Course Outcomes Guide

Course/Program Title: CSC 232/IST 232 Advanced C++ Programming

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Course/Program Team: Tom Paci-Funk

Expected Learning Outcomes:

• Develop C++ programs that use a variety of data structures such as arrays, 2D arrays, vectors, and queues.

• Design, code and test object oriented applications that incorporate concepts such as structures, classes and inheritance.

Assessment: (How do or will students demonstrate achievement of each outcome?)

- Programming Labs Students will complete software projects which are designed to demonstrate the use of:
 - o Data structures such as Arrays, 2D-Arrays, Vectors, and Queues
 - o OOP concepts such as structs and classes
 - o Inheritance and Composition
 - o Recursion
 - o See the attached "Word Search" program assignment with code and the "War" program assignment with code.
- Examinations Students will be able to demonstrate:
 - o use of the C++ programming language syntax and semantics
 - o ability to read and write programs
 - See attached Midterm and Final exams.

Validation: (What methods have you used or will you use to validate your assessment?)

- IST Advisory Committee Recommendations
- ANSI coding practices

Results: (What do your assessment data show? If you have not yet assessed student achievement of your learning outcomes, when is assessment planned?)

See attached grade book

Follow-up: (How have you used or how will you use the data to improve student learning?)

I see a correlation between attendance, students completing the programming assignments and students passing the exams and the course. Therefore, I need to follow up with students to make sure they are coming to class and completing the programming assignments.

Budget Justification: (What resources are necessary to improve student learning?)

PC lab hardware; projection unit, printers, PCs Software Development hardware and software Course Management software Classroom Management system software