

# Programming II

## Syllabus

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# Welcome to CS112!

This course introduces object-oriented programming and its concepts such as abstraction, encapsulation, inheritance, and polymorphism to provide great flexibility, modularity, and reusability in developing software. You will learn programming with objects and classes, class inheritance , polymorphism, exception handling, abstract classes, and interfaces.

Having successfully completed this course, the student will be able to:

- Solve problems algorithmically.
- Discuss basic concepts of OO programming.
- Present the syntax and semantics of the Java language as well as data types offered by the language.
- Develop skills in designing, implementing, and testing programs in Java language.
- Develop competences in using an integrated development environment.

# Course Description

- CS112 provides a deeper look into the Java programming language for those who have prior programming experience.
- The course aims to teach the concept of object oriented (OO) and the use of advanced Java primitives such as collections, files, inheritance, exception handling, . . . etc.

## Instructor





- Dr. Sameer Alrehaili

## Email

- srehaili@taibahu.edu.sa

## Office hours

- Monday 12:00 A.M -02:00 P.M
- Wednesday 12:00 A.M -02:00 P.M

-  Y Daniel. Liang(2014) *Intro to Java Programming*, Prentice Hall.
-  David Flanagan(2005) *Java in a Nutshell*, O'Reilly Media.
-  Herbert Schildt(2011) *Java: The Complete Reference*, McGraw-Hill Osborne Media.
-  Sameer. Alrehaili. *CS112 Programming II*, 2020  
<https://salrehaili.github.io/sp22/CS112>

# Course schedule

Week	Date	Topic	Activity
Week01	17 Jan, 19 Jan	Overview	
Week02	24 Jan, 26 Jan	Review + Objects and Classes (Part 1)	
Week03	31 Jan, 02 Feb	Objects and Classes (Part 2)	Wed & Thur
Week04	07 Feb, 09 Feb	Inheritance and Polymorphism	Quiz1
Week05	14 Feb, 16 Feb	Exception Handling	
Week06	21 Feb, 23 Feb	Abstract Classes and Interfaces	Wed & Thur
Week07	28 Feb, 02 Mar	File Class and Binary I/O	
Week08	07 Mar, 09 Mar	Midterm	Midterm
Week09	14 Mar, 16 Mar	Recursion	Holiday
Week09	21 Mar, 23 Mar	Graphical User interface (GUI)	
Week10	28 Mar, 30 Mar	Lists and Stacks	
Week11	04 Apr, 06 Apr	Queues and Priority Queues	
Week12	11 Apr, 13 Apr	Sets & Maps	Quiz2

# Course schedule

Week	Date	Topic	Activity
Week13	18 Apr, 20 Apr	Review	
Week13	25 Apr, 27 Apr		Tue & Mon ..
Week14	09 May, 11 May		
Week15	16 May, 18 May		
Week16	23 May, 25 May		
Week17	29 May		Final Exam



Attendance & participation	10%
Assignments and /or lab assignments	10%
Final lab exam	10%
Two Quizzes (week 4 and 12)	10% (5 each)
Midterm (week 8)	20%
Final (week 15 or 16)	40%