

COURSE DESCRIPTION

Dept., Number	CSci 259	Course Title	Programming in C++
Semester hours	3	Course Coordinator	Stephen V. Rice, Assistant Professor

Current Catalog Description

Study of programming in the language C++, covering character processing; use of pointers with strings, arrays and functions; data structures; bitwise operators.

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 does not assume that students have specific experience with Java, C, or C++, but does assume that students have some prior experience in computer programming. After successfully completing this course, the students can:

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

CSci111, Computer Science I, *or* CSci 251, Programming for Engineering and Sciences

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