

GENERAL INFORMATION											
Name: School of Computer and Engineering Technology	Phone #: 77021										
Course Prefix/Number: COP1334	Course Title: Introduction to Object-Oriented Programming in C++										
Number of Credits: 4											
Degree Type	<input type="checkbox"/> B.A. <input type="checkbox"/> B.S. <input type="checkbox"/> B.A.S <input type="checkbox"/> A.A. <input checked="" type="checkbox"/> A.S. <input type="checkbox"/> A.A.S. <input type="checkbox"/> C.C.C. <input type="checkbox"/> A.T.C. <input type="checkbox"/> V.C.C										
Date Submitted/Revised: 07-28-2008	Effective Year/Term: 2009-1										
<input type="checkbox"/> New Course Competency <input checked="" type="checkbox"/> Revised Course Competency											
Course to be designated as a General Education course (part of the 36 hours of A.A. Gen. Ed. coursework): <input type="checkbox"/> Yes <input type="checkbox"/> No											
The above course links to the following Learning Outcomes: <table style="width: 100%; border: none;"> <tr> <td><input type="checkbox"/> Communication</td> <td><input type="checkbox"/> Social Responsibility</td> </tr> <tr> <td><input checked="" type="checkbox"/> Numbers / Data</td> <td><input type="checkbox"/> Ethical Issues</td> </tr> <tr> <td><input checked="" type="checkbox"/> Critical thinking</td> <td><input checked="" type="checkbox"/> Computer / Technology Usage</td> </tr> <tr> <td><input type="checkbox"/> Information Literacy</td> <td><input type="checkbox"/> Aesthetic / Creative Activities</td> </tr> <tr> <td><input type="checkbox"/> Cultural / Global Perspective</td> <td><input type="checkbox"/> Environmental Responsibility</td> </tr> </table>		<input type="checkbox"/> Communication	<input type="checkbox"/> Social Responsibility	<input checked="" type="checkbox"/> Numbers / Data	<input type="checkbox"/> Ethical Issues	<input checked="" type="checkbox"/> Critical thinking	<input checked="" type="checkbox"/> Computer / Technology Usage	<input type="checkbox"/> Information Literacy	<input type="checkbox"/> Aesthetic / Creative Activities	<input type="checkbox"/> Cultural / Global Perspective	<input type="checkbox"/> Environmental Responsibility
<input type="checkbox"/> Communication	<input type="checkbox"/> Social Responsibility										
<input checked="" type="checkbox"/> Numbers / Data	<input type="checkbox"/> Ethical Issues										
<input checked="" type="checkbox"/> Critical thinking	<input checked="" type="checkbox"/> Computer / Technology Usage										
<input type="checkbox"/> Information Literacy	<input type="checkbox"/> Aesthetic / Creative Activities										
<input type="checkbox"/> Cultural / Global Perspective	<input type="checkbox"/> Environmental Responsibility										
Course Description (limit to 50 words or less, <b>must</b> correspond with course description on Form 102):  This is an introductory course in C++ programming recommended for Computer Science and Computer Information Systems majors. Students learn the syntax and rules of the C++ language, including how to code, compile, and execute programs. Students will learn program design, structured modular programming arrays, report generation, and file processing. No previous computer courses are required although CGS 1060 is recommended. Laboratory fee. (3 hr. lecture; 2 hr. lab).											
Prerequisite(s): none	Corequisite(s): none										

**Course Competencies:** (for further instruction/guidelines go to: <http://www.mdc.edu/asa/curriculum.asp>)

**Competency 1: The student will demonstrate an understanding of the program development process by:**

- a. Writing pseudocode for program development before writing the code.
- b. Applying the techniques of functional decomposition to break a programming design problem into smaller pieces.
- c. Incorporating adequate and meaningful comments into the source code of programming projects.
- d. Participating in a team to develop a solution to a problem.
- e. Testing and debugging programming logic and code.

**Competency 2: The student will demonstrate a mastery of basic C++ fundamental data types and operators by:**

- a. Using all the data types (float points, integers, long, double, boolean, characters, and strings) available in C++ for programming assignments.
- b. Using descriptive and meaningful names in programming assignments.
- c. Creating programs that use casting of data types.

Revision Date: 07-17-2008

Approved By Academic Dean Date: \_\_\_\_\_

Reviewed By Director of Academic Programs Date: \_\_\_\_\_

- d. Creating programs that use all existing operator(s) (+, -, \*, %, /, =) available in C++.
- e. Explaining the properties of a variable such as its name, value, scope, persistence, and size.

**Competency 4: The student will demonstrate an understanding of conditional statements by:**

- a. Creating programs that use if, else if, and else statements to evaluate conditions.
- b. Creating a program that uses logical operators (and, not, or) in conditional statements.
- c. Creating a program that uses comparison operators (==, <, >, <=, >=) in conditional statements.
- d. Creating a program that uses the Switch, Case, and Break conditional structure to evaluate the conditions.
- e. Creating a program that uses nested conditional statements.

**Competency 5: The student will demonstrate an understanding of loops by:**

- a. Creating programs that use while, do-while and loops to create repetition.
- b. Analyzing existing programs with loops and determining the results.
- c. Creating programs that use nested loops.

**Competency 6: The student will demonstrate a mastery of functions by:**

- a. Creating functions that use call-by-reference and call-by-value.
- b. Modifying existing programs that use functions.
- c. Creating programs that include and use existing C++ Library functions.
- d. Creating a program that uses functions to return values.
- e. Identifying the scope of variables in functions.

**Competency 7: The student will demonstrate an understanding of arrays by:**

- a. Explaining the form and uses of array.
- b. Creating a program that uses single and multi-dimensioned arrays.
- c. Evaluating existing programs that search arrays.

**Competency 8: The student will demonstrate an understanding of structures by:**

- a. Defining the uses of structures.
- b. Writing a program that uses structures.

**Competency 9: The student will demonstrate an understanding of the input and output functions of a program by:**

- a. Writing a program that reads an existing sequential file.
- b. Writing a program that creates a sequential file.
- c. Writing a program that produces formatted printed output.
- d. Modifying a program that produces formatted printed output.

Revision Date: 07-17-2008

Approved By Academic Dean Date: \_\_\_\_\_

Reviewed By Director of Academic Programs Date: \_\_\_\_\_