



SUJ-01-05-01A	رقم النموذج	نموذج مخطط مادة دراسية/ انجليزي Course Syllabus
	تاريخ الإصدار	
	رقم وتاريخ المراجعة أو التعديل	
	رقم قرار اعتماد مجلس العمداء	
	تاريخ قرار اعتماد مجلس العمداء	
07	عدد الصفحات	

1.	Course title	Software Engineering
2.	Course number	1902910
3.	Credit hours	3
	Contact hours (theory, practical)	3
4.	Prerequisites/co-requisites	Introduction to Software Engineering (1902371)
5.	Program title	Computer Information Systems
6.	Program code	-
7.	Awarding institution	The university of Jordan
8.	School	King Abdullah II School for Information Technology
9.	Department	Computer Information Systems
10.	Course level	Graduate
11.	Year of study and semester (s)	2022-2023 (Spring)
١٢.	Other department (s) involved in teaching the course	none
١٣.	Main teaching language	English and Arabic Bilingual
١٤.	Delivery method	<input checked="" type="checkbox"/> Face to face learning <input type="checkbox"/> Blended <input type="checkbox"/> Fully online
١٥.	Online platforms(s)	<input checked="" type="checkbox"/> Moodle <input checked="" type="checkbox"/> Microsoft Teams <input type="checkbox"/> Skype <input type="checkbox"/> Zoom <input type="checkbox"/> Others.....
١٦.	Issuing/Revision Date	22-2-2023



١٧. Course Coordinator:

Name: Fawaz Ahmad ALZAGHOUL Contact hours:
Office number: KASIT 2nd Floor OFFICE No. 205 Phone number: 5355000/ext.: 22607
Email: fawaz@ju.edu.jo

١٨. Other instructors:

NON

١٩. Course Description:

As stated in the approved study plan.

An overview of Software Process and process Improvement, new trends in software engineering, Quantifying Software Specifications Using Formal Methods, Using Set Theory and Logic, Verifying Requirements Mathematically, Emerging Trends in Software Engineering, Data Science for Software Engineers, Measuring User Satisfaction, Software reuse, Component based software engineering, Distributed systems architecture and application architecture, Service-oriented software engineering, Software testing, Software quality, Software cost estimation techniques: algorithmic cost modeling.

Topic Outline:

- A) Review: software processes, requirements engineering and system models.
- B) Advanced topics in Software Engineering:
 1. Software Process Improvement
 2. Quantifying Software Specifications Using Formal Methods
 3. Using Set Theory and Logic
 4. Verifying Requirements Mathematically
 5. Emerging Trends in Software Engineering
 6. Data Science for Software Engineers
 7. Measuring User Satisfaction
 8. Software reuse.



9. Component based software engineering.
10. Distributed systems architecture and application architecture.
11. Service-oriented software engineering.
12. Software testing,
13. Software quality.
14. Software cost estimation techniques: algorithmic cost modeling.

Course Requirements

(e.g: students should have a computer, internet connection, webcam, account on a specific software/platform...etc.

Course Policies:

A- Attendance policies:

B- Absences from exams and submitting assignments on time:

C- Health and safety procedures:

D- Honesty policy regarding cheating, plagiarism, misbehavior:

E- Grading policy:

Midterm Exam	30%
Projects	15%
Research paper and presentation	15%
Final Exam	40%

References:

1. Software Engineering (10th Edition) by Ian Sommerville, 2016.
2. Software Engineering: A Practitioner's Approach, By Roger S. Pressman and Bruce Maxim, McGraw-Hill, Higher International; 9th Edition.
3. The DevOps Handbook: How to Create World-Class Agility, Reliability, and Security in Technology Organizations by Gene Kin, Patrick Debois, John Willis, Jez Humble, and John Allspaw, IT Revolution Press; ISBN-10: 1942788002; ISBN-13: 978-1942788003 (10/16).
4. Shari Lawrence Pfleeger, Software Engineering: Theory and Practice, 2nd Ed., Prentice-Hall, 2001.
5. J. Rumbaugh, I. Jacobson, and G. Booch. The Unified Modeling Language Reference Manual. Addison-Wesley,



- Longman, Mass, USA, 1999.
6. M. Shaw and D. Garlan. Software Architecture: Perspectives on an Emerging Discipline. Prentice Hall Publishing, 1996.
 7. D. Schmidt, S. Stal, H. Rohnert, and B. Buschmann. Pattern-Oriented Software Architecture: Patterns for Concurrent and Networked Objects. Vol. 2, John Wiley and Sons, New York, USA, 2000.
 8. OMG. OMG Unified Modeling Language Specification Ver. 1.4. 2001. Available at <http://www.omg.org>.
 9. J.M. Spivey. The Z Notation: A Reference Manual. Prentice-Hall, 1992.
 10. University of Jordan E-library: <http://e-library/>
 11. IEEE Transactions on Software Engineering
 12. ACM Transactions on Software Engineering and Methodology
 13. Other papers and articles will be made available.