CS 125 Fall 2021

Beginning Java Programming

Units	: **4**
Instructor	: **Yong Qiang Gao**
Office	: **Online**
Email	: **ygao@ohlone.edu or ygao_ohlone@yahoo.com**
Textbook	: **Starting out with Java, Early Objects, 6/e,Tony Gaddis, ISBN: 0-13-446201-1**
Reference	: **The Art of Programming in Java. Second Edition, Yong Qiang Gao, download for free in the Canvas**

DESCRIPTION:

This course is an introduction to computer programming for beginners. Its primary objective is to teach the fundamentals of programming using Java. Emphasis will be placed on object-oriented programming. This course is designed primarily for CS and related transfer majors.

COURSE OBJECTIVES:

1. Define computer program and algorithm and describe the compilation, execution and interpretation processes.
2. Describe the composition of a Java program.
3. Describe syntax templates and recognize Java identifiers.
4. Use numeric and other basic data types in expressions.
5. Describe the basic principles of object-oriented design and functional decomposition.
6. Use functional decomposition to solve simple problems.
7. Construct three types of loops.
8. Construct simple logical expressions and decision-making statements to perform specific tasks.
9. Declare and use of String objects.
10. Declare, instantiate, and manipulate elements in simple arrays.
11. Design and use constructors, implement interfaces, and test code.
12. Demonstrate the use of inheritance and recursion in classes in object-oriented programming.
13. Demonstrate the use of simple exception handlings in Java programs.
14. Demonstrate the use of basic layout managers in Java programs.
15. Design and write the simple even-handling and GUI programs in Java.

STUDENT LEARNING OUTCOMES:

1. Define computer program and algorithm and describe the compilation, execution and interpretation processes.

2. Construct a code segment to create a window on a screen, organize messages in a window, and invoke methods.

3. Demonstrate use of basic data types, expressions, arrays, control statements, loops, GUI, layout managers, exception and event handling in Java.

4. Describe the basic principles of object-oriented design and functional decomposition.

5. Demonstrate the use of inheritance in classes in object-oriented programming.

PREREQUISITE:

CS101

WORK REQUIREMENT (Nominal Hours):

4 Units × 3 hours/week = 12 hours/week, consisting of:
3 hours/week class attendance
3 hours/week laboratory work
6 hours/week reading, review, and additional work

Keeping up the work requirement on a week to week basis is essential by most students, in order to pass the course.

GRADING:

Lab Projects	**49%**
Midterm	**20%**
Final	**31%**

The course is graded on a straight percentage basis as follows:

A	**90% or above**
B	**80% - 89%**
C	**70% - 79%**
D	**60% - 69%**
F	**Less than 60%**

Note: Online activities, such as participation in discussions questions in the Canvas will be considered as a curve no more than 2% in the final grading.

CS LAB HOURS:

You may use CS Lab if you don't have computer or good Internet connection. It opens 9:00 a.m. - 10:00 a.m. Monday through Friday; 10:00 a.m. - 4:00 p.m. Saturday. However, check the open hours change due to COVID-19.

DISCIPLINES:

1. Every day login to the class is expected and encouraged. If an online activities such as participating discussions, immediate email responses, and study schedule is missed it is the student's responsibility to find out what was covered and to get notes of the lecture or the assignment due. A student's online participations will affect to a student's grade.
2. Students who intend to withdraw should notify the instructor and the Admission Office. Failure to do so may result in a "F" grade. In the first weeks of the semester the instructor will drop students who do not log in for 2 weeks.
3. Submission or resubmission of an assignment after other's submissions have been graded is not acceptable unless with the permission by instructor and it will receive a 10% mark down for everyday it is late.
4. Student must do his/her own assignments, quizzes, and final. Cheating or copying other's work is not allowed. As long as you are not copying other's work, group discussion and cooperative learning are strongly encouraged.
5. A makeup exam is only allowed to take if you have legitimate reason you have missed a scheduled test and must be reported to me before the end of exam period. A makeup test may be taken in face-to-face at a classroom or Zoom during the office hours or a rescheduled time.
6. Should the unlikely occurrence of a discipline problem arise (include academic dishonesty), the student will be warned in class and receive no score. If this does not resolve the problem a conference will be arranged between the instructor and the student; if the behavior continues, the student will be withdrawn from the course.

COURSE SCHEDULES

(See My Lessons link in Canvas)