COURSE DESCRIPTION

Dept., Number	CSci 390	Course Title	Special Topics in Programming: C++
Semester hours	3	Course Coordinator	Stephen V. Rice

Current Catalog Description

Study of topics in programming according to the interests of the instructor and students.

Topic description: Study of programming in the language C++.

Textbook

Deitel and Deitel. *C++: How to Program,* 6th edition, Pearson Prentice Hall, 2008.

References

Course Outcomes

This course provides an introduction to the C++ programming language. This course is more advanced than CSCI 259 and is intended for computer science majors. After successfully completing this course, the students are able to:

1. write valid C++ expressions and control statements
2. design and implement functions
3. manipulate arrays, strings, and pointers
4. understand and utilize object-oriented constructs

Relationship between Course Outcomes and Program Outcomes

The course outcomes contribute to the program outcomes as follows: (1) to (i), (2) to (c), (3) to (i), (4) to (i).

Prerequisites by Topic

CSci 211, Computer Science III

Major Topics Covered in the Course

- Data types, operators, and expressions
- Control statements (if, switch, while, do, for)
- Functions, value parameters, reference parameters, and default arguments
- Arrays, strings, and pointers
- Classes, objects, data members, member functions, constructors and destructors, and inheritance
- Static and dynamic allocation of storage
- Function and operator overloading

Assessment Plan for the Course

This is an elective course offered every semester. An offering typically has three or more examinations, and four or more programming assignments, which are designed to assess course outcomes (1) to (4).

How Data in the Course are Used to Assess Program Outcomes (unless adequately covered already in the assessment discussion under Criterion 4)

Estimate Curriculum Category Content (Semester hours)

Area	Core	Advanced	Area	Core	Advanced
Algorithms		0.5	Software design		1
Data structures		0.5	Concepts of programming languages		1