

**CURRICULUM OF BACHELOR OF SCIENCE IN SOFTWARE
ENGINEERING (BSE)**

=====YU-COEA A.Y.2021 September 1st=====

FIRST YEAR (Freshmen)							
First Semester				Second Semester			
Code	Course Title	CR	Pre-Requisite	Code	Course Title	CR	Pre-Requisite
CIS 103	Programming Fundamentals I	4	Co-registered in ORN 04C and ORN 04R	CIS 104	Programming Fundamentals II	4	CIS 103 and ORN 05C and ORN 05R
ENG 101	English Essay Writing	3	ORN 05R ORN 05C	ISY 102	Introduction to Information Systems	3	ORN 04C and ORN 04R
PHY 101	Introduction to Physical Science	3	ORN 04R AND ORN 04C	PHY 103	Physics I	4	PHY 101
MTH 104	Calculus I	3	MTH 001 and ORN 03C and ORN 03R	STT 103	Probability and Statistics	3	MTH 001 and ORN 03C and ORN 03R
ISL 101	Foundation of Islamic Culture	2	ORN 02-R and ORN 02 C	MTH 105	Discrete Mathematics	4	MTH 001 and ORN 03C and ORN 03R
ARB 102	Communication Skills in Arabic	2	ORN 02-R and ORN 02 C				
Sub-Total		17		Sub-Total		18	

SECOND YEAR (Sophomore)							
First Semester				Second Semester			
Code	Course Title	CR	Pre-Requisite	Code	Course Title	CR	Pre-Requisite
CIS 202	Data Structures	3	CIS 104	SWE 202	Introduction to Software Engineering	3	CIS 104
CIS 201	Fundamentals of Web Design	3	CIS 103	NES 212	Data Communications & Computer Networks	3	CIS 201
ENG 201	Technical Report Writing	3	ENG 101	PHY 203	Physics II	4	PHY 103
MTH 211	Calculus II	4	MTH 104	ISY 221	Introduction to Database Systems	3	CIS 104
MTH 301	Linear Algebra	3	MTH 001 and ORN 03C and ORN 03R	CIS 222	Interactive Media	3	CIS 201
ISL 201	Foundation of Islamic Economy	2	ORN 02-R and ORN 02 C	ARB 202	Writing Skills in Arabic	2	ORN 02-R and ORN 02 C
Sub-Total		18		Sub-Total		18	

THIRD YEAR (Junior)							
First Semester				Second Semester			
Code	Course Title	CR	Pre-Requisite	Code	Course Title	CR	Pre-Requisite
CIS 381	Computer Ethics	2	ISY 221	CIS 321	Operating Systems	3	CIS 304
SWE 300	Software Process & Modelling	3	SWE 202	CIS 386	Project Management	3	ISY 102
CIS 304	Computer Architecture	3	MTH 105	SWE 302	Software Architecture & Design	3	SWE 202
SWE 301	Software Requirements Engineering	3	SWE 202	SWE 312	Software Construction & User Interface	3	SWE 202
MTH 302	Differential Equations	4	MTH 211	SWE 321	Advanced User Interface Design	3	CIS 222
ISL 301	Work Ethics in Islam	2	ORN 02-R and ORN 02 C	SWE 322	Advanced Web Programming	3	CIS 201
Sub-Total		17		Sub-Total		18	

FOURTH YEAR (Senior)							
First Semester				Second Semester			
Code	Course Title	CR	Pre-Requisite	Code	Course Title	CR	Pre-Requisite
CIS 493	Cooperative Assignment	3	90 CH	CIS 492	Graduation Project II	3	CIS 491
CIS 491	Graduation Project I	3	90 CH	SWE 401	Software Quality Assurance	3	SWE 301
SWE 411	Software Verification & Validation	3	SWE 312	ISY 384	Information Security	3	ISY 102
SWE 421	Game Development	3	CIS 222	SWE Elective III		3	
SWE Elective I		3		SWE Elective IV		3	
SWE Elective II		3					
Sub-Total		18		Sub-Total		15	

SWE Electives students should register 4 courses

Course Code	Course Title	Pre-requisites	Credit Hours*
SWE 402	Software Maintenance and Evolution	SWE 312	3
SWE 413	Design Patterns	SWE 302	3
SWE 414	Formal Methods in Software Engineering	SWE 202	3
SWE 415	Software Usability Engineering	SWE 202	3
SWE 323	Visual Communication	CIS 222	3
SWE 324	Computer Graphics	CIS 222	3
SWE 422	3D Modeling and Design	CIS 222	3
SWE 423	Principles of Video and Animation	CIS 222	3