



Arab Academy for Science and Technology & Maritime Transport
College of Computing and Information Technology

University/Academy: Arab Academy for Science and Technology & Maritime Transport
Faculty/Institute: College of Computing and Information Technology
Program: Software Engineering

Course title	Software Engineering Process
Course code	SE496

Form no. (11A) Knowledge and skills matrix for a course

Course content	Week study	Knowledge	Intellectual skills	Professional skills	General skills
Course Description and Introduction	1	K12	I10, I12	P10, P15, P20	G1, G2, G3
Understand software development best practices <ul style="list-style-type: none"> • The Nature of Software • Some types of Software • What is Software Engineering? 	2	K12	I10, I12	P10, P15, P20	G1, G2, G3
An Introduction to RUP <ul style="list-style-type: none"> ▪ The Rational Unified Process ▪ RUP Features ▪ The Phases ▪ An Iterative Development 	3	K15, K17	I10, I12	P10, P15, P20	G1, G2, G3

Course content	Week study	Knowledge	Intellectual skills	Professional skills	General skills
Process...					
An Introduction to RUP (Cont.) <ul style="list-style-type: none"> ▪ Risk Management ▪ The Development Phases ▪ Inception Phase ▪ Elaboration Phase ▪ Construction Phase 	4	K15, K17	I10, I12, I14	P10, P15, P20	G1, G2, G3
▪ Essentials of Rational Unified Process <ul style="list-style-type: none"> ▪ RUP disciplines ▪ Requirements ▪ Business Modeling ▪ Configuration & Change Management ▪ Environment 	5	K15, K17	I10, I12, I14	P10, P15, P20	G1, G2, G3
Rational Unified Process (cont) <ul style="list-style-type: none"> ▪ Analysis & Design ▪ Implementation ▪ Test ▪ Deployment 	6	K15, K17	I10, I12, I14	P10, P15, P20	G1, G2, G3
7th Week Exam	7				
RUP-I <ul style="list-style-type: none"> ▪ Introduction ▪ Phases ▪ Core Workflows ▪ Best Practices 	8	K15, K17	I12, I14	P10, P17, P20	G1, G2, G3

Course content	Week study	Knowledge	Intellectual skills	Professional skills	General skills
<ul style="list-style-type: none"> ▪ Tools 					
RUP-II <ul style="list-style-type: none"> ▪ Static Structure: Process Description ▪ Dynamic Structure: Iterative Development ▪ An Architecture-Centric Process ▪ 	9	K15, K17	I12, I14	P10, P17, P20	G1, G2, G3
RUP-II (cont) <ul style="list-style-type: none"> ▪ A Use-Case-Driven Process ▪ Deployment Workflow ▪ Iteration Plans ▪ Implementing the Rational Unified Process 	10	K15, K17	I12, I14	P10, P17, P20	G1, G2, G3
Integrating RE Processes <ul style="list-style-type: none"> ▪ RUP Vocabulary (1) ▪ RUP Vocabulary (2) ▪ Disciplines, Phases, and Iterations 	11	K15, K17	I12, I14	P13, P17, P20	G1, G2, G3
12th Week Exam	12				
Integrating RE Processes (cont) <ul style="list-style-type: none"> ▪ Inception Phase ▪ Elaboration Phase ▪ Construction Phase ▪ Transition Phase 	13	K20, K22	I12, I14	P13, P17, P20	G1, G2, G3

Course content	Week study	Knowledge	Intellectual skills	Professional skills	General skills
<ul style="list-style-type: none"> ▪ Business Modeling Discipline 					
Principles of Software Testing <ul style="list-style-type: none"> ▪ Introduction ▪ Testing discipline activities ▪ Test types and detected defects ▪ Unit Testing ▪ Integration Testing ▪ Usability Testing ▪ User Acceptance Testing 	14	K17, K20, K22	I12, I14	P10, P13, P17	G1, G2, G3
Software Testing <ul style="list-style-type: none"> ▪ Who Tests Software? ▪ Understand and describe the basic concepts of functional (black box) software testing. ▪ Characterize a good bug report, peer-review the reports of your colleagues, and improve your own report writing. 	15	K17, K20, K22	I12, I14	P10, P13, P17	G1, G2, G3
Final Exam	16				

Course Instructor

Name:

Head of Department

Name:

Signature:

Signature: