Course: ENGR 22200 – Object Oriented Programming

Replacement Course: CS 22800 – Object Oriented Programming

Type of Course: Required for EE and CmpE programs

Catalog Description: This course will introduce the fundamentals of object oriented programming in C++. Students should gain understanding of the implementation of overloading, inheritance, polymorphism, and templates. A rudimentary introduction to Java is also included.

Credits: 1

Contact Hours: 1

Prerequisite Courses: None

Corequisite Courses: ENGR 221

Prerequisites by Topics: Proficiency in C programming language


Course Objectives: Introduction to object oriented programming principles in C++. Programming in C++ to solve engineering problems.

Course Outcomes: Students who successfully complete this course will have demonstrated an ability to:

1. use object oriented programming in C++ to solve basic engineering problems. (a, e, k, 1, 2, 6)
2. understand the use of classes and access control of class members in C++. (a, e, k, 1, 2, 6)
3. understand the object oriented principles in C++: overloading, inheritance, and polymorphism. (a, e, k, 1, 2, 6)
4. understand the use of templates in C++. (a, e, k, 1, 2, 6)
5. understand the basic principles of object oriented programming in Java (a, k, 1, 6)

Lecture Topics: 1. Introduction to object oriented programming and C++
2. Function overloading and operator overloading
3. Inheritance and composition
4. Polymorphism & virtual functions
5. Templates, introduction to Java

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<thead>
<tr>
<th><strong>Computer Usage</strong></th>
<th>High</th>
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<tbody>
<tr>
<td><strong>Laboratory Experience</strong></td>
<td>None</td>
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<td><strong>Design Experience</strong></td>
<td>None</td>
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<tr>
<td><strong>Coordinator</strong></td>
<td>Elizabeth Thompson, Ph.D.</td>
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<td><strong>Date</strong></td>
<td>10 May 2011</td>
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