Faculty: Information Technology	
Department: Computer Science	**Program: Bachelor**
Academic Year:	**Semester:**

Course Plan

First: Course Information

Course No.: 1503170	***Course Title:* Software Innovation**	***Credit Hours: 3***	***Theoretical: 3***	***Practical: 0***
Prerequisite No. and Title:		***Section No.:***	***Lecture Time:***	
Level in JNQF	***2***			
Type Of Course:	☐ ***Obligatory University Requirement*** ☐ ***Elective University Requirement*** ☐ ***Obligatory Faculty Requirement*** ☐ ***Elective Faculty Requirement*** ☐ ***Obligatory Specialization Requirement*** ■ ***Elective Specialization Requirement*** ☐ ***Ancillary course***			
Type of Learning:	■ ***Face-to-Face Learning*** ☐ ***Blended Learning (2 Face-to-Face + 1 Asynchronous)*** ☐ ***Online Learning (2 Synchronous+ 1 Asynchronous)***			

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:	***Sunday***	***Monday***	***Tuesday***	***Wednesday***	***Thursday***

Third: Course Description

Innovation is the primary key to modern systems development - the element that defines the thriving software firm and the cutting-edge software application. Traditional forms of technical education pay little attention to creativity - often encouraging overly rationalistic ways of thinking which stifle the ability to innovate. Professional software developers are often drowned in commercial drudgery and overwhelmed by work pressure and deadlines. This course sets out the new field of software innovation. It organizes the existing scientific research into eight simple heuristics - guiding principlesfor organizing a system developer's work-life so that it focuses on innovation.

Fourth: Course Objectives

1. Introducing the student to the fundamental concepts of Software Innovation
2. Introduce the student to the sets out the new field of software innovation.
3. Expanding the student's skills of applying different creative thinking for select a software innovation project.
4. Providing the student to identify value property canvas in Entrepreneurship

Fifth: Learning Outcomes

Level descriptor according to (JNQF)	***CILOs Code***	***CILOs*** If any CLO will not be assessed in the course, mark NA.	***Associated PILOs Code*** *Choose one PILO for each CILO**	***Assessment method*** *Choose at least two methods*
Knowledge	**K1**	Identify the concepts of innovative software	**PK1**	• Mid-term Exam • Final Exam
	K2	Gain knowledge about how to turn novel ideas into software products	**PK1**	• Mid-term Exam • Final Exam
	K3	Present the most recent tools and processes of software innovation	**PK1**	• Quizzes • Mid-term Exam • Final Exam
Skills	**S1**	Identify the appropriate techniques for collecting software Innovation	**PS1**	• Mid-term Exam • Final Exam
	S2	Provide students with the different tools and techniques that help turn innovative idea intoproducts	**PS3**	• Mid-term Exam • Final Exam
	S3	Supply the student with the ability to identify problems related to the Software innovation	**PS1**	• Mid-term Exam • Final Exam
	S4	Evaluate the concepts concept of value property canvas as innovation technique	**PS1**	• Quizzes • Mid-term Exam • Final Exam
Competencies	**C1**	Use creative thinking and innovation to mix differentdevelopment methods in order to solve complex problems	**PC4**	• Practice

*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:	***Software Innovation: Eight work-style heuristics for creative system developers***		
Author: Jeremy Rose	***Issue No.: 2nd***	***Print:***	***Publication Year: 2010***
Additional Sources and Websites:	***Introduction to value proposition value*** ***Authors: Dorothy Graham, Rex Black, Erik van Veenendaal*** ***Publication year: 2019***		
Teaching Type:	■ ***Classroom*** □ ***Laboratory*** □ ***Workshop*** ■ ***MS Teams*** ■ ***Moodle***		

Seventh: Course Structure

Week Number	Course Intended Teaching Outcomes (CILOs)	Topics	Teaching Procedures *	Teaching Methods**	References***
1	-	Syllabus Overview	Face-to-Face	-	-
	K1	Introduction to innovation	Face-to-Face	Lecture, In-class Questions	Chapter 1
	K1	Basic terms and concepts	Face-to-Face	Lecture, In-class Questions	Chapter 1
2	K3, S1, C1	Software innovation consequences	Face-to-Face	Lecture, In-class Questions	Chapter 1
	K2, S2	Software innovation forms	Face-to-Face	Lecture, In-class Questions	Chapter 2
	K3, S1, S2	Software innovation product andprocess	Face-to-Face	Lecture, In-class Questions	Chapter 2
3	K1, K3, S1, S2, S4,	Innovative software products characteristics	Face-to-Face	Lecture, In-class Questions	Chapter 2
	K1, K3, S1, S2, C1	Novelty levels	Face-to-Face	Lecture, In-class Questions	Chapter 2
	K1, K2, S1, S3	Incremental and radical innovation	Face-to-Face	Lecture, In-class Questions	Chapter 2
4	K1, K3, S1, S2, C1	Blue and red ocean strategies	Face-to-Face	Lecture, In-class Questions	Chapter 2
	K2, K3, S1, S2	Utility forms	Face-to-Face	Lecture, In-class Questions	Chapter 3
	K2, K3, S1, S2	Utility forms	Face-to-Face	Lecture, In-class Questions	Chapter 3

5	K2, K3, S1, S2	Utility forms	Face-to-Face	Lecture, In-class Questions	Chapter 3
	K3, S1, S2, C1	The innovative software process	Face-to-Face	Lecture, In-class Questions	Chapter 3
	K3, S1, S3, S3	Software process models	Face-to-Face	Lecture, In-class Questions	Chapter 3
6	K3, S1, S2	Software process models	Face-to-Face	Lecture, In-class Questions	Chapter 3
	K1, K3, S1, S3, C1	Market-led and technology led software innovation	Face-to-Face	Lecture, In-class Questions	Chapter 4
	K3, S1, S3	Process, instantiation, improvisation and bricolage	Face-to-Face	Lecture, In-class Questions	Chapter 4
7	K3, S4, S1, C1	Software process innovation	Face-to-Face	Lecture, In-class Questions	Chapter 4
	K2, S1, S2, S4,	Software innovation process strategies	Face-to-Face	Lecture, In-class Questions	Chapter 4
	K2, S1, S2, C1	Software innovation process strategies	Face-to-Face	Lecture, In-class Questions	Chapter 4
Midterm Exam					
8	K2, S1, S2, S4, C1	Software innovation process strategies	Face-to-Face	Lecture, In-class Questions	Chapter 5
	K2, S1, S2, S4,	Technology development and economic progress	Face-to-Face	Lecture, In-class Questions	Chapter 5
9	K2, S1, S2, S4	Technology development and economic Progress	Face-to-Face	Lecture, In-class Questions	Chapter 5
	K2, S1, S2, S3	Technology development and economic progress	Face-to-Face	Lecture, In-class Questions	Chapter 5
	K2, S3	Technology trajectory	Face-to-Face	Lecture, In-class Questions	Chapter 5

10	K1, S2, S3	Technology convergence	Face-to-Face	Lecture, In-class Questions	Chapter 6
	K2, S1, S2, S3, S4, C1	Personal creativity perspectives	Face-to-Face	Lecture, In-class Questions	Chapter 6
	K1, K2, S1, S2, S3	Personal creativity perspectives	Face-to-Face	Lecture, In-class Questions	Chapter 6
11	K1, K2, S2, S3, C1	Software innovation process strategies	Face-to-Face	Lecture, In-class Questions	Chapter 6
	K2, S2, S3	Personal creativity perspectives	Face-to-Face	Lecture, In-class Questions	Chapter 6
	K2, S4	Value Property Canvas	Face-to-Face	Lecture, In-class Questions	Chapter 6
12	K1, S2, S3	Innovation Comminuty Support	Face-to-Face	Lecture, In-class Questions	Chapter 7
	K1, S2, S3	Skill, Interesting and Impact Innovation	Face-to-Face	Lecture, In-class Questions	Chapter 7
	K1, S4, C1	Value Support	Face-to-Face	Lecture, In-class Questions	Chapter 7
13	K3, S4, C1	Customer, Gain and Pain	Face-to-Face	Lecture, In-class Questions	Chapter 7
	K3, S1, S4	Product, pain release and gain benefits	Face-to-Face	Lecture, In-class Questions	Chapter 7
	K3, S4	Open source community	Face-to-Face	Lecture, In-class Questions	Chapter 8
14	K3, S4	Open source community	Face-to-Face	Lecture, In-class Questions	Chapter 8
	K3, S1, S4, C1	Game Design Innovation	Face-to-Face	Lecture, In-class Questions	Chapter 9
	K3, S1, S4, C1	Game Design Innovation	Face-to-Face	Lecture, In-class Questions	Chapter 9
	-	Review	Face-to-Face	Lecture, In-class Questions	Chapter 9
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	Specific Course Output to be assessed **If any CILO will not be assessed in the course, mark NA.							
				K1	K2	K3	S1	S2	S3	S4	C1
First Exam											
Second Exam											
Mid-term Exam			35	✓	✓	✓	✓	✓	✓	✓	
Participation											
Asynchronous Activities											
Quizzes											
Assignments			15			✓				✓	✓
Group presentation											
Final Exam			50	✓	✓	✓	✓	✓	✓	✓	
Total out of 100			100								

Ninth: Course Policies

- All course policies are applied to 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).