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

## Study Plan (Fall Start)

## Total Credit Hours: **135**

	Semester 1		First Year	(Freshinan)	Semester 2		
Code	Title	Credit	Prerequisite	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.	PHY 102	Physics and Engineering Applications I	3	MTT 102
ARL 100	Communication Skills in Arabic I	3	nil	PHY 102L	Physics and Engineering Applications I Lab	1	MTT 102 + PHY 102 (co-req)
MTT 102	Calculus I	3	C grade in MTT 101 or MPT	CHE 205	General Chemistry I	3	Co) ENG 102/ENG200
STT 100	General Statistics	3	nil	CHE 201L	Chemistry Lab	1	CHE 205 (co-req)
ISL 100	Islamic Culture	3	nil	MTT 200	Calculus II	3	MTT 102
	Total Credit Hours	15		COE 102	Introductory Big Data Analytics	3	STT 100
					Total Credit Hours	14	
	Semester 3	5	Second Year	r (Sophomore)	Semester 4		
Code	Title	Credit	Prerequisite	Code	Title	Credit	Prerequisite
SWE 201	Structured Programming	3	MTT 101 or Higher	CSC 202	Programming II	3	SWE 201 or CSC 201
FWS 205	UAE and GCC Society	3	ENG102 + FWS100/USS001. FWS100/USS001 (Co) if placed in	CSC 307	Web Design	3	SWE 201 or CSC 201
PHY 201	Physics and Engineering Applications II	3	PHY 102	CSC 302	Database Management Systems	3	MTT 202 + (SWE 201 or CSC
PHY 201L	Physics and Engineering Applications II Lab	1	PHY 102 + PHY 201 (co-req)	FWS 305	Technical Communications for Workplace	3	ENG 200 + (Comp. of 45CH)
MTT 202	Discrete Structures and Applications	3	STT 100	MTT 204	Introduction to Linear Algebra	3	MTT 200
	Just a way a dista Chatistica and Dasa a wale	3	STT 100	COE 202	Engineering Ethics, Economy, and Law	3	ENG 200 + MTT 102
STT 201	Intermediate Statistics and Research Total Credit Hours Summer Semeste				Total Credit Hours	18	
STT 201 Code SWE399A	Total Credit Hours Summer Semeste Title Internship/Project in Software Engineering I	Credit 1.5	Prerequisite 60 Credit Hours			18	
Code SWE399A	Total Credit Hours Summer Semeste Title Internship/Project in Software Engineering I Semester 5	r Credit 1.5	60 Credit Hours Third Ye	ear (Junior)	Semester 6		
Code SWE399A Code	Total Credit Hours Summer Semeste Title Internship/Project in Software Engineering I Semester 5 Title	Credit 1.5 Credit	60 Credit Hours Third Ye Prerequisite	Code	Semester 6 Title	Credit	Prerequisite
Code SWE399A Code CSC 301	Total Credit Hours Summer Semeste Title Internship/Project in Software Engineering I Semester 5 Title Data Structures and Algorithms	Credit 1.5 Credit 3	60 Credit Hours Third Ye Prerequisite CSC 202 + MTT 202	Code CSC 308	Semester 6 <b>Title</b> Operating Systems	Credit 3	CSC 301
Code SWE399A Code CSC 301 CSC 305	Total Credit Hours Summer Semeste Title Internship/Project in Software Engineering I Semester 5 Title Data Structures and Algorithms Data Communications and Networks	Credit           1.5           Credit           3           3	60 Credit Hours Third Ye Prerequisite CSC 202 + MTT 202 Junior Level	Code CSC 308 CSC 406	Semester 6 Title Operating Systems Artificial Intelligence	Credit 3 3	CSC 301 STT 201 + CSC 301
Code SWE399A Code CSC 301 CSC 305 ITE 390	Total Credit Hours Summer Semeste Title Internship/Project in Software Engineering I Semester 5 Title Data Structures and Algorithms Data Communications and Networks Computer Ethics	Credit           1.5           Credit           3           3           3           3	60 Credit Hours Third Ye Prerequisite CSC 202 + MTT 202 Junior Level CSC 202	Code CSC 308 CSC 406 ITE 410	Semester 6 Title Operating Systems Artificial Intelligence Web Programming	Credit 3 3 3	CSC 301 STT 201 + CSC 301 CSC 307
Code SWE399A Code CSC 301 CSC 305 ITE 390 SWE 371	Total Credit Hours Summer Semeste Title Internship/Project in Software Engineering I Semester 5 Title Data Structures and Algorithms Data Communications and Networks	Credit           1.5           Credit           3           3	60 Credit Hours Third Ye Prerequisite CSC 202 + MTT 202 Junior Level	Code CSC 308 CSC 406	Semester 6 Title Operating Systems Artificial Intelligence Web Programming Native Mobile Application Development	Credit 3 3	CSC 301 STT 201 + CSC 301
Code SWE399A Code CSC 301 CSC 305 ITE 390 SWE 371 SWE 401	Total Credit Hours Summer Semeste Title Internship/Project in Software Engineering I Semester 5 Title Data Structures and Algorithms Data Communications and Networks Computer Ethics Software Requirements and Specification	Credit           1.5           Credit           3           3           3           3           3           3           3           3           3	60 Credit Hours Third Ye Prerequisite CSC 202 + MTT 202 Junior Level CSC 202 CSC 202	Code CSC 308 CSC 406 ITE 410 ITE 421	Semester 6 Title Operating Systems Artificial Intelligence Web Programming	<b>Credit</b> 3 3 3 3 3	CSC 301 STT 201 + CSC 301 CSC 307 CSC 202
Code SWE399A Code CSC 301 CSC 305 ITE 390 SWE 371 SWE 401	Total Credit Hours Summer Semeste Title Internship/Project in Software Engineering I Semester 5 Title Data Structures and Algorithms Data Communications and Networks Computer Ethics Software Requirements and Specification Software Engineering	Credit           1.5           Credit           3           3           3           3           3           3           3           3           1.5	60 Credit Hours Third Ye Prerequisite CSC 202 + MTT 202 Junior Level CSC 202 CSC 202 CSC 202 CSC 202	Code CSC 308 CSC 406 ITE 410 ITE 421 SWE 302	Semester 6 Title Operating Systems Artificial Intelligence Web Programming Native Mobile Application Development Formal Methods in Software Engineering	Credit 3 3 3 3 3 3	CSC 301 STT 201 + CSC 301 CSC 307 CSC 202 MTT 202 + SWE 401
Code SWE399A Code CSC 301 CSC 305 ITE 390 SWE 371 SWE 401	Total Credit Hours         Summer Semeste         Title         Internship/Project in Software Engineering I         Semester 5         Title         Data Structures and Algorithms         Data Communications and Networks         Computer Ethics         Software Requirements and Specification         Software Engineering         Object Oriented Design Patterns         Total Credit Hours	Credit           1.5           Credit           3           3           3           3           3           3           3           3           1.5	60 Credit Hours Third Ye Prerequisite CSC 202 + MTT 202 Junior Level CSC 202 CSC 202 CSC 202 CSC 202	Code CSC 308 CSC 406 ITE 410 ITE 421 SWE 302	Semester 6 Title Operating Systems Artificial Intelligence Web Programming Native Mobile Application Development Formal Methods in Software Engineering Software Design and Architecture	Credit 3 3 3 3 3 3 3 3 3	CSC 301 STT 201 + CSC 301 CSC 307 CSC 202 MTT 202 + SWE 401
Code SWE399A Code CSC 301 CSC 305 ITE 390 SWE 371 SWE 401 SWE 370 Code	Total Credit Hours         Summer Semeste         Title         Internship/Project in Software Engineering I         Semester 5         Title         Data Structures and Algorithms         Data Communications and Networks         Computer Ethics         Software Requirements and Specification         Software Engineering         Object Oriented Design Patterns         Total Credit Hours         Summer Semeste	Credit           1.5           Credit           3           3           3           3           3           3           3           3           1.5	60 Credit Hours Third Ye Prerequisite CSC 202 + MTT 202 Junior Level CSC 202 CSC 202 CSC 202 CSC 202 CSC 202 CSC 202	Code CSC 308 CSC 406 ITE 410 ITE 421 SWE 302	Semester 6 Title Operating Systems Artificial Intelligence Web Programming Native Mobile Application Development Formal Methods in Software Engineering Software Design and Architecture	Credit 3 3 3 3 3 3 3 3 3	CSC 301 STT 201 + CSC 301 CSC 307 CSC 202 MTT 202 + SWE 401
Code SWE399A Code CSC 301 CSC 305 ITE 390 SWE 371 SWE 401 SWE 370	Total Credit Hours         Summer Semeste         Title         Internship/Project in Software Engineering I         Semester 5         Title         Data Structures and Algorithms         Data Communications and Networks         Computer Ethics         Software Requirements and Specification         Software Engineering         Object Oriented Design Patterns         Total Credit Hours         Summer Semeste         Title	Credit           1.5           Credit           3           3           3           3           3           3           3           3           18           Credit           1.5	60 Credit Hours Third Ye Prerequisite CSC 202 + MTT 202 Junior Level CSC 202 CSC 202 CSC 202 CSC 202 CSC 202 CSC 202 CSC 202 Prerequisite 90 Credit Hours	Code CSC 308 CSC 406 ITE 410 ITE 421 SWE 302 SWE 471	Semester 6 Title Operating Systems Artificial Intelligence Web Programming Native Mobile Application Development Formal Methods in Software Engineering Software Design and Architecture	Credit 3 3 3 3 3 3 3 3 3	CSC 301 STT 201 + CSC 301 CSC 307 CSC 202 MTT 202 + SWE 401
Code SWE399A Code CSC 301 CSC 305 ITE 390 SWE 371 SWE 401 SWE 370 Code	Total Credit Hours         Summer Semeste         Title         Internship/Project in Software Engineering I         Semester 5         Title         Data Structures and Algorithms         Data Communications and Networks         Computer Ethics         Software Requirements and Specification         Software Engineering         Object Oriented Design Patterns         Summer Semeste         Total Credit Hours         Summer Semeste         Title         Internship/Project in Software Engineering	Credit           1.5           Credit           3           3           3           3           3           3           3           3           18           Credit           1.5	60 Credit Hours Third Ye Prerequisite CSC 202 + MTT 202 Junior Level CSC 202 CSC 202 CSC 202 CSC 202 CSC 202 CSC 202 Prerequisite 90 Credit Hours Fourth Ye	Code CSC 308 CSC 406 ITE 410 ITE 421 SWE 302	Semester 6 Title Operating Systems Artificial Intelligence Web Programming Native Mobile Application Development Formal Methods in Software Engineering Software Design and Architecture Total Credit Hours	Credit 3 3 3 3 3 3 3 3 3	CSC 301 STT 201 + CSC 301 CSC 307 CSC 202 MTT 202 + SWE 401
Code           SWE399A           Code           CSC 301           CSC 305           ITE 390           SWE 371           SWE 401           SWE 370           Code           SWE 370	Total Credit Hours         Summer Semeste         Title         Internship/Project in Software Engineering I         Semester 5         Title         Data Structures and Algorithms         Data Communications and Networks         Computer Ethics         Software Requirements and Specification         Software Engineering         Object Oriented Design Patterns         Total Credit Hours         Summer Semeste         Title         Internship/Project in Software Engineering         Semester 7	Credit           1.5           Credit           3           3           3           3           3           3           3           3           18           Credit           1.5	60 Credit Hours Third Ye Prerequisite CSC 202 + MTT 202 Junior Level CSC 202 CSC 202 CSC 202 CSC 202 CSC 202 CSC 202 CSC 202 Prerequisite 90 Credit Hours	Code CSC 308 CSC 406 ITE 410 ITE 421 SWE 302 SWE 471 SWE 471	Semester 6 Title Operating Systems Artificial Intelligence Web Programming Native Mobile Application Development Formal Methods in Software Engineering Software Design and Architecture Total Credit Hours Semester 8	Credit 3 3 3 3 3 3 3 3 18	CSC 301 STT 201 + CSC 301 CSC 307 CSC 202 MTT 202 + SWE 401 SWE 401
Code SWE399A CSC 301 CSC 305 ITE 390 SWE 371 SWE 401 SWE 370 Code SWE399B Code ITE 408	Total Credit Hours         Summer Semeste         Title         Internship/Project in Software Engineering I         Semester 5         Title         Data Structures and Algorithms         Data Communications and Networks         Computer Ethics         Software Requirements and Specification         Software Engineering         Object Oriented Design Patterns         Summer Semeste         Title         Internship/Project in Software Engineering         Semester 7         Title	Credit           1.5           Credit           3           3           3           3           3           3           3           18           Credit           1.5           Credit           1.5	60 Credit Hours Third Ye Prerequisite CSC 202 + MTT 202 Junior Level CSC 202 CSC 202 CSC 202 CSC 202 CSC 202 Prerequisite 90 Credit Hours Fourth Ye Prerequisite CSC 305	Code           CSC 308           CSC 406           ITE 410           ITE 421           SWE 302           SWE 471	Semester 6 Title Operating Systems Artificial Intelligence Web Programming Native Mobile Application Development Formal Methods in Software Engineering Software Design and Architecture Total Credit Hours Semester 8 Title	Credit 3 3 3 3 3 3 3 3 18 Credit	CSC 301 STT 201 + CSC 301 CSC 307 CSC 202 MTT 202 + SWE 401 SWE 401 Prerequisite
Code           SWE399A           Code           CSC 301           CSC 305           ITE 390           SWE 371           SWE 401           SWE 370           Code           SWE 370           Code           SWE399B           Code           ITE 408           ITE 409	Total Credit Hours         Summer Semeste         Title         Internship/Project in Software Engineering I         Semester 5         Title         Data Structures and Algorithms         Data Communications and Networks         Computer Ethics         Software Requirements and Specification         Software Engineering         Object Oriented Design Patterns         Summer Semeste         Title         Internship/Project in Software Engineering         Semester 7         Title         Information Security         Human Computer Interactions	Credit           1.5           Credit           3           3           3           3           3           3           3           3           1.5           Credit           1.5           Credit           3           3           3           3           3           3           1.5           Credit           3	60 Credit Hours Third Ye Prerequisite CSC 202 + MTT 202 Junior Level CSC 202 CSC 202 CSC 202 CSC 202 CSC 202 Prerequisite 90 Credit Hours Fourth Ye Prerequisite	Code           CSC 308           CSC 406           ITE 410           ITE 421           SWE 302           SWE 471	Semester 6 Title Operating Systems Artificial Intelligence Web Programming Native Mobile Application Development Formal Methods in Software Engineering Software Design and Architecture <b>Total Credit Hours</b> Semester 8 <u>Title</u> Distributed Information Systems Software Maintenance and Evolution	Credit 3 3 3 3 3 3 3 3 3 3 18 Credit 3	CSC 301 STT 201 + CSC 301 CSC 307 CSC 202 MTT 202 + SWE 401 SWE 401 SWE 401 Prerequisite CSC 202 + CSC 305 SWE 401
Code SWE399A Code CSC 301 CSC 305 ITE 390 SWE 371 SWE 401 SWE 370 Code SWE399B Code ITE 408 ITE 409 SWE 472	Total Credit Hours         Summer Semeste         Title         Internship/Project in Software Engineering I         Semester 5         Title         Data Structures and Algorithms         Data Communications and Networks         Computer Ethics         Software Requirements and Specification         Software Engineering         Object Oriented Design Patterns         Summer Semeste         Title         Internship/Project in Software Engineering         Semester 7         Title         Information Security         Human Computer Interactions         Software Testing and Quality Assurance	Credit           1.5           Credit           3           3           3           3           3           3           3           3           1.5           Credit           1.5           Credit           3           3           3           3           3           3           3           1.5           Credit           3           3           3	60 Credit Hours Third Ye Prerequisite CSC 202 + MTT 202 Junior Level CSC 202 CSC 305 CSC 401 or SWE 401 SWE 471	Code CSC 308 CSC 406 ITE 410 ITE 421 SWE 302 SWE 471 SWE 471 Code CSC 408 SWE 473 FWS 310	Semester 6 Title Operating Systems Artificial Intelligence Web Programming Native Mobile Application Development Formal Methods in Software Engineering Software Design and Architecture <b>Total Credit Hours</b> Semester 8 <u>Title</u> Distributed Information Systems Software Maintenance and Evolution Fund. of Innovation and Entrepreneurship	Credit 3 3 3 3 3 3 3 18 Credit 3 3 3 3 3 3 3 3 3 3 3 3 3	CSC 301 STT 201 + CSC 301 CSC 307 CSC 202 MTT 202 + SWE 401 SWE 401 SWE 401 Prerequisite CSC 202 + CSC 305 SWE 401 ENG 200 + (Comp. of 60 CH)
Code SWE399A Code CSC 301 CSC 305 ITE 390 SWE 371 SWE 401 SWE 370 Code SWE399B Code ITE 408 ITE 408 ITE 409 SWE 472 CSE 410	Total Credit Hours         Summer Semeste         Title         Internship/Project in Software Engineering I         Semester 5         Title         Data Structures and Algorithms         Data Communications and Networks         Computer Ethics         Software Requirements and Specification         Software Engineering         Object Oriented Design Patterns         Summer Semeste         Title         Internship/Project in Software Engineering         Semester 7         Title         Information Security         Human Computer Interactions         Software Testing and Quality Assurance         Mobile Device Security	Credit         1.5         Credit         3 <t< td=""><td>60 Credit Hours Third Ye Prerequisite CSC 202 + MTT 202 Junior Level CSC 202 CSC 202 CSC 202 CSC 202 Prerequisite 90 Credit Hours Fourth Ye Prerequisite CSC 305 CSC 401 or SWE 401 SWE 471 CSC 305</td><td>Code CSC 308 CSC 406 ITE 410 ITE 421 SWE 302 SWE 471 Code CSC 408 SWE 473 FWS 310 ITE 423</td><td>Semester 6 Title Operating Systems Artificial Intelligence Web Programming Native Mobile Application Development Formal Methods in Software Engineering Software Design and Architecture <b>Total Credit Hours</b> Semester 8 Title Distributed Information Systems Software Maintenance and Evolution Fund. of Innovation and Entrepreneurship Advanced Mobile Application Development</td><td>Credit 3 3 3 3 3 3 3 18 Credit 3 3 3 3 3 3 3 3 3 3 3 3 3</td><td>CSC 301         STT 201 + CSC 301         CSC 307         CSC 202         MTT 202 + SWE 401         SWE 401    Prerequisite          CSC 202 + CSC 305         SWE 401         ENG 200 + (Comp. of 60 CH)         ITE 421</td></t<>	60 Credit Hours Third Ye Prerequisite CSC 202 + MTT 202 Junior Level CSC 202 CSC 202 CSC 202 CSC 202 Prerequisite 90 Credit Hours Fourth Ye Prerequisite CSC 305 CSC 401 or SWE 401 SWE 471 CSC 305	Code CSC 308 CSC 406 ITE 410 ITE 421 SWE 302 SWE 471 Code CSC 408 SWE 473 FWS 310 ITE 423	Semester 6 Title Operating Systems Artificial Intelligence Web Programming Native Mobile Application Development Formal Methods in Software Engineering Software Design and Architecture <b>Total Credit Hours</b> Semester 8 Title Distributed Information Systems Software Maintenance and Evolution Fund. of Innovation and Entrepreneurship Advanced Mobile Application Development	Credit 3 3 3 3 3 3 3 18 Credit 3 3 3 3 3 3 3 3 3 3 3 3 3	CSC 301         STT 201 + CSC 301         CSC 307         CSC 202         MTT 202 + SWE 401         SWE 401    Prerequisite          CSC 202 + CSC 305         SWE 401         ENG 200 + (Comp. of 60 CH)         ITE 421
Code SWE399A CSC 301 CSC 305 ITE 390 SWE 371 SWE 401 SWE 370 Code SWE399B Code ITE 408 ITE 409 SWE 472	Total Credit Hours         Summer Semeste         Title         Internship/Project in Software Engineering I         Semester 5         Title         Data Structures and Algorithms         Data Communications and Networks         Computer Ethics         Software Requirements and Specification         Software Engineering         Object Oriented Design Patterns         Summer Semeste         Title         Internship/Project in Software Engineering         Semester 7         Title         Information Security         Human Computer Interactions         Software Testing and Quality Assurance	Credit         1.5         Credit         3         3         3         3         3         3         3         3         3         3         3         3         3         1.5         Credit         1.5         Credit         3	60 Credit Hours Third Ye Prerequisite CSC 202 + MTT 202 Junior Level CSC 202 CSC 305 CSC 401 or SWE 401 SWE 471	Code CSC 308 CSC 406 ITE 410 ITE 421 SWE 302 SWE 471 Code CSC 408 SWE 473 FWS 310	Semester 6 Title Operating Systems Artificial Intelligence Web Programming Native Mobile Application Development Formal Methods in Software Engineering Software Design and Architecture <b>Total Credit Hours</b> Semester 8 <u>Title</u> Distributed Information Systems Software Maintenance and Evolution Fund. of Innovation and Entrepreneurship	Credit 3 3 3 3 3 3 3 18 Credit 3 3 3 3 3 3 3 3 3 3 3 3 3	CSC 301 STT 201 + CSC 301 CSC 307 CSC 202 MTT 202 + SWE 401 SWE 401 SWE 401 Prerequisite CSC 202 + CSC 305 SWE 401 ENG 200 + (Comp. of 60 CH)