



Faculty: Information Technology	
Department: Software Engineering	Program: Bachelor
Academic year:	Semester:

Course Plan

First: Course Information

Course No.: 1503272	Course Title: Software Modelling	Credit Hours:	Theoretical:	Practical:
Prerequisite No. and Title: 1503271, Requirement Engineering		Section No.:	Lecture Time:	
Level in JNQF	7			
Type Of Course:	<input type="checkbox"/> <i>Obligatory University Requirement</i>		<input type="checkbox"/> <i>Elective University Requirement</i>	
	<input type="checkbox"/> <i>Obligatory Faculty Requirement</i>		<input type="checkbox"/> <i>Elective Faculty Requirement</i>	
	<input checked="" type="checkbox"/> <i>Obligatory Specialization Requirement Requirement</i>		<input type="checkbox"/> <i>Elective Specialization Requirement</i>	
	<input type="checkbox"/> <i>Ancillary course</i>			
Type of Learning:	<input type="checkbox"/> <i>Face-to-Face Learning</i>			
	<input checked="" type="checkbox"/> <i>Blended Learning (2 Face-to-Face + 1 Asynchronous)</i>			
	<input type="checkbox"/> <i>Online Learning (2 Synchronous + 1 Asynchronous)</i>			

Second: Instructor's Information

Course Coordinator:					
Name:		Academic Rank:			
Office Number:		Extension Number:		Email:	
Course Instructor:					
Name:		Academic Rank:			
Office Number:		Extension Number:		Email:	
Office Hours:	<i>Sunday</i>	<i>Monday</i>	<i>Tuesday</i>	<i>Wednesday</i>	<i>Thursday</i>

Third: Course Description

This course aims to introduce the student to fundamental concepts of object-oriented approach to development based on analyzing and modeling problem and solution spaces.

Fourth: Course Objectives

- Introduce students to the fundamental concepts and components of software modelling , such as classes, objects, relationships, and diagrams
- Explore the different types of software modelling diagrams, including class diagrams, use case diagrams, sequence diagrams, activity diagrams, and state machine diagrams
- Teach students how to use software modelling diagrams to model and analyze software systems during the design and analysis phases of the software development life cycle
- Illustrate how software modelling diagrams can be used to document requirements, design decisions, and system architectures

Fifth: Course Objectives

<i>Level descriptor according to (JNQF)</i>	<i>CILOs Code</i>	<i>CILOs</i> If any CLO will not be assessed in the course, mark NA.	<i>Associated PILOs Code</i> Choose one PILO for each CILO*	<i>Assessment method</i> Choose at least two methods
Knowledge	K1	Awareness of the fundamental concepts and components of software modelling , such as classes, objects, relationships, and diagrams	PK4	<ul style="list-style-type: none"> • Mid-term Exam • Final Exam • Quiz
	K2	Understanding the strengths and limitations of each diagram type allows students to effectively communicate and model different aspects of a software system	PK4	<ul style="list-style-type: none"> • Mid-term Exam • Final Exam • Quiz
Skills	S1	The ability to model relationships accurately is critical for capturing the structure and interactions within a system	PS3	<ul style="list-style-type: none"> • Mid-term Exam • Final Exam
	S2	Develop strong analytical skills to decompose complex software systems into manageable components, identifying key relationships and interactions	PS3	<ul style="list-style-type: none"> • Mid-term Exam • Final Exam
	S3	Translating real-world requirements into Software Modelling diagrams that accurately represent the system's structure and behavior	PS3	<ul style="list-style-type: none"> • Mid-term Exam • Final Exam
Competencies	C1	Addressing challenges related to system architecture, design, and interactions, allowing Software Modelling students to apply appropriate modeling solutions in different contexts by choosing the right diagram for a given scenario is crucial	PC3	<ul style="list-style-type: none"> • Presentation • Mid-term Exam • Final Exam

*CILOs: Course Intended Learning Outcomes; PILOs: Program Intended Learning Outcomes; For each CILO, the PILO could be the same or different.

Sixth: Learning Resources

Main Reference:	UML @ Classroom: An Introduction to Object-Oriented Modeling		Addison Wesley Longman Publishing
Author: M. Seidl , M. Scholz, Ch. Huemer , G. Kappel	Issue No.: 2015th edition	Print:	Publication Year: 2015
Additional Sources&Websites:	<ul style="list-style-type: none"> • Lecture Notes • Projects, Tasks, and Quizzes • Self-learning materials • Moodle 		
Teaching Type:	<input checked="" type="checkbox"/> Classroom <input type="checkbox"/> Laboratory <input type="checkbox"/> Workshop <input checked="" type="checkbox"/> MS Teams <input checked="" type="checkbox"/> Moodle		

Seventh: Course Structure

Week	Course Intended Teaching Outcomes (CILOs)	Topics	Teaching Procedures*	Teaching Methods**	References***
1	K1, K2	Outline Ch1: Requirements and Requirements Engineering	Face-to-Face	Lecture	Course Outline
	K1, K2	User Stories	Asynchronous	Video for learning activity	Course Slides / book / External Sources
2	K1, K2	Ch1: Introduction to software modelling	Face-to-Face	Lecture	Course Slides / book
	K1,K2	Introduction to software modelling	Asynchronous	Video for learning activity	Course Slides / book / External Sources
3	K1, K2	Ch2: Object Oriented Concepts	Face-to-Face	Lecture	Course Slides / book / External Sources
	S1	Writing a simple scenario and java program to reflect some of the studied OO Concepts	Asynchronous	Video for learning activity	Course Slides / book
4	K1, K2	Ch3: Introduction to UML Modelling	Face-to-Face	Lecture	Course Slides / book
	K1, K2	Modelling Spaces	Asynchronous	Quiz , ch1 and 2 Video for learning activity	Course Slides / book / External Sources
5	S1, S2, S3	Ch4:Use Case Diagram	Face-to-Face	Lecture	Course Slides / book
	S1, S2, S3	Tools to Draw Use	Asynchronous	Video for learning	Course Slides /

		Case Diagram		activity	book / External Sources
6	K1,K2 S1, S2, S3	Ch5: Use Case Description	Face-to-Face	Lecture	Course Slides / book
	S1, S2, S3	Use Case Diagram and Description	Asynchronous	Video for learning activity	Course Slides / book
7	K1, K2	Ch3: Introduction to UML Modelling	Face-to-Face	Lecture	Course Slides / book / External Sources
	C1	Modelling Spaces	Asynchronous	Video for learning activity	Course Slides / book
8	K1, K2	Ch3: Introduction to UML Modelling	Face-to-Face	Lecture	Course Slides / book / External Sources
	C1	Modelling Spaces	Asynchronous	Video for learning activity	Course Slides / book
Midterm Exam					
9	S1, S2, S3	Ch6: Classes and Business Entities	Face-to-Face	Lecture	Course Slides / book / External Sources
	S1, S2, S3	Classes and Business Entities	Asynchronous	Quiz ch4, Video for learning activity	Course Slides / book
10	S1, S2, S3	Ch6: Classes and Business Entities	Face-to-Face	Lecture	Course Slides / book
	C1	Writing a Java program to reflect Classes and Business Entities	Asynchronous	Video for learning activity	Course Slides / book / External Sources
11	S1, S2, S3	Ch7: Class Diagram	Face-to-Face	Lecture	Course Slides / book
	C1	Tools to model a class diagram	Asynchronous	Video for learning activity	Course Slides / book / External Sources
12	S1, S2, S3	Ch7: Class Diagram	Face-to-Face	Lecture	Course Slides / book
	C1	modeling a class diagram	Asynchronous	Video for learning activity	Course Slides / book / External Sources
13	S1, S2, S3	Ch8: Activity Diagram	Face-to-Face	Lecture	Course Slides / book
	C1	Activity Diagram	Asynchronous	Video for learning activity	Course Slides / book / External Sources
14	S1, S2, S3	Ch8: Activity Diagram	Face-to-Face	Lecture	Course Slides / book
	C1	Activity Diagram	Asynchronous	Presentation Lecture	Course Slides / book / External Sources
Final Exam					

*Teaching procedures: (Face-to-Face, synchronous, asynchronous).

** Teaching methods: (Lecture, video....).

*** Reference: (Pages of the book, recorded lecture, video....)

Eighth: Assessment Methods

Methods	Online Learning	Blended Learning	Face-To-Face Learning	Measurable Course (CILOs); Specific Course Output to be measured *State the score identified for each CILO for each method of assessment out of 100 **If any CILO will not be assessed in the course, mark NA.					
				K1	K2	S1	S2	S3	C1
First Exam									
Second Exam									
Mid-term Exam		30		✓	✓	✓	✓	✓	✓
Participation									
Asynchronous Activities									
Quizzes		10		✓	✓				
Assignments									
Group presentation		10							✓
Final Exam		50		✓	✓	✓	✓	✓	✓
Total out of 100		100		✓	✓	✓	✓	✓	✓

Ninth: Course Policies

- All course policies are applied on all teaching patterns (online, blended, and face-to-face Learning) as follows:
 - a. Punctuality.
 - b. Participation and interaction.
 - c. Attendance and exams.
- Academic integrity: (cheating and plagiarism are prohibited).