

# ICS 212 – Program Structure

## Instructor Information

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Office hours: Online only

## Windward Community College Mission Statement

Windward Community College offers innovative programs in the arts and sciences and opportunities to gain knowledge and understanding of Hawai'i and its unique heritage. With a special commitment to support the access and educational needs of Native Hawaiians, we provide O'ahu's Ko'olau region and beyond with liberal arts, career and lifelong learning in a supportive and challenging environment — inspiring students to excellence.

## Catalog Description

Program organization paradigms, programming environments, implementation of a module from specifications, the C and C++ programming languages.

## Student Learning Outcomes

The Student Learning Outcomes for this course are:

- Use an editor, makefile, and a compiler in the UNIX environment.
- Use recursion, arrays, pointers, character variables, bitwise operators, structures, and linked data structures in C.
- Use classes (constructors, destructor, and overloading assignment), operator overloading, inheritance, and polymorphism in C++.
- Use linked data structures and recursion in C++.
- Use standard C++ strings and C++ STL library data structures, such as STL lists.

## Course Tasks

In this class, you must show mastery of each concept through a series of projects. Every assignment is worth 3 points except the final project, which is worth 9 points. The only deadline for submission of assignments is Dec. 8, 2016. This is a firm deadline. No work will be accepted after that date.

To get the full 3 points, your work must not contain any errors. If there are errors, then I will specify what it is and return it to you. Note that I will not tell you how to correct the error, only what it is. You should then correct the assignment and resubmit it for a higher grade. Note that you will never receive a lower grade from a resubmission, only a higher or the same grade.

# Assignment Tasks and Grading

Your letter grade will be determined by the number of assignments you complete. There are 12 assignments and the final project for a total of 45 points:

- A: 40 - 45 points
- B: 36 - 39 points
- C: 31 - 35 points
- D: 23 - 30 points
- F: 0 -22 points

## Learning Resources

We will use Lulima for submitting and returning all assignments. All grades will be posted in Lulima and you will be able to track your progress by utilizing the grade book. You will be able to post and read questions and comments on the discussion boards. Use the private message tool in Lulima to contact the instructor.

We will be using the C and C++ programming languages to develop our programs. You will need access to a computer that has the C and C++ compilers installed. Although it isn't necessary, I also recommend you use an Integrated Development Environment for developing and debugging your programs.

As an alternative, you can use uhunix (type `ssh username@uhunix.hawaii.edu` at the command line. Replace username with your UH username). To use uhunix you must be comfortable with transferring files using ssh as well as using the gcc command line compiler.

## Other resources

Tutoring may be available from the TRIO office in the Library Learning Commons on the WCC campus.

## Policies

### Disabilities Accommodation Statement

If you have a physical, sensory, health, cognitive, or mental health disability that could limit your ability to fully participate in this class, you are encouraged to contact the Disability Specialist Counselor to discuss reasonable accommodations that will help you succeed. Ann Lemke can be reached by phone at 235-7448, by email at [lemke@hawaii.edu](mailto:lemke@hawaii.edu), or by stopping by her office in Hale 'Akoakoa 213 for more information.

### Academic Dishonesty - Cheating and Plagiarism

You are responsible for the content and integrity of all work you submit. The guiding principle of academic integrity will be that all files, work, reports, and projects that you submit are your own work.

You will be guilty of cheating if you:

- Represent the work of others as your own (plagiarism).

- User or obtain unauthorized assistance in any academic work.
- Give unauthorized assistance to other students.
- Modify, without instructor approval, an examination, paper, record, or report for the purpose of obtaining additional credit.
- Misrepresent the content of submitted work.

### **Netiquette**

Whenever you post something to the discussion board or other online forums, you are expected to follow proper netiquette. Be respectful at all times. Do not use obscene language or make disparaging comments, even if it is meant as a joke. Remember that others cannot see your facial expression nor hear your tone of voice, so they will not know you are trying to be witty. Do not use all caps. Using all caps is normally interpreted to be shouting.

### **Discussion Boards**

Discussion boards are to be used for class work only. Do not post political or other comments or statements, nor solicit sales for any type of product. Your instructor will be monitoring all communication in Laulima and will take appropriate action when necessary

## **A Final Thought**

All programming languages use the same basic concepts. By learning the concepts and writing your initial program in pseudocode, you should be able to use any programming language to code your software. It is vital that you understand these concepts. You will use them throughout your studies in Computer Science and as a programmer or Software Engineer afterward. The best way to learn them is to use them. Try designing and creating programs that you will find useful. Good luck!