



King Saud University  
College of Computer and Information  
Sciences

**Software Engineering Department**

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**Software Engineering  
Bachelor Program**

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## The Summary of SWE BSC Study Plan

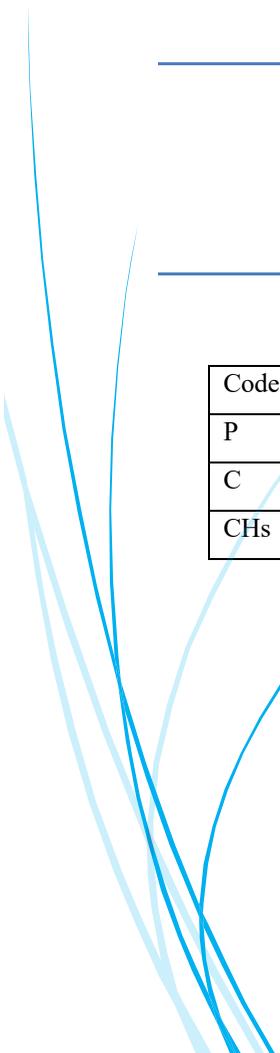
- **Year 1** includes semester 1, and 2.
  - **Year 2** includes semester 3, and 4.
  - **Year 3** includes semester 5, and 6.
  - **Year 4** includes semester 7, and 8.
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## SWE BSc Study Plan

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Code	Code Meanings
P	Prerequisite
C	Co-requisite
CHs	Completed Hours



<b>YEAR 1</b>				
<b>LEVEL (SEMESTER) 1</b>				
<b>Course Code</b>	<b>Course Title</b>	<b>Credit Hours</b>	<b>Pre-requisites</b>	<b>Co-Requisites</b>
<b>ENGL 100</b>	English Language	6		
<b>MATH 101</b>	Differential Calculus	3		
<b>CHEM1 101</b>	General Chemistry (1)	4		
<b>ARAB 100</b>	Writing Skills	2		
<b>ENT 101</b>	Entrepreneurship	1		
<b>Total</b>			<b>16 CH</b>	
<b>LEVEL (SEMESTER) 2</b>				
<b>STAT 101</b>	An Introduction to Probability & Statistics	3		
<b>EPH 101</b>	Fitness and Health Education	1		
<b>CT 101</b>	IT Skills	3		
<b>CUR 101</b>	University Skills	3		
<b>ENGL 110</b>	English	6	<b>ENGS 100</b>	
<b>Total</b>			<b>16 CH</b>	

<b>YEAR 2</b>				
<b>LEVEL (SEMESTER) 3</b>				
<b>PHYS 103</b>	General Physics I	4	<b>PHYS 103</b>	
<b>CSC 111</b>	Computer Programming I	4	<b>CT 101</b>	
<b>MATH 106</b>	Integral Calculus	3	<b>MATH 101</b>	
<b>MATH 151</b>	Discrete Mathematics	3	<b>MATH 101</b>	
---	General Education	2		
--	Mathematics and Statistics Elective	3		
<b>Total</b>			<b>19 CH</b>	
<b>LEVEL (SEMESTER) 4</b>				
<b>SWE 211</b>	Introduction to Software Engineering	3	<b>MATH 151</b> <b>CSC 111</b>	
<b>CSC 113</b>	Computer Programming II	4	<b>CSC 111</b>	
<b>PHYS 104</b>	General Physics II	4	<b>PHYS 103</b>	
<b>MATH 244</b>	Linear Algebra	3	<b>MATH 106</b>	
<b>CEN 303</b>	Computer Communications and Networks	3		
---	General Education	2		
<b>Total</b>			<b>19 CH</b>	

<b>YEAR 3</b>				
<b>LEVEL (SEMESTER) 5</b>				
<b>CSC 220</b>	Computer Organization	3	<b>CSC 111</b>	
<b>CSC 212</b>	Data Structures	3	<b>CSC 113</b>	
<b>SWE 314</b>	Software Security Engineering	3	<b>CENX 303</b>	
--	Mathematics and Statistics Elective	3		--
<b>SWE 312</b>	Software Requirements Engineering	3	<b>CSC 113</b> <b>SWE 211</b>	
--	Science Elective	3		
<b>Total</b>			<b>18 CH</b>	
<b>LEVEL (SEMESTER) 6</b>				
<b>CSC 227</b>	Operation Systems	3	<b>CSC 212</b> <b>CSC 220</b>	
<b>IS 230</b>	Introduction to Database Systems	3	<b>CSC 212</b>	
<b>SWE 321</b>	Software Design and Architecture	3	<b>SWE 312</b>	
<b>SWE 381</b>	Web Application Development	3	<b>SWE 211</b>	
<b>SWE 333</b>	Software Quality Assurance	2	<b>SWE 312</b>	
--	Department Elective	3		
<b>Total</b>			<b>17 CH</b>	
<b>LEVEL (SEMESTER) 9 Summer</b>				
<b>SWE 479</b>	Practical Training	1	<b>95CH</b>	

<b>YEAR 4</b>				
<b>LEVEL (SEMESTER) 7</b>				
<b>IC107</b>	Professional Ethics	2		
<b>SWE 482</b>	Human-Computer Interaction	3	<b>SWE 381</b>	
<b>SWE 434</b>	Software Testing & Validation	3	<b>SWE 333</b>	
<b>SWE 444</b>	Software Construction Laboratory	2	<b>SWE 321</b> <b>SWE 333</b>	--
<b>SWE 496</b>	Graduation Project I	3	<b>95 CH</b> <b>Passed</b> <b>SWE 321</b>	
<b>SWE 477</b>	Software Engineering Code of Ethics & Professional Practice	2	<b>95 CH</b> <b>Passed</b>	
<b>Total</b>			<b>15 CH</b>	
<b>LEVEL (SEMESTER) 8</b>				
<b>SWE 455</b>	Software Maintenance & Evolution	2	<b>SWE 434</b>	
<b>SWE 466</b>	Software Project Management	3	<b>SWE 333</b>	
<b>SWE 497</b>	Graduation Project II	3	<b>SWE 496</b>	
--	Department Elective	3		
<b>IC108</b>	Contemporary Issues	2	<b>IC108</b>	
--	Department Elective	3		
<b>Total</b>			<b>16 CH</b>	
<b>Grand Total</b>			<b>137 CH</b>	

DEPARTMENT ELECTIVES – Student selects 3 courses (9 CH)				
Code	Hours	Course Name	Pre-requisite	
SWE481	3	Advanced Web Applications Engineering	SWE312 - p	SWE381 - p
SWE483	3	Mobile Application Development	CSC 113 - p	
SWE484	3	Multimedia Computing	SWE 314	
SWE485	3	Selected Topics in Software Engineering	95 CHs	
SWE486	3	Cloud Computing and Big Data	CEN303–p	IS230 - p
SWE488	3	Complex System Engineering	95 CHs	
CEN316	3	Computer Architecture	CSC 220 – p	
CEN445	3	Network Protocols & Algorithms	CEN303 – p	
CEN318	5	Embedded Systems Design	CEN303 – p	
CSC215	3	Procedural Language	CSC111– p	
CSC311	3	Algorithms	CSC212 – p	
CSC361	3	Artificial Intelligence	CSC212–p	
CSC476	3	Computer Graphics	CSC212 –p	
CSC478	3	Digital Image Processing	CSC361–p	
IS 385	3	Enterprise Resource Planning Systems	IS 230- p	
IS 485	3	ERP Systems Lab	IS 385- p	
Subtotal	48			

Math and Statistics - elective group (6 credits hours required)				
Code	Hours	Course Name	Pre-requisite	
MATH200	3	Differential and Integral Calculus	MATH 106 -p	
MATH254	3	Numerical Analysis	MATH 244 - p	
OPER122	3	Introduction to Operations Research		
Subtotal	9			

General Sciences - elective group (3 credits hours required)				
Code	Hours	Course Name	Pre-requisite	
BIOL145	3	Biology		
BCH101	4	General Biochemistry		
MIC140	3	General Microbiology		
GPH201	3	Principles of Geophysics		
PHYS201	3	Mathematical Physics I		
Subtotal	15			

University Requirements - elective group (4 credits hours required)				
Code	Hours	Course Name	Pre-requisite	
QURN 100	2	The Holy Quran		
IC100	2	Studies in the prophet biography		
IC101	2	Principles of Islamic Culture		
IC102	2	Family in Islam		
IC103	2	Economic System in Islam		
IC104	2	Islamic Political System		
IC105	2	Human Rights		
IC106	2	Medical Jurisprudence		
IC109	2	Development Role of Women		
Subtotal	18			