Jordan University of Science and Technology

Faculty of Computer & Information Technology

Computer Science Department

CS113 Object-Oriented Programming Lab

First Semester 2020-2021

Course Catalog
1 Credit Hours. This course is a hands-in of Object Oriented programming (OOP). Students learn how to write programs in an object oriented high level programming language. Topics covered include the C++ programming lab (CS102) concepts, fundamental of algorithm, problem solving, introducing arrays, structures, functions, objects and classes, constructors and destructors, virtual functions, friend functions, this pointer, inheritance, pointers and references to objects, streams, binary and text files. Students build concepts obtained from prerequisite courses by practice rather than just theory.

Text Book	
Title	C++ Programming: From Problem Analysis to Program Design
Author(s)	D. S. Malik
Edition	5th Edition
Short Name	Textbook
Other Information	

Instructor	
Name	**Amneh Al Abdi**
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Office Hours	
Email	amalabdi@just.edu.jo

Instructor	
Name	**Dr. Firas Al Balas**
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Instructor	
Name	**Tasnim Almallah**
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Class Schedule & Room

Section 1:
Lecture Time: Sun : 08:30 - 11:30
Room: CS01-PH3 L-1

Section 2:
Lecture Time: Sun : 11:30 - 14:30
Room: CS01-PH3 L-1

Section 3:
Lecture Time: Mon : 08:30 - 11:30
Room: CS06-C5L1

Section 4:
Lecture Time: Mon : 11:30 - 14:30
Room: CS06-C5L1

Section 5:
Lecture Time: Tue : 11:30 - 14:30
Room: CS02-PH1L-1

Section 6:
Lecture Time: Wed : 11:30 - 14:30
Room: CS03-PH1L-1

Prerequisites

Line Number	Course Name	Prerequisite Type
1731121	CS112 Introduction To Object- Oriented Programming	Pre./Con.

Tentative List of Topics Covered

Weeks	Topic	References
Week 2	Review of C++ and Arrays	**Ch9** From **Textbook**
Week 3	Pointers	**Ch13** From **Textbook**
Weeks 4, 5	Records (Structs)	**Ch11** From **Textbook**
Weeks 6, 7	Classes and Abstract Data Type (ADT)	**Ch12** From **Textbook**
Weeks 8, 9, 10	Inheritance and Composition	**Ch13** From **Textbook**
Weeks 11, 12, 13	Classes, Virtual Functions, and Abstract Classes	**Ch14** From **Textbook**

Mapping of Course Outcomes to Program Student Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Deal with string data type, input/output from files and its built-in functions. [1SO5]	8%	
Deal with structures and examine various operations on a struct [2SO5]	10%	
Deal with classes and Abstract Data Types (ADT). [2SO5]	23%	
Use Object-Oriented Programming (OOP) properties such as inheritance and composition [1SO1, 1SO6]	20%	
Deal with pointers and dynamic memory allocation [1SO1, 1SO2, 1SO5]	25%	
Use virtual functions efficiently to implement polymorphism in an inheritance hierarchy [1SO1, 1SO5, 1SO6]	14%	

Relationship to Program Student Outcomes (Out of 100%)					
SO1	SO2	SO3	SO4	SO5	SO6
23	8.33			54	14.67

Evaluation	
Assessment Tool	**Weight**
Lab Work	40%
Midterm	20%
Final	40%

Policy	
Attendance	Attendance is very important for the course. In accordance with university policy, students missing more than 20% of total classes are subject to failure. Penalties may be assessed without regard to the student's performance. Attendance will be recorded at the beginning or end of each class
Exams	All exams will be CLOSE-BOOK; necessary algorithms/equations/relations will be supplied if required.

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