Bachelor of Science in Software Engineering – Web and Mobile Applications Development Concentration

Study Plan (Fall Start)   Total Credit Hours: **135**

First Year (Freshman)

Semester 1

Code	Title	Credit	Prerequisite
ENG200	English II	3	IELTS average score of 6 or EMSAT average score of 1400 or passing grade in ENG102. FWS100/USS001 as Co-req if placed in ENG200.
ARL 100	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
	Total Credit Hours	**15**	

Semester 2

Code	Title	Credit	Prerequisite
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	**14**	

Second Year (Sophomore)

Semester 3

Code	Title	Credit	Prerequisite
SWE 201	Structured Programming	3	MTT 101 or Higher
FWS 205	UAE and GCC Society	3	ENG102 + FWS100/USS001. FWS100/USS001 (Co) if placed in
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)
MTT 202	Discrete Structures and Applications	3	STT 100
STT 201	Intermediate Statistics and Research	3	STT 100
	Total Credit Hours	**16**	

Semester 4

Code	Title	Credit	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
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	Credit	Prerequisite
SWE399A	Internship/Project in Software Engineering I	1.5	60 Credit Hours

Third Year (Junior)

Semester 5

Code	Title	Credit	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**	

Semester 6

Code	Title	Credit	Prerequisite
CSC 308	Operating Systems	3	CSC 301
CSC 406	Artificial Intelligence	3	STT 201 + CSC 301
ITE 410	Web Programming	3	CSC 307
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	Credit	Prerequisite
SWE399B	Internship/Project in Software Engineering	1.5	90 Credit Hours

Fourth Year (Senior)

Semester 7

Code	Title	Credit	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
CSE 410	Mobile Device Security	3	CSC 305
ITE 414	Introduction to E-Commerce	3	Junior Level
SWE 499A	Capstone Design Project in SWE Part A	1	Senior Level + SWE471
	Total Credit Hours	**16**	

Semester 8

Code	Title	Credit	Prerequisite
CSC 408	Distributed Information Systems	3	CSC 202 + CSC 305
SWE 473	Software Maintenance and Evolution	3	SWE 401
FWS 310	Fund. of Innovation and Entrepreneurship	3	ENG 200 + (Comp. of 60 CH)
ITE 423	Advanced Mobile Application Development	3	ITE 421
ITE 415	Advanced E-Commerce Application Design	3	ITE 414
SWE 499B	Capstone Design Project in SWE Part B	2	SWE 499A
	Total Credit Hours	**17**	