

Object-Oriented Programming

CS 202 (3 Credits)

BYU Hawaii – Winter 2008

Instructor: Chris Slade, MS

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Office Hours:

Prerequisites: CS 101, and Math 110

Course Meeting: 9:00-9:50 AM

Monday, Wednesday, Friday in GCB 101

Course Materials

Course Web Page: <http://wiki.cs.byuh.edu/index.php/CS202:Mainpage>

Text book: Malik, D.S. *C++ Programming: From Problem Analysis to Program Design*. Publisher. 1418836397.

Expected Learning Outcomes

By the end of this course you should be able to do the following:

- Demonstrate mastery in the basic skills of computer programming.
- Become highly proficient in C++ and use it as a basis for learning other languages.
- Be able to implement basic programming algorithms.
- Be able to use basic C++ data structures.
- Be able to identify and design solutions to programming problems.
- Understand some ethical issues software engineers face.

General Course Description

This course will teach you the basics of object-oriented programming. We will practice identifying problems and designing an object-oriented programming solution to them.

Specific C++ topics include:

- Records (Structs)
- Class and Data Abstraction
- Inheritance and Composition
- Pointers, Classes, Virtual Functions, and Abstract Classes
- Overloading and Templates
- Exception Handling
- Linked Lists

Grading

Grading scale:

93-100%	A	73-76%	C
90-92%	A-	70-72%	C-
87-89%	B+	67-69%	D+
83-86%	B	63-66%	D
80-82%	B-	60-62%	D-
77-79%	C+	59 and below	F

Grade components:

Participation: 10%

Projects: 45%

Midterm: 20%

Final Exam: 25%

Final Exam

The final exam will be conducted in the classroom at the time designated in the final exam schedule. **There are no exceptions to this rule.**

Teaching Approach:

This class will be taught using a combination of lecture, readings, and projects. Lecture notes will be available on-line on the course web page. The on-line schedule will include assigned readings in the textbook. Projects are designed to provide learning activities that will not only give you a measurement on how well you have learned the material, but also help solidify the material and encourage further exploration and learning. **Your success in this course depends upon your attendance in class, reading the material and finishing the projects on time.**

Late Policy

Projects are due Saturday at midnight of the week they are assigned. Late projects will lose 10% each school day it is late. After ten school days, I will not accept the project. I suggest you start early and stay on top of your projects. Exceptions will only be granted in extenuating circumstances. The projects are worth 45% of your grade.

Attendance

Attendance will be taken daily **at the beginning** of class. The attendance and quiz scores will make up your class participation score, worth 10% of your grade.

Exams

There will be one midterm and a final. You cannot make up the midterm if you missed it. The final exam will be at the scheduled time. There are no exceptions to this rule.

Schedule (subject to change, see course web page to up-to-date version)

Week 1: (Jan. 10): Course Introduction and Review (Chapter 6&7)

Week 2: (Jan. 15 & 17): Review, Namespace, and Strings (Chapter 8)

Week 3: (Jan. 22, 24): Structs (Chapter 11) Object-Oriented Programming Design

Week 4: (Jan. 29, 31): Object-Oriented Programming (Chapter 12)

Week 5: (Feb. 5, 7): Object-Oriented Programming (Chapter 12)

Week 6: (Feb. 12, 14): Inheritance and Composition (Chapter 13)

Week 7: (Feb. 19, 21): Inheritance and Composition (Chapter 13)

Week 8: (Feb. 27, 29): Pointers (Chapter 14)

Week 9: (Mar. 4, 6): Midterm

Week 10: (Mar. 11, 13): Virtual Functions & Abstract Classes (Chapter 14)

Week 11: (Mar. 18, 20): Overloading & Templates (Chapter 15)

Week 12: (Mar. 25, 27): Linked-Lists (Chapter 18)

Week 13: (Apr. 1, 3): Exception Handling (Chapter 16)

Week 14: (Apr. 8, 10): Recursion (Chapter 17)

Week 15: (Apr. 15): Review (Chapter 18)

Week 16: (Dec 14): FINAL EXAM from 7:00 – 10:00am

Academic Honesty:

You will be expected to adhere to the Honor Code as outlined at <http://w2.byuh.edu/studentlife/honorcode/docs/ces.htm#1>.

If you cheat, you will be turned into the Honor Code Office and you will receive an automatic F in the class. Please do *not* cheat. All work submitted must be your own. Copying code via file transfer, cut-and-paste, dictation, typing in what you see or recollect of another person's program or any other form of cheating or copying is strictly forbidden. It is also forbidden to share your work with other students. If you have any questions about what is permitted, please discuss your concerns with the instructor.

Quizzes, tests, and the final exam are to be strictly independent work.

Preventing Sexual Harassment

Title IX of the education amendments of 1972 prohibits sex discrimination against any participant in an educational program or activity that receives federal funds, including Federal loans and grants. Title IX also covers student-to-student sexual harassment. If you encounter unlawful sexual harassment or gender-based discrimination, please contact the Human Resource Services at 780-8875 (24 hours).

Students with Disabilities

Brigham Young University- Hawai'i is committed to providing a working and learning atmosphere, which reasonably accommodates qualified persons with disabilities. If you have any disability that may impair your ability to complete this course successfully, please contact the students with Special Need counselor Leilani A'una at 293-3999 or 293-3518. Reasonable academic accommodations are reviewed for all students who have qualified documented disabilities. If you need assistance or if you feel you have been unlawfully discriminated against on the basis of disability, you may seek resolution through established grievance policy and procedures. You should contact the Human Resource Services at 780-8875.