

BACHELOR OF SCIENCE IN SOFTWARE ENGINEERING (August 2026)

FRESHMAN YEAR											
FIRST SEMESTER						SECOND SEMESTER					
Course Number	Course Title	Credit Hours	Contact Hours		Pre-requisite	Course Number	Course Title	Credit Hours	Contact Hours		Pre-requisite
			Lec	Lab					Lec	Lab	
ISLM 1221	Islamic Cultures, Values & Societies	2	2	0	<i>IELTS/APTIS</i>	UNIV 1221	Generative AI Prompt Engineering Basics	2	2	0	<i>UNIV 1211</i>
COMM 1321	Oral Communication	3	3	0	<i>IELTS/APTIS</i>	COMM 1322	Written Communication	3	3	0	<i>COMM 1321</i>
UNIV 1211	Prof. Development and Competencies	2	2	0		UNIV 1212	Critical Thinking and Problem Solving	2	2	0	<i>UNIV 1211</i>
MATH 1422	Calculus I	4	4	1	<i>PRPM 0022</i>	MATH 1423	Calculus II	4	4	1	<i>MATH 1422</i>
GEIT 1411	Computer Science I	4	3	2		GEIT 1412	Computer Science II	4	3	2	<i>GEIT 1411</i>
PHED 1111	Active Living Lifestyle	1	1	0		PHYS 1421	Physics for Engineers I	4	3	3	<i>PRPM 0022</i>
Total Credit Hours		16				Total Credit Hours		19			

SOPHOMORE YEAR											
FIRST SEMESTER						SECOND SEMESTER					
Course Number	Course Title	Credit Hours	Contact Hours		Pre-requisite	Course Number	Course Title	Credit Hours	Contact Hours		Pre-requisite
			Lec	Lab					Lec	Lab	
UNIV 2221	Future Skills	2	2	0	<i>UNIV 1221</i>	UNIV 2222	Systems Thinking for Future Innovations	2	2	0	<i>UNIV 2221</i>
UNIV 1213	Leadership and Teamwork	2	2	0	<i>UNIV 1212</i>	COMM 2322	Writing & Research	3	3	0	<i>COMM 2321</i>
PHYS 1422	Physics for Engineers II	4	3	3	<i>PHYS 1421</i> <i>MATH 1422</i>	ASSE 2111	Learning Outcome Assessment I	1	1	1	<i>Sophomore Standing</i>
MATH 1324	Calculus III	3	3	1	<i>MATH 1423</i>	GEIT 2331	Mathematical Reasoning and Algorithmic Thinking	3	3	0	<i>GEIT 1412</i>
GEIT 2421	Data Structures	4	3	2	<i>GEIT 1412</i>	SOEN 2312	Web Programming	3	2	2	<i>GEIT 1411</i>
COMM 2321	Technical & Professional Communication	3	3	0	<i>COMM 1322</i>	GEIT 2291	Professional Ethics	2	2	0	
PHED 1112	Healthy Behaviors and Management	1	1	0	<i>PHED 1111</i>		Social Science Elective I*	3			<i>See from the list</i>
Total Credit Hours		19				Total Credit Hours		17			

JUNIOR YEAR											
FIRST SEMESTER						SECOND SEMESTER					
Course Number	Course Title	Credit Hours	Contact Hours		Pre-requisite	Course Number	Course Title	Credit Hours	Contact Hours		Pre-requisite
			Lec	Lab					Lec	Lab	
GEIT 3341	Database I	3	2	2	<i>GEIT 1412</i>	SOEN 3311	Requirements Engineering	3	3	0	<i>GEIT 3351</i>
GEIT 3331	Computer Organization	3	3	0	<i>GEIT 1412</i>	SOEN 4361	Operating Systems	3	3	0	<i>GEIT 3331</i>
SOEN 2332	Discrete Structure and Combinatorial Analysis	3	3	0	<i>GEIT 2331</i>	ASSE 3211	Learning Outcome Assessment II	2	2	1	<i>ASSE 2111 & Junior Standing</i>
GEIT 3351	Principles of Software Engineering	3	3	0	<i>GEIT 1412</i>	SOEN 4371	E-Commerce	3	3	0	<i>GEIT 3341</i> <i>SOEN 2312</i>
SOEN 3351	Algorithms	3	3	0	<i>GEIT 2421</i>	MATH 2313	Probability and Statistics	3	3	1	<i>MATH 1423</i>
Total Credit Hours		15				Total Credit Hours		14			

SUMMER OF JUNIOR YEAR										
Course Number	Course Title	Credit Hours			Pre-requisite					
GEIT 4361	Internship	3	8 weeks (320 hours) full time		End of Junior Year (summer before graduation) and department approval					

SENIOR YEAR											
FIRST SEMESTER						SECOND SEMESTER					
Course Number	Course Title	Credit Hours	Contact Hours		Pre-requisite	Course Number	Course Title	Credit Hours	Contact Hours		Pre-requisite
			Lec	Lab					Lec	Lab	
SOEN 4311	Software Architecture and Design	3	3	0	SOEN 3311	SOEN 4313	Software Project Management	3	3	0	GEIT 3351
ASSE 4311	Learning Outcome Assessment III - SE	3	3	0	ASSE 3211 & Senior Standing		CS, CE, or IT Elective (300 or 400 Level) ***	3			See from the list
SOEN 4312	Software Testing and Quality Assurance	3	3	0	GEIT 3351		SE Elective II ****	3			See from the list
	Natural Science Elective **	4			See from the list		Social Science Elective II **	3			See from the list
	SE Elective I ****	4			See from the list						
Total Credit Hours		17				Total Credit Hours		12			

TOTAL DEGREE CREDIT HOURS = 132										
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* Social Science Electives: 2 Courses = 6 Credit Hours			
Course Number	Course Title	Credit Hours	Pre-Requisites
FREN 1311	Introduction to French Language	3	
FURS 1311	Introduction to Futures Skills	3	
FUTR 1311	Introduction to Futures Studies	3	
GEGR 1311	World Regional Geography	3	
HIST 1311	World Civilizations	3	
PSYC 1311	Introduction to Psychology	3	
SERV 1311	Introduction to Service Learning and Volunteering	3	
SPAN 1311	Introduction to Spanish Language	3	
SUST 1311	Introduction to Sustainability	3	
SYST 1311	Introduction to Systems Thinking	3	
BSTW 1311	Behavioral Sciences in 3D World	3	
DANT 1311	Digital Anthropology	3	
ECON 1311	Introduction to Macroeconomics	3	
ECON 1312	Introduction to Microeconomics	3	

**** Natural Science Electives: 1 Course = 4 Credit Hours**

Course Number	Course Title	Credit Hours	Contact Hours		Pre-requisite
			LEC	LAB	
BIOL 1411	Introductory Biology	4	3	3	PRPM 0011
CHEM 1411	Introductory Chemistry	4	3	3	PRPM 0011
CHEM 1421	Chemistry for Engineers I	4	3	3	PRPM 0022
CHEM 1422	Chemistry for Engineers II	4	3	3	PRPM 0022
GEOL 1411	Introductory Geology	4	3	3	PRPM 0011

***** CS/CE/IT Electives: 1 Course = 3 Credit Hours**

Students can take any 3XXX or 4XXX course that starts with COSC/COEN/ITAP prefix.
However, students are not allowed to take the same course with a different code (Equivalent courses)

****** SE Electives: 2 Courses = 7 Credit Hours**

SE Elective: 1 Course = 3 Credit Hours

Course Number	Course Title	Credit Hours	Contact Hours		Pre-requisite
			LEC	LAB	
SOEN 4321	Software Maintenance and Evolution	3	3	0	GEIT 3351 SOEN 4312
SOEN 4322	Software Security	3	3	0	GEIT 1412
SOEN 3314	Formal Methods in Software Engineering	3	3	0	GEIT 2331
SOEN 3321	Programming in UNIX Environments	3	3	0	SOEN 4361 SOEN 3351
SOEN 4316	Concurrent Programming	3	3	0	GEIT 2421 SOEN 3351
SOEN 4315	Cloud Computing	3	3	0	GEIT 1412
SOEN 3361	Computer Networks	3	3	0	MATH 2313 GEIT 2421

SE Elective: 1 Course = 4 Credit Hours

Course Number	Course Title	Credit Hours	Contact Hours		Pre-requisite
			LEC	LAB	
SOEN 4463	Data Mining	4	3	2	MATH 2313 GEIT 3341
SOEN 3463	Distributed System	4	3	2	GEIT 1412 SOEN 3361
SOEN 4461	Programming Languages	4	3	3	GEIT 2421