



الجامعة الهاشمية
كلية الامير الحسين بن عبدالله الثاني لتكنولوجيا المعلومات



The Hashemite University
Prince Al-Hussein Bin Abdullah II Faculty for Information Technology
Department of Software Engineering

Course Syllabus

The Hashemite University			
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Department of Software Engineering			
Year:	2018-2019	Semester:	Spring 2019

Course Information	
Course Title	Software Engineering Methods and Tools
Course Number	SWE 3751 (121003751)
Instructor	Dr. Hani Bani-Salameh
Office Location	IT 324
Office Phone	Ext. 4471
Office Hours	<input checked="" type="checkbox"/> 10:00 AM – 11:00 AM (Sun, Tue, Thu)
E-mail	hani@hu.edu.jo

Text Book (s)

Assessment Policy		
Assessment Type	Expected Due Date	Weight
Midterm exam	TBA	30 %
Project / Paper - Presentation	TBA- Individual	5 %
Research Work / Paper	TBA- Individual	25 %
Final Exam	TBA	40 %

Course Description

To increase knowledge of methods and tools of software requirements, design, construction, testing, maintenance, configuration and quality assessment, to increase expertise in the area of the conceptual and formal modeling, to develop skills in choosing and applying appropriate software engineering methods and tools in practice, to improve abstract thinking.

Teaching & Learning Methods

- Class lectures and lecture notes are designed to achieve the course objectives.
- You should read the assigned chapters before class, and participate in class and do whatever it takes for you to grasp this material.
- You are responsible for all material covered in the class.
- Please communicate with me regarding any concerns or issues related to this course by either in class, email, or during office hours.
- Lecture notes and syllabus are available at the Moodle.

# of Weeks	Topics	Chapter(s)
1 Week: (2 X 1.5 hours lectures)	<input checked="" type="checkbox"/> The conception, purpose, and classification of the software methods and tools.	<input checked="" type="checkbox"/> Chapter 10 ▪ Software Engineering Body of Knowledge (SWEBOK)
2 Weeks: (4 X 1.5 hours lectures)	<input checked="" type="checkbox"/> Formal methods of software engineering, their classification, characteristics, application.	<input checked="" type="checkbox"/> Chapter 2: An Overview of Formal Methods Tools and Techniques. In <i>Rigorous Software Development, Undergraduate Topics in Computer Science</i>, pages 15-44. Springer, 2011.
2 Weeks: (4 X 1.5 hours lectures)	<input checked="" type="checkbox"/> Object constraint language (OCL) as an extension of UML. Kinds of constraints, structural and user-defined types, OCL expressions, OCL messages.	<input checked="" type="checkbox"/> OCL (Object Constraint Language) by Example <input checked="" type="checkbox"/> Object Constraint Language (OCL): a Definitive Guide
2 Week: (4 X 1.5 hours lectures)	<input checked="" type="checkbox"/> Students Presentations	<input checked="" type="checkbox"/>
2 Weeks: (4 X 1.5 hours lectures)	<input checked="" type="checkbox"/> An application of specific OCL constraints.	<input checked="" type="checkbox"/> Model-Driven Development of Mobile Applications Allowing Role-Driven Variants? Steffen Vaupel et al.
2 Week: (4 X 1.5 hours lectures)	<input checked="" type="checkbox"/> Formal modeling with Z language. An implementation of models.	<input checked="" type="checkbox"/> Presentation on a modern software engineering method and/or a corresponding tool (tools), which is not used in the study program.
2 Weeks: (4 X 1.5 hours lectures)	<input checked="" type="checkbox"/> Evaluating Software Engineering Methods and Tools (Part 1 - 10)	<input checked="" type="checkbox"/> TBA