

BACHELOR OF SCIENCE IN COMPUTER SCIENCE

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	
ALIS 1211	Introduction to Islamic Culture	2	2	0		ALIS 1212	The Social System in Islam	2	2	0	ALIS 1211
COMM 1311	Written Communication	3	3	0		COMM 1312	Writing and Research	3	3	0	COMM 1311
UNIV 1211	Prof. Development and Competencies	2	2	0		UNIV 1212	Critical Thinking and Problem Solving	2	2	0	UNIV 1211
MATH 1422	Calculus I	4	4	1	PRPM 0022	PHYS 1421	Physics for Engineers I	4	3	3	PRPM 0022
GEIT 1411	Computer Science I	4	3	2		GEIT 1412	Computer Science II	4	3	2	GEIT 1411
PHED 1111	Active Living Lifestyle	1	1	0		MATH 1423	Calculus II	4	4	1	MATH 1422
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	
ALIS 2211	Linguistic Communication Skills	2	2	0	ALIS 1212	ALIS 2212	The Biography of Prophet Mohammad	2	2	0	ALIS 2211
UNIV 1213	Leadership and Teamwork	2	2	0	UNIV 1212	COMM 2312	Technical and Professional Communications	3	3	0	COMM 2311
PHYS 1422	Physics for Engineers II	4	3	3	PHYS1421 MATH 1422	ASSE 2111	Learning Outcome Assessment I	1	1	1	Sophomore Standing
MATH 1324	Calculus III	3	3	1	MATH 1423	GEIT 2331	Mathematical Reasoning and Algorithmic Thinking	3	3	0	GEIT 1412
GEIT 2421	Data Structures	4	3	2	GEIT 1412	COSC 2312	Web Programing	3	2	2	GEIT 1411
COMM 2311	Oral Communication	3	3	0	COMM 1312	GEIT 2291	Professional Ethics	2	2	0	
PHED 1112	Healthy Behaviors and Management	1	1	0	PHED 1111	MATH 2313	Probability and Statistics	3	3	1	MATH 1423
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	
COSC 3332	Discrete Structures and Combinatorial Analysis	3	3	0	GEIT 2331	GEIT 3351	Principles of Software Engineering	3	3	0	GEIT 1412
GEIT 3341	Database I	3	2	2	GEIT 1412	COSC 3361	Computer Networks	3	3	0	MATH 2313 GEIT 2421
GEIT 3331	Computer Organization	3	3	0	GEIT 1412	COSC 3351	Algorithms	3	3	0	GEIT 2421
MATH 3433	Linear Algebra and Differential Equation	4	4	1	MATH 1423	COSC 3411	Systems Programming	4	3	3	GEIT 3331
ASSE 3211	Learning Outcome Assessment II	2	2	1	ASSE 2111 & Junior Standing		Natural Science Elective**	4			See from the list
	CS Elective I***	3			See from the list						
Total Credit Hours		18				Total Credit Hours		17			

SUMMER OF JUNIOR YEAR

Course Number	Course Title	Credit Hours		Pre-requisite
GETT 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	
COSC 4361	Operating Systems	3	3	0	<i>COSC 3411</i>	COSC 4362	Artificial Intelligence	3	3	0	<i>COSC 3351</i>
COSC 4461	Programming Languages	4	3	3	<i>COSC 3411</i>	COSC 4363	Theory of Computation	3	3	0	<i>COSC 3351</i> <i>MATH 3433</i>
ASSE 4311	Assessment III - CS (<i>Capstone</i>)	3	3	0	<i>ASSE 3211 & Senior Standing</i>		CS Elective III***	3			<i>See from the list</i>
	CS Elective II***	3			<i>See from the list</i>		Social Science Elective II*	3			<i>See from the list</i>
	Social Science Elective I*	3			<i>See from the list</i>						
Total Credit Hours		16				Total Credit Hours		12			

TOTAL DEGREE CREDIT HOURS = 137

* 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 Electives: 3 Courses = 9 Credit Hours**

Course Number	Course Title	Credit Hours	Contact Hours		Pre-requisite
			LEC	LAB	
COSC 3354	Introduction to Cryptography	3	3	0	GEIT 2421
COSC 4371	Computer Graphics	3	3	0	GEIT 2421
ITAP 3313	User Interface Development	3	3	0	GEIT 1412 COSC 2312
COSC 3359	Computer Animation	3	3	0	GEIT 2421
COSC 3357	Logic and Formal Verification	3	3	0	GEIT 2331
COSC 4373	Computer Vision	3	3	0	GEIT 2421 MATH 2313
COSC 4352	Formal Methods in Software Engineering	3	3	0	GEIT 3351
COSC 4372	Distributed Systems and Algorithms	3	3	0	COSC 3351 COSC 4361
COSC 4376	Bioinformatics	3	3	0	COSC 3351
COSC 4380	Quantum Information and Computation	3	3	0	COSC 3351
COSC 4311	Parallel Computing	3	3	0	COSC 3351
COSC 4364	Compilers	3	3	0	COSC 3351 COSC 4461
ITAP 4371	e-Commerce	3	3	0	GEIT 3341 COSC 2312
ITAP 3371	Database II	3	2	2	GEIT 3341
COSC 4393	Special Topics – I	3	3	0	Senior Standing & Department Approval
COSC 4398	Special Topics – II	3	3	0	Senior Standing & Department Approval
COSC 4399	Special Topics - III	3	3	0	Senior Standing & Department Approval