
DAVIS UNIVERSITY

# COURSE SYLLABUS

# DSC113: COMPUTER PROGRAMMING I

**COURSE SYLLABUS FOR:** DSC113 COMPUTER PROGRAMMING I

**CREDIT HOURS:** 5 CREDITS

**INSTRUCTOR:**

**INSTRUCTOR EMAIL:**

**INSTRUCTOR OFFICE HOURS:**

**COURSE DESCRIPTION:** This course introduces the basic concepts of object-oriented programming including class design, simple data types, arithmetic and logic operators, repetition structures, arrays and object data structures, problem-solving, algorithm design, procedural abstractions and software design, modular programming, debugging, testing, and documentation.

**PREREQUISITES:** Introduction to algebra

**TEXT:** Introduction to Java Programming and Data Structures, Liang, 11th Edition, ISBN: 9780134670942

**HARDWARE/SOFTWARE**

A computer is required in this class.

The software needed for this course is Eclipse. It is free and can be downloaded at https://www.eclipse.org/.

**PLAGIARISM AND COPYRIGHT INFRINGEMENT POLICY:** Work that is found to be plagiarized receives a grade of zero and often causes a student to fail a class. Documentation of plagiarism is added to the student's academic file as a violation of accepted student conduct

and is subject to disciplinary action. Plagiarism is the use of another person's exact words, or their ideas written in the student's words without giving the original author credit.

Plagiarism can result from any of the following:

- Quote material directly without using quotation marks.
- Paraphrase the original so that many of the phrases are the same as the original. A good rule is no more than 3 or 4 words in a row should be the same as the original.
- Copy the original sentence pattern, substitution synonyms for key words.
- Neglect to indicate the source of the original material.

**ASSESSMENTS:**

| Content | Points |
|---|---|
| Quiz 1 | 10 |
| Quiz 2 | 10 |
| Quiz 3 | 10 |
| Test 1 | 100 |
| Final Exam | 100 |
| Assignment 1 | 10 |
| Assignment 2 | 10 |
| Assignment 3 | 20 |
| Assignment 4 | 30 |
| Course Project | 300 |
| Total | 600 |

**COURSE GRADE:**

| | |
|---|---|
| A+ = 97%–100% | C+ = 77%–79% |
| A = 93%-96% | C = 73%–76% |
| A– = 90%–92% | C– = 70%–72% |
| B+ = 87%–89% | D+ = 67%–69% |
| B = 83%–86% | D = 63%–66% |
| B– = 80%–82% | D– = 60%–62% |
| | F = Below 60% |

**TENTATIVE COURSE OUTLINE:**

**(Subject to change)**

| Modules/Units | Content Covered | Assignments |
|---|---|---|
| **Module 1** | Computer basics and programming languages,<br>Flow chart, pseudocode, Develop, compile and execute Java programs | Assignment 1 |
| **Module 2** | Identifiers, Data types, Arithmetic operators<br>Evaluate Java expressions, Scanner and Math classes | Quiz 1 |
| **Module 3** | Conditional operators and selection statements | Assignment 2 |
| **Module 4** | Generating random numbers<br>Introduction to mathematical functions<br>Characters, Strings and String class | Quiz 2 |
| **Module 5** | Repetition statements and for loop | Assignment 3 |
| **Module 6** | While and do while loops | Test 1 |
| **Module 7** | Defining and calling a method<br>Passing parameters to a method and method returning a value | Assignment 4 |
| **Module 8** | Introduction of arrays<br>Passing arrays to methods, method returning an array<br>Arrays class, arrays comparison, sorting and searching | Quiz 3 |
| **Module 9** | Defining classes and creating objects using constructors | Course Project |
| **Module 10** | Array of objects and passing objects to methods<br>Java library classes, immutable Objects and classes | Final Exam |