<div style="border:1px solid black; text-align:center;">

Course Outcomes Guide

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Course/Program Title: CSC 132/IST 132 Introduction to C and C++

Date: 3/24/2016

Course/Program Team: David Maruszewski

Expected Learning Outcomes:

- Design mathematical algorithms that are structured using top-down design by way of user defined functions with parameters and return values.

- Develop C++ programs incorporating input/output, control/repetition structures and manipulations with arrays.

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:
  - input/output statements
  - functions with return values and parameters
  - if, while, and for-loop logic structures
  - arrays
  - file I/O
  - See the attached "Weather" program assignment with code and the "Growth" program assignment with code.

- Examinations – Students will be able to demonstrate:
  - use of the C++ programming language syntax and semantics
  - ability to read and write programs
  - See attached Midterm Exam and Final Exam.

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 – in Assessments

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

Some students were successful but did not complete much homework had bad grades. It might be good to increase the test % of the overall grade.

The pace of the class is very good. Students can struggle and still keep up with course content.

Moodle keeps things clear for students like in the cases of grades and due dates.

Math skills would benefit the course. Some students could use simple logic skills.

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