

Bachelor of Science in Software Engineering Study Plan (Fall Start)

Total Credit Hours: **135**

Semester 1

First Year (Freshman)

Semester 2

Code	Title	Cr.	Prerequisite
ENG200	English II	3	IELTS average score of 6 or EMSAT average score of 1400 or passing grade in ENG102 (FWS100E) (Co) if placed in ENG200)
ARL 101	Communication Skills in Arabic I	3	nil
MTT 102	Calculus I	3	C grade in MTT 101 or MPT
STT 100	General Statistics	3	nil
ISL 100	Islamic Culture	3	nil
OE 1	Open Elective 1	3	-

Total Credit Hours 18

Code	Title	Cr.	Prerequisite
FWS 205	UAE and GCC Society	3	ENG102 (P) & USS001 as pre-requisite USS001 as co-requisite if students enter to ENG200 course directly
PHY 102	Physics and Engineering Applications I	3	MTT 102
PHY 102L	Physics and Engineering Applications I Lab	1	MTT 102 + PHY 102 (co-req)
CHE 205	General Chemistry I	3	Co) ENG 102/ENG200
CHE 201L	Chemistry Lab	1	CHE 205 (co-req)
MTT 200	Calculus II	3	MTT 102
COE 102	Introductory Big Data Analytics	3	STT 100

Total Credit Hours 17

Semester 3

Second Year (Sophomore)

Semester 4

Code	Title	Cr.	Prerequisite
SWE 201	Structured Programming	3	MTT 101 or Higher
PHY 201	Physics and Engineering Applications II	3	PHY 102
PHY 201L	Physics and Engineering Applications II Lab	1	PHY 102 + PHY 201 (co-req)
STT 201	Intermediate Statistics and Research Methods	3	STT 100
MTT 202	Discrete Mathematics	3	STT 100
OE 2	Open Elective II	3	-

Total Credit Hours 16

Code	Title	Cr.	Prerequisite
CSC 202	Programming II	3	SWE 201 or CSC 201
CSC 307	Web Design	3	SWE 201 or CSC 201
CSC 302	Database Management Systems	3	MTT 202 + (SWE 201 or CSC 201)
FWS 305	Technical Communications for Workplace	3	ENG 200 + (Comp. of 45CH)
MTT 204	Introduction to Linear Algebra	3	MTT 200
COE 202	Engineering Ethics, Economy, and Law	3	ENG 200 + MTT 102

Total Credit Hours 18

Summer Semester

Code	Title	Cr.	Prerequisite
SWE 399A	Internship/Project in Software Engineering I	1.5	60 Credit Hours

Semester 5

Third Year (Junior)

Semester 6

Code	Title	Cr.	Prerequisite
CSC 301	Data Structures and Algorithms	3	CSC 202 + MTT 202
CSC 305	Data Communications and Networks	3	Junior Level
ITE 390	Computer Ethics	3	CSC 202
SWE 371	Software Requirements and Specification	3	CSC 202
SWE 401	Software Engineering	3	CSC 202
SWE 370	Object Oriented Design Patterns	3	CSC 202

Total Credit Hours 18

Code	Title	Cr.	Prerequisite
CSC 308	Operating Systems	3	CSC 301
CSC 406	Artificial Intelligence	3	STT 201 + CSC 301
ITE 422	System and Network Administration	3	CSC 305
ITE 421	Native Mobile Application Development	3	CSC 202
SWE 302	Formal Methods in Software Engineering	3	MTT 202 + SWE 401
SWE 471	Software Design and Architecture	3	SWE 401

Total Credit Hours 18

Summer Semester

Code	Title	Cr.	Prerequisite
SWE 399B	Internship/Project in Software Engineering II	1.5	90 Credit Hours

Semester 7

Fourth Year (Senior)

Semester 8

Code	Title	Cr.	Prerequisite
ITE 408	Information Security	3	CSC 305
ITE 409	Human Computer Interactions	3	CSC 401 or SWE 401
SWE 472	Software Testing and Quality Assurance	3	SWE 471
ME 1	Major Elective I	3	-
SWE 499A	Capstone Design Project in SWE Part A	1	Senior Level + SWE471

Total Credit Hours 13

Code	Title	Cr.	Prerequisite
CSC 408	Distributed Information Systems	3	CSC 202 + CSC 305
SWE 473	Software Maintenance and Evolution	3	SWE 401
ME 2	Major Elective II	3	-
FWS 310	Fund. of Innovation and Entrepreneurship	3	ENG 200 + (Comp. of 60 CH)
SWE 499B	Capstone Design Project in SWE Part B	2	SWE 499A

Total Credit Hours 14