## COURSE SYLLABUS

<table>
<thead>
<tr>
<th>Course Title:</th>
<th>Object-Oriented Programming Using C++</th>
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<tbody>
<tr>
<td>Department:</td>
<td>Business and Technology</td>
</tr>
<tr>
<td>Curriculum:</td>
<td>Computer Information system</td>
</tr>
<tr>
<td>Date submitted:</td>
<td>Sept. 22, 2014</td>
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### Course Code: (eg. ACC 101)
CSC*213

### Course Type:
X

### Prerequisites:
C- or better in Programming Logic and Design with Visual Basic (CSC*126), or permission of Program Coordinator

### Elective Type:
G/LAS

### Credit Hours:
3

### Contact Hours:
- Lecture: 1.5
- Clinical: 0
- Lab: 1.5
- Studio: 0
- Other: 0
- TOTAL: 3

### Class Maximum:
24

### Semesters Offered:
F/Sp/Su

### Course Descriptors:
Make certain that the course descriptors are consistent with college and Board of Trustees policies, and the current course numbering system.

### Catalog Course Description:
Introduces students to object oriented programming in Microsoft’s .net environment. Topics covered include basic principles of programming using C++, algorithmic and procedural problem solving, program design and development, basic data types, control structures, functions, arrays, pointers, and introduction to classes for programmer-defined data types.

### Topical Outline:
- 1. Introduction to C++
- 2. Expression and interactivity
- 3. Making Decision
- 4. Looping
- 5. Functions and subroutins
- 6. Introduction to Classes and Objects
- 7. Arrays
- 8. Searching and Sorting
- 9. Pointers

### Outcomes:
Upon successful completion of this course, the student will be able to do the following:

#### COURSE:
At the end of semester, student will be able to:
<table>
<thead>
<tr>
<th>Demonstrate as evidence that they have mastered the course content.</th>
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<tbody>
<tr>
<td>1. develop Programming algorithms</td>
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<td>2. test and Solve computer Problems using algorithms</td>
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<td>3. demonstrate an understanding of the software development process by using requirements to design, implement and test C++ programs</td>
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<td>4. create, compile and run C++ programs</td>
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<td>5. create and use Objects</td>
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**PROGRAM:** *(Numbering reflects Program Outcomes as they appear in the college catalog)*

1. Demonstrate and apply algorithmic thinking ability

**GENERAL EDUCATION:** *(Numbering reflects General Education Outcomes as they appear in the college catalog)*

2. **Critical Analysis/Logical Thinking** - Students will be able to organize, interpret, and evaluate evidence and ideas within and across disciplines; draw reasoned inferences and defensible conclusions; and solve problems and make decisions based on analytical processes.

   **Demonstrates:** Identifies the issue(s); formulates an argument; explains and analyzes relationships clearly; draws reasonable inferences and conclusions that are logical and defensible; provides support by evaluating credible sources of evidence necessary to justify conclusions.

   **Does Not Demonstrate:** Identifies few or no issues; formulates an argument without significant focus; provides an unclear explanation of analysis and relationships; drawing few reasonable inferences and conclusions that are illogical and indefensible; provides little to no support using credible sources of evidence necessary to justify conclusions.

**Evaluation:**

List how the above outcomes will be assessed

1. Students will write short programs to demonstrate basic skills.
2. Students will write at least two long programs to demonstrate the ability to solve a complex problem.
3. One or more of these projects will be uploaded to ePortfolio.
4. Written examinations

**Instructional Resources:**

List library (e.g. books, journals, on-line resources), technological (e.g. Smartboard, software), and other resources (e.g. equipment, supplies, facilities) required and desired to teach this course.

**Required:**

1. Room will require Media Control System (Computer and multimedia projector)
2. Microsoft Visual studio
3. Computer Lab

**Textbook(s):**

Textbook: Refer to current academic year printout