

**CoSci 452 SYLLABUS
Programming in Java**

INSTRUCTOR Mari Rettke rettkem@lamission.edu

818 – 470-8419

SECTION : 3103

Note: *Should you become unable to complete the class you must withdraw from the class prior to the cutoff date. Students that are enrolled in a class after the last date to drop must receive a grade.*

STUDENT LEARNING OUTCOMES

Students will at the completion of the course be able to:

1. Demonstrate an understanding of how Windows/WEB based object oriented programming works using Java as the user interface.
2. Code and debug object oriented programs using Java
3. Demonstrate understanding and use of Java Classes, constructors, Instantiating an Object of a Class
4. Demonstrate understanding and use of control statements and arrays as applied to object oriented programming.
5. Apply programming logic by using selection, decision and repetition structures.
6. Develop a Java application.
7. Demonstrate an understanding of scope by referencing elements passed as parameters between modules in a project.

DETERMINATION OF GRADE

1. Attendance:

The class meets from 5:40 to 10:00pm Tues. Attendance will affect your grade in a negative manner only. You may miss two class meetings without penalty. If you miss more than two meetings, 1 point will be subtracted from your final grade for each additional class missed. Three cases of tardiness equals one absence.

2. Assignments, Exercises, and Quizzes: (20%)

Short programming assignments will be given each week. These assignments will count as 15% of the final grade.

Debugging exercise and quizzes will be given in class. They will count for 5% of the final grade.

3. Tests: (55%)

Test #1	15%
Test #2	20%
Test #3	20%

Tests (programs) will be evaluated as follows:

Internal documentation: 25%

- Programmer name and project description
- Documentation of code;
- Each event shall contain a description of the event and the method
- Pseudo-code for each line in the method
- Evidence of your thought process in debugging – (comment out lines that do not work)

The program must match the project specifications and perform exactly as described: 65%

A total of 90% is possible. In order to achieve a higher score, the 90% must be reached.

Additional points may be assigned for:

Menus

Design – effective use of color and framing

Error checking – deterministic code blocks

4. **Final Exam:** (25%)

5. **Grading scale** – A = 90-100, B = 80-89, C = 70-79, D= 60-69, F – below 60

MATERIALS:

Text – Java SE 6 Training and Reference; Murach; ISBN- 10 1-890774-42-1;

Office Hours:

Tue/Thur - 4pm to 5:30pm Tue/Thur – 12:30pm to 2pm Or call for appointment 470-8419

CoSci 452 CLASS SCHEDULE

WEEK OF

(1) Introduction and Vocabulary

Getting started with Java – download and installation

OOP vocabulary

Structure of a Java program – Process - source code / byte code / executable

Assignment: Read Chapter 1(pages 1-16 and pages 26 – 30) , 2 and 3

(2 & 3)

Basic coding skills – class – main method

Discuss Classes, Objects, Methods and Identifiers, numeric and string variables, input and output, control statements

Working with data, Java classes for data types.

Assignment: Read Chapter 4

WEEK OF

- (5 & 6) Coding Control Statements;
Boolean Expressions, if/else and switch
Pre-test and post test loops
Break and continue
Static methods, static Fields and Class Math; Declaring and using Methods

Assignment: *Read Chapter 5 and 6*

- (7 & 8) Validating input data
OOP with Java
Classes, coding classes that define an object
Creating and using objects – object methods – primitive types and reference types

Assignment: *Read Chapter 7*

- (9) Inheritance – superclass, subclass
Polymorphism

Assignment: *Read Chapter 8 and 9*

- (10) Interfaces compared to abstract classes
Coding and implementing an interface

Assignment: *Read Chapter 10*

- (11 & 12) Discuss Declaring and Creating Arrays, Multidimensional Arrays
Assignment: Programming Assignment

Assignment: *Read Chapter 11 and 12*

- (13) Collections, generics, LinkedList class
Working with dates and strings

Assignment: *Read Chapter 13,14, 15*

- (14) Exceptions – throwing and catching, assertions
Threads – classes and interfaces, life cycle of a thread
Manipulating threads
GUI programming with Java

Assignment: *Read Chapter 16,17*

- (15) Swing classes – frames panels, buttons, events, layout managers, labels and text fields

- (16) Final project - Final Exam