

Course Plan for Bachelor program - Course Plan Development and Updating Procedures/ Software Engineering Department	QF01/0407-3.0E
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Course Plan for Software Engineering (Bachelor Program) No.: (Academic year)
Approved by Deans Council by decision (07/72/2016-2017) dated (30/8/2017)
(133) Credit Hours

No.	Goals and learning outcomes
Goal 1	Software Engineering graduates will have a sufficient understanding of the field of software engineering including scientific principles, analysis techniques, and design methodologies to: Be successfully employed, pursue a graduate degree, or continue their professional education
ILO 1.1	Demonstrate an understanding of the key facts, concepts, principles, and theories of software engineering.
ILO 1.2	Understand processes that support the delivery and software engineering within a specific application environment.
ILO 1.3	Analyze problems and identify and define the computing requirements appropriate to the solution.
ILO 1.4	Design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs.
ILO 1.5	Use current techniques, skills, and tools necessary for computing practice.
GOAL 2	Demonstrate the ability to work effectively as a team member and/or leader in an ever-changing professional environment;
ILO 2.1	Function effectively in teams to accomplish a common goal.
ILO 2.2	Communicate effectively with a range of audiences.
ILO 2.3	Analyze the local and global impact of computing on individuals, organizations, and the society.
GOAL 3	Progress through advanced degree or certificate programs in computing, science, engineering, business, and other professionally related fields.
ILO 3.1	Apply knowledge of computing and mathematics appropriate to the program's student outcomes and to the discipline of Computer Science.
ILO 3.2	Understand professional, ethical, legal, security, and social issues and responsibilities.
ILO 3.3	Recognize the need for and an ability to engage in continuing professional development.

Note: G= Goal, ILO= Intended Learning Outcome
Assign 3-7 ILOs for each goal

Course Plan for Bachelor program - Course Plan Development and Updating Procedures/ Software Engineering Department	QF01/0407-3.0E
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Student's information		Course number	Course title	Credit Hours	Theory Hours	Practical Hours	Prerequisite Co-requisite	Advertisement Plan
Registered	passed							Semester/year
First: University Requirements (27) Credit Hours								
A. Mandatory requirement (15 credit hour)								
<input type="checkbox"/>	<input type="checkbox"/>	0420101	Military Sciences	3	3	0		1/2
<input type="checkbox"/>	<input type="checkbox"/>	0420111	Arabic Language (1)	3	3	0	Remedial Arabic Language	1/1
<input type="checkbox"/>	<input type="checkbox"/>	0420121	English Language (1)	3	3	0	Remedial English Language	1/2
<input type="checkbox"/>	<input type="checkbox"/>	0420151	National Education	3	3	0		1/1
<input type="checkbox"/>	<input type="checkbox"/>	0420171	Life Skills	3	3	0		1/1
B. Electives (12 credit hours, minimum 3 credits from each field)								
Field I. Humanitarian courses								
<input type="checkbox"/>	<input type="checkbox"/>	0420103	History of Jerusalem	3	3	0		1/2
<input type="checkbox"/>	<input type="checkbox"/>	0420112	Islamic Culture	3	3	0		2/2
<input type="checkbox"/>	<input type="checkbox"/>	0420131	Principles of Education	3	3	0		1/2
<input type="checkbox"/>	<input type="checkbox"/>	0420134	Sport and Health	3	2	2		2/2
<input type="checkbox"/>	<input type="checkbox"/>	0420142	Human Civilization	3	3	0		1/2
<input type="checkbox"/>	<input type="checkbox"/>	0420152	Introduction to Sociology	3	3			2/2
<input type="checkbox"/>	<input type="checkbox"/>	0501100	Innovation and Entrepreneurship in Business	3	3	0		2/2
<input type="checkbox"/>	<input type="checkbox"/>	0601102	Law in Our Life	3	3	0		1/2
Field II. Scientific course								
<input type="checkbox"/>	<input type="checkbox"/>	0120111	Information Technology and Society	3	3	0		1/2
<input type="checkbox"/>	<input type="checkbox"/>	0120153	Medicinal Plants	3	3	0		1/2
<input type="checkbox"/>	<input type="checkbox"/>	0301101	First Aid	3	3	0		1/2
<input type="checkbox"/>	<input type="checkbox"/>	0301102	Fundamental of Nutrition	3	3	0		2/2
<input type="checkbox"/>	<input type="checkbox"/>	0906100	Principles of Energy Science	3	3	0		2/2

Second: Faculty Requirements (21) credit hours								
Student's information		Course number	Course title	Credit Hours	Theory Hours	Practical Hours	Prerequisite Co-requisite	Advertisement Plan
Registered	passed							Semester/year
<input type="checkbox"/>	<input type="checkbox"/>	0120117	Introduction to Information Technology	3	3	0	*Remedial computer skills	1/1
<input type="checkbox"/>	<input type="checkbox"/>	0120126	Principles of Mathematics and Statistics	3	3	0		1/1
<input type="checkbox"/>	<input type="checkbox"/>	0120110	Principles of Programming	3	2	2	Introduction to Information Technology	1/2
<input type="checkbox"/>	<input type="checkbox"/>	0120118	Professional Skills for Scientific Faculties	3	3	0		1/2

Course Plan for Bachelor program - Course Plan Development and Updating Procedures/ Software Engineering Department	QF01/0407-3.0E
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<input type="checkbox"/>	<input type="checkbox"/>	0120261	Web Design	3	2	2	Principles of Programming	
<input type="checkbox"/>	<input type="checkbox"/>	0120127	Linear Algebra 1	3	3	0	Principles of Calculus and Statistics	2/1
<input type="checkbox"/>	<input type="checkbox"/>	0120128	Numerical Analysis 1	3	3	0	Principles of Calculus and Statistics	3/2
Third: Major requirements (82) credit hours								
A. Mandatory Major requirements (33) credit hours								
<input type="checkbox"/>	<input type="checkbox"/>	0114211	Discrete Mathematics	3	3	0	Introduction to Information Technology	1/2
<input type="checkbox"/>	<input type="checkbox"/>	0114212	Data Structure	3	2	2	Object Oriented Programming	2/2
<input type="checkbox"/>	<input type="checkbox"/>	0114221	Object Oriented Programming	3	2	2	Principles of Programming	1/2
<input type="checkbox"/>	<input type="checkbox"/>	0114222	Visual Programming	3	2	2	Object Oriented Programming	2/2
<input type="checkbox"/>	<input type="checkbox"/>	0114231	Digital Logic Design	3	3	0	Discrete Mathematics	2/2
<input type="checkbox"/>	<input type="checkbox"/>	3011431	Algorithms	3	3	0	Data Structure	1/3
<input type="checkbox"/>	<input type="checkbox"/>	0114423	Web Applications Programing	3	2	2	Web Design	1/4
<input type="checkbox"/>	<input type="checkbox"/>	2011433	Computer Architecture	3	3	0	Digital Logic Design	1/3
<input type="checkbox"/>	<input type="checkbox"/>	0114341	Database	3	2	2	Data Structure	1/3
<input type="checkbox"/>	<input type="checkbox"/>	0114343	Systems Analysis and Design	3	2	2	Software architecture	3/2
<input type="checkbox"/>	<input type="checkbox"/>	0114442	Database management system	3	2	2	Database	1/4
B. Mandatory Minor Requirements (31) Credit Hours								
<input type="checkbox"/>	<input type="checkbox"/>	0114251	Software Engineering Principles	3	3	0	Introduction to Information Technology	2/1
<input type="checkbox"/>	<input type="checkbox"/>	0114252	Software specification and design	3	3	0	Software Engineering Principles	2/2
<input type="checkbox"/>	<input type="checkbox"/>	0114453	Software testing	3	2	2	Systems Analysis and Design	4/1
<input type="checkbox"/>	<input type="checkbox"/>	0114354	Software architecture	3	3	0	Software specification and design	1/3
<input type="checkbox"/>	<input type="checkbox"/>	0114455	Software development and documentation	3	2	2	Systems Analysis and Design	4/1
<input type="checkbox"/>	<input type="checkbox"/>	0114456	Software project management	3	2	2	Software testing	4/2
<input type="checkbox"/>	<input type="checkbox"/>	0114357	Software economics	3	3	0	Software specification and design	3/1

Course Plan for Bachelor program - Course Plan Development and Updating Procedures/ Software Engineering Department	QF01/0407-3.0E
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<input type="checkbox"/>	<input type="checkbox"/>	0114558	Software quality management	3	3	0	Software testing	4/2
<input type="checkbox"/>	<input type="checkbox"/>	0114381	Human computer interaction	3	3	0	Software Engineering Principles	3/2
<input type="checkbox"/>	<input type="checkbox"/>	0114471	Software documentation techniques	3	3	0	Software development and documentation	4/2
<input type="checkbox"/>	<input type="checkbox"/>	0114472	Final Project	1	1	0	Department Approval	4/2
C. Major supporting requirements (9) credit hours								
<input type="checkbox"/>	<input type="checkbox"/>	0113353	Information security	3	3	0	Algorithms	3/2
<input type="checkbox"/>	<input type="checkbox"/>	0122241	Computer Networks	3	3	0	Introduction to Information Technology	2/1
<input type="checkbox"/>	<input type="checkbox"/>	0112333	Operation systems	3	3	0	Computer Networks	3/1
D. Major electives (9) credit hours								
<input type="checkbox"/>	<input type="checkbox"/>	0114459	Software analysis and modelling	3	3	0	Software architecture	1/4
<input type="checkbox"/>	<input type="checkbox"/>	0114482	Special topics in SE(1)	3	2	0	Database	4/1
<input type="checkbox"/>	<input type="checkbox"/>	0114483	Special topics in SE(2)	3	2	0	Database	4/1
<input type="checkbox"/>	<input type="checkbox"/>	0114484	Mobile Applications Programming	3	2	2	Database	4/1
<input type="checkbox"/>	<input type="checkbox"/>	0114485	Enterprise resource planning (ERP)	3	3	0	Systems Analysis and Design	2/4
<input type="checkbox"/>	<input type="checkbox"/>	0114486	Software configuration management	3	3	0	Systems Analysis and Design	2/4
<input type="checkbox"/>	<input type="checkbox"/>	0114487	Artificial intelligence	3	3	0	Systems Analysis and Design	2/4
<input type="checkbox"/>	<input type="checkbox"/>	0114488	E-Business development	3	3	2	Visual Programming	4/2
<input type="checkbox"/>	<input type="checkbox"/>	0114489	Software maintenance and re-engineering	3	2	0	Software development and documentation	4/2

Fourth: free electives (3) Credit Hours

(Student may choose any course from any course plan at the university unless the student had passed it previously)

❖ Co-requisite

Course Plan for Bachelor program - Course Plan Development and Updating Procedures/ Software Engineering Department	QF01/0407-3.0E
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Courses Given to Other Majors)

Course number	Course title	Credit hours	Type of requirement (University Requirements, Faculty Requirements, Supporting Requirements)
0114251	3	Software Engineering Principles	Supporting Requirements for Computer Information Technology/Computer Information Technology, computer science /computer science