

Syllabus: SWE 510 Object-Oriented Programming in Java

Spring, 2017

Instructor Information

Instructor: Yonghee Shin **Email:** yshin9@gmu.edu **Office Hours:** by appointment or by email

Course Information

Description

This course introduces students to programming in the Java language. Topics include problem-solving methods and algorithm development, program structures, abstract data types, simple data and file structures, and program development in a modular, object-oriented manner. Introductory use of OO language features, including data hiding, inheritance, polymorphism, and exception handling.

Objectives and Learning Outcomes

After completing this course students should be able to

1. solve problems using various Java language and library features
2. understand and use Object Oriented concepts to develop reusable, reliable, and maintainable software

Prerequisites Undergraduate courses or equivalent knowledge in programming in a high-level language.

Text Java: How to Program (Early Objects), 10th Edition, by Paul Deitel and Harvey Deitel, Pearson (Required)

Meeting Times and Location Thursday 7:20 P.M. - 10:00 PM, Innovation Hall 134

* Please see [Class Schedule Listing for SWE 510](#) for additional course information.

Grading Policies

Programming languages can be learned by practice. To reinforce your learning, there will be frequent assignments and quizzes.

Class Attendance: 10%

Each attendance will be counted as one point. To accommodate late registration or any personal emergency situations, two classes will be excluded from the calculation of attendance score.

Assignments: 40%

There will be 10% reduction per day for late submission with maximum delay of one week unless exceptions are discussed in advance.

Quizzes: 20%

Two lowest scores will be dropped from the calculation.

Final exam: 30%

There will be no makeup for missed final exam.

Academic Integrity

All CS students must adhere to the [GMU Honor Code](#). Additionally, it is mandatory to follow the [CS Department Honor Code](#). ***It is important and mandatory for you to read and understand these rules.***

General Policies

Attendance

The class follows the [University Attendance Policies](#). If there are any conflicts in class schedule due to religious observances or official university activities, please notify me as early as possible for possible schedule adjustment or alternative opportunities.

Disability Accommodations

If you are a student with a disability and you need academic accommodations, please contact [Disability Services](#) at 703-993-2474. All academic accommodations must be arranged through Disability Services. Please also let me know your accommodation needs before the first lecture.

Privacy

In response to Federal Privacy Regulations, all academic email communications between instructor and students must be conducted via Mason email accounts. I will not respond to messages sent from a non-Mason email address.

Electronic devices

To help students focus on the lecture, the uses of mobile electronic devices such as laptops and mobile phones are not allowed in class. Habitual violators may be asked to leave the class. Please read a useful article on [Why You Shouldn't Use Laptops in Classrooms](#) by Dr. Jeff Offutt.

Social Media

If there are social media connection requests from students, I prefer to accept the requests only after the course is over.

Course Schedule

Date	Topic	Text Chapters
Jan 26	Introduction to Java	Chapter 1,2
Feb 2	Introduction to Classes, Objects, Methods, and Strings	Chapter 3
Feb 9	Control Statements	Chapter 4,5
Feb 16	Methods: A Deeper Look	Chapter 6
Feb 23	Arrays and ArrayLists	Chapter 7
Mar 2	Classes and Objects: A Deeper Look Object-Oriented Programming: Inheritance	Chapter 8,9
Mar 9	Object-Oriented Programming: Polymorphism and Interfaces Exception Handling: A Deeper Look	Chapter 10,11
Mar 16	Spring Break	
Mar 23	Strings, Characters, and Regular Expressions Files, Streams, and Object Serialization	Chapter 14,15
Mar 30	Generic Collections Java SE 8 Lambdas and Streams	Chapter 16,17
Apr 6	Recursion, Searching, Sorting, and Big O	Chapter 18,19
Apr 13	Generic Classes and Methods Custom Generic Data Structures	Chapter 20, 21
Apr 20	Concurrency	Chapter 23
Apr 27	TBD	Tentatively Chapter 25
May 4	TBD, Final Exam Review	Tentatively Chapter 24
May 11	Final Exam (7:30pm – 10:15 pm)	