

ICS-111 Introduction to Computer Science

```
format.xml { redirect_to(
{ head :ok }
else
format.html { render :acti
```

ICS-111 - Introduction to Computer Science

Welcome to Introduction to Computer Science. This course is designed to provide an introduction to programming techniques. By the end of the course, you should be able to:

- Use the Java programming language to build object-oriented programs and applications.
- Identify the problem to be solved, and determine what input, output, and data structures are needed to solve it.
- Understand what objects are and use them to create efficient programs.
- Retrieve data from the keyboard or a file and output it to the monitor or a file.

Instructor Information

David Maxson

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Office Hours: Online

Student Learning Outcomes

The student learning outcomes for this course are:

- Understand the relationships between computer systems, applications, programming and programming languages.
- Design, code, compile, run, and debug computer programs using an object-oriented programming language.
- Demonstrate an understanding of primitive data types, expressions, strings and arrays.
- Understand and use the core concepts of an object-oriented language (classes, objects, methods with parameters, abstract classes, interfaces, inheritance and polymorphism).
- Understand and use basic computer language concepts such as program flow, conditionals, and loops.

Class times and location

This is an online class. All lessons and interaction will be through Lulima.

Grading

Your final grade will be determined using a series of projects:

1. Projects from Weeks 1 – 12 are worth 40 points per week for a total of 480 points. You will have 1 – 2 projects per week. See the schedule for more details.
2. The Final Project is worth 320 points.
3. Each project will have a rubric associated with it. Make sure you check the rubric before turning in your assignment.

Your letter grade is based upon the number of points you earn.

- A – 720 to 800 points.
- B – 640 to 719 points.
- C – 560 to 639 points.
- D – 480 to 559 points.
- F – 0 to 479 points.

Bonus points may be earned to demonstrate knowledge in certain areas and will only be allowed in sections you performed poorly in. Check with the instructor for bonus assignments.

Resources

Your textbook for this class is *Java Programming From The Ground Up* from McGraw-Hill.

We will use Lulima for submitting and returning all assignments, including extra credit assignments. All grades will be posted in Lulima and you will be able to track your progress by utilizing the grade book. In addition, there will be discussion boards in Lulima where you may post or answer questions. Use the private message tool in Lulima to contact the instructor.

We will be using Java to develop our programs. If you are a Mac user you already have the Java JDK (java development kit) installed. For other platforms go to <http://java.sun.com/javase/downloads/index.jsp> to download the SE jdk. It will come with installation instructions.

Other resources

- Tutoring may be available from the TRIO office in Na'auao 146 on the WCC campus.
- The Library and The Learning Center at WCC have computers configured with all of the software needed for this class.

Statement and 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 in this class. Ann Lemke can be reached by phone at 235-7448, by email at 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, examinations, reports, and projects that you submit are your own work. See page 16 of the Windward Community College catalog for further clarification.

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.

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. There are many exercises in the book that are not assigned as projects. If you need practice, consider doing more of the programming exercises (I will give extra credit for most of them). Good luck!

Schedule

Week	Lesson	Assignment
1	Introduction to ICS-111 and Laulima	1.1, 1.2
	Introduction to Java	1.3
2	Declaring Variables	2.1
	The Assignment Operator	2.2
3	Data Types	3.1
	Relational Operators	3.2
4	Scope, Decisions, and the If statement	4.1
	The If Else statement	4.2
5	The Switch statement	5.1
6	Repetition and the While statement	6.1
	The Do While statement	6.2
7	The For statement	7.1
8	Methods	8.1
9	Introduction to Object Oriented Programming; Declaring and Creating Objects	9.1
10	Using Objects; Inheritance	10.1
11	Static Arrays	11.1
12	Text File Output	12.1
	Text File Input	12.2
13	Final Project	Final Project
14	Final Project	Final Project
15	Final Project	Final Project
Finals	Final Project Due	Final Project