics</b>	1.0
Introduction to web programming. Integrating web pages and programs.	
<b>Event Programming</b>	1.0
Handling mouse clicks and key presses.	
<b>Testing</b>	<u>1.0</u>
	14.0

**EVALUATION**

Programs (Designs & Implementations)	30 - 40%
Labs	10 - 20%
Tests	30 - 45%
Final Exam	20 - 25%

WAC: Program design and documentation of programs require extensive writing that meets the writing across the curriculum goal of the university.

NOTE: ONCE A STUDENT HAS RECEIVED CREDIT, INCLUDING TRANSFER CREDIT, FOR A COURSE, CREDIT MAY NOT BE RECEIVED FOR ANY COURSE WITH MATERIAL THAT IS EQUIVALENT TO IT OR IS A PREREQUISITE FOR IT.