Jordan University of Science and Technology

Faculty of Computer & Information Technology

Computer Science Department

CS216 Object-Oriented Software Modeling Lab

First Semester 2020-2021

Course Catalog
1 Credit Hours. Introduction to the concepts of object-oriented software modeling (techniques and methodologies). A general modeling language (e.g., UML), structure modeling, behavior modeling, domain modeling, architecture modeling, model checking, limitations of modeling, validation of models, comparison of different approaches considering their advantages and disadvantages. An internal laboratory is included.

Text Book	
Title	A STUDENT GUIDE TO OBJECT-ORIENTED DEVELOPMENT
Author(s)	Carol Britton and Jill Doake
Edition	1st Edition
Short Name	Textbook
Other Information	

Instructor	
Name	**Dr. Firas Al Balas**
Office Location	-
Office Hours	
Email	faalbalas@just.edu.jo

Class Schedule & Room
Section 1: Lecture Time: Thu : 14:30 - 16:30 Room: CS01-PH3 L-1 Section 2: Lecture Time: Thu : 10:30 - 12:30 Room: CIS LAB 2

Prerequisites		
Line Number	**Course Name**	**Prerequisite Type**
1731121	CS112 Introduction To Object- Oriented Programming	Prerequisite / Study

Tentative List of Topics Covered		
Weeks	**Topic**	**References**
Weeks 1, 2	Introduction	**Ch1** From **Textbook**
Week 3	Requirements for the Wheels case study system	**Ch2** From **Textbook**
Week 4	Use cases	**Ch3** From **Textbook**
Week 5	Objects and classes: the basic concepts	**Ch4** From **Textbook**
Weeks 6, 7	The class diagram	**Ch5** From **Textbook**
Weeks 8, 9	Identifying functionality: CRC cards and interaction diagrams	**Ch6** From **Textbook**
Week 10	State Diagrams	**Ch7** From **Textbook**
Week 11	Activity diagrams	**Ch8** From **Textbook**
Week 12	Design	**Ch9** From **Textbook**
Week 13	Designing objects and classes	**Ch10** From **Textbook**

Mapping of Course Outcomes to Program Student Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Learn and appreciate the role of formal modeling in software analysis and specification [1SO1]	7%	
Learn what is meant by an object-oriented software modeling [1SO2]	21%	
Learn in detail the UML notation for object-oriented modeling and design [1SO2]	48%	
Learn the difference between object-oriented analysis and object-oriented programming [1SO1]	24%	

Relationship to Program Student Outcomes (Out of 100%)					
SO1	SO2	SO3	SO4	SO5	SO6
31	69				

Evaluation	
Assessment Tool	**Weight**
Lab work	40%
Final	60%

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.
Homework/Lab	Students are expected to keep up with the material as it is presented and submit assignments on time.

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