CS 1405

Division: Natural Science and Mathematics
Department: Engineering and Computer Science
Course: CS 1405
Title: Programming Fundamentals Lab
Catalog Description:

This laboratory provides the hands-on experience necessary to begin to develop correct programming practices. It introduces the student to an integrated development environment. It provides the opportunity to apply software fundamentals in an appropriate programming language.

General Education Requirements: N/A
Semesters Offered: Fall, Spring
Credit/Time Requirement: Credit: 1; Lecture: 0; Lab: 2
Clock/Hour Requirements: 0
Offered for Non-Credit: No
Prerequisites: MATH 1050

Corequisites: CS 1400

Justification:

This course is the laboratory experience associated with the first required course for students pursuing a computer science degree. It is part of the recommended curriculum for computer science and engineering majors at Snow College.

Student Learning Outcomes:

Students will be able to:

- Use a modern operating system and utilities
- Use an integrated development environment to develop a program
- Solve problems and develop programs using the control structures of sequence, selection, and repetition, following a disciplined approach.

Content:

The following topics will be covered in this course:

- Syntax of a programming language
- Problem-solving techniques
- Operating system purpose and use

- System configuration and management of executables.
- Tools to support software development, testing, and debugging.

General Education Outcomes:

4) Retrieve, evaluate, interpret, and deliver information through a variety of traditional and electronic media.

Students will be required to utilize the text, application software help material, and online information to produce software solutions to assigned problems.

7) Apply scientific reasoning to a variety of contexts.

Students will be able to approach problems logically and develop solutions by applying the software development process. This will include understanding the problem statement, developing an algorithmic solution, and verifying the solution.

Key Performance Indicators:

Weekly worksheets: 30%-50% of final grade

Weekly programming projects: 50%-70% of final grade

Representative Text and/or Supplies:

W. Savitch, *Absolute C++*, current edition, Addison Wesley

T. Gaddis, J. Walters, and G. Muganda, *Starting Out with C++*, current edition, Scott/Jones

Optimum Class Size: 12
Maximum Class Size: 15

Signatures:

I hereby submit this course syllabus:

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I hereby find this course consistent with the goals and resources of the Engineering and Computer Science Department:

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Garth O. Sorenson, MS, Associate Professor, Chair

I hereby find this course consistent with the goals and resources of the Natural Science and Mathematics Division:

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Dan Black, EdD, Associate Professor, Dean

I have discussed the need for library resources related to this class with the person submitting the syllabus:

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Lynn Anderson, MLIS, Technical Services Librarian (Main Campus)

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Michelle Olsen, MLS, Campus Librarian (Richfield Campus)