

Bachelor of Engineering in Computer and Communications Engineering (BECCE)

First Year

Fall Semester

Code	Title	Credits	Prerequisites	Corequisites
ENGL201	Composition and Research Skills	3	ENGL151	
PHYS220	Physics for Engineers	3	PHYS161 - ENGL101 - PHYS160	MATH210
MATH225	Linear Algebra with Applications	3	MATH160 - ENGL051 - MATH161	
MATH210	Calculus II	3	MATH161 - MATH160	
ENGG200	Introduction to Engineering	3	MATH160 - CHEM160	
Total		15		

Spring Semester

Code	Title	Credits	Prerequisites	Corequisites
EENG250	Electric Circuits I	3	PHYS161 - PHYS160 - MATH161 - MATH160 - ENGL051	ENGG200 - MATH210
MATH270	Ordinary Differential Equations	3	MATH225 - MATH210	
CENG250	Digital Logic I	3		EENG250
CSCI250	Introduction to Programming	3		CSCI250L
	Elective	3		
CSCI250L	Introduction to Programming Lab	1		CSCI250
Total		16		

Summer Semester

Code	Title	Credits	Prerequisites	Corequisites
MATH220	Calculus III	3	MATH210	
ENGL251	Communication Skills	3	ENGL201	
Total		6		

Second Year

Fall Semester

Code	Title	Credits	Prerequisites	Corequisites
EENG300	Electric Circuits II	3	EENG250	EENG301L
CSCI300	Intermediate Programming with Objects	3	CSCI250L - CSCI250	
CENG325	Software Applications and Design	3		CSCI300
ENGG300	Engineering Economics	3	ENGL201 - MATH225	MATH220
EENG301L	Electric Circuits Lab	1	EENG250	EENG300
CENG335	Digital Logic II	3	CSCI250 - CENG250	
Total		16		

Spring Semester

Code	Title	Credits	Prerequisites	Corequisites
EENG385	Signals and Systems	3	MATH225 - EENG300	MATH310 - MATH270
CENG375	Introduction to Database Systems	3	CENG325 - CSCI300	
CENG380	Microprocessors and Microcontrollers	3	CENG250 - CENG335 - EENG250 - CSCI250	CENG352L
MATH310	Probability & Statistics for Scientists & Engineers	3	MATH210 - ENGL201	
EENG350	Electronic Circuits I	3	ENGG200 - CENG250 - EENG300 - EENG250	EENG350L

CENG352L	Digital Logic Circuits Lab	1	CENG250 - EENG301L	
EENG350L	Electronic Circuits I Lab	1	EENG300 - EENG250 - EENG301L	EENG350
Total		17		
Summer Semester				
Code	Title	Credits	Prerequisites	Corequisites
	Elective	3		
ARAB200	Arabic Language and Literature	3		
Total		6		
Third Year				
Fall Semester				
Code	Title	Credits	Prerequisites	Corequisites
CENG435	Mobile Application Development	3	CENG325 - CSCI300 - CENG375	
CENG415	Communication Networks	3	CENG250 - CENG325 - CSCI250 - CSCI300	
EENG447	Analog Communication Systems	3	MATH310 - EENG385	
CENG420	Web Programming and Technologies	3	CENG325 - CSCI300 - CENG375	
CENG400L	Microcontroller Applications Lab	1	CENG380	
CENG430L	Linux Lab	1	CENG380 - CENG325	
CENG400	Computer Organization and Design	3	CENG335 - CENG250 - CENG380	
Total		17		
Spring Semester				
Code	Title	Credits	Prerequisites	Corequisites
EENG467L	Analog Communication Systems Lab	1	EENG447	
CENG460	Operating Systems	3	CENG380 - CSCI300	
EENG388	Electromagnetic Fields and Waves	3	MATH270 - PHYS220 - MATH220 - EENG300	
ENGG450	Engineering Ethics and Professional Practice	3	ENGG300 - ENGL251	
CENG470	Data Structures and Analysis of Algorithms	3	CENG325 - CSCI300	
CENG455L	Communication Networks Lab	1	CENG415	
CENG450L	Scripting Languages Lab	1	CENG430L	
Total		15		
Summer Semester				
Code	Title	Credits	Prerequisites	Corequisites
ENGG499	Practical Experience	4		
CULT200	Introduction to Arab - Islamic Civilization	3		
Total		7		
Fourth Year				
Fall Semester				
Code	Title	Credits	Prerequisites	Corequisites
ENGG515	Advanced Engineering Mathematics	3	MATH310 - MATH270 - MATH225 - MATH220	
EENG537	Digital Communications	3	EENG388 - EENG447	
EENG527	Digital Signal Processing	3	EENG350 - EENG447	
	Elective	3		
CENG507	Embedded Systems	3	CENG400	
Total		15		

Spring Semester				
Code	Title	Credits	Prerequisites	Corequisites
	Elective	3		
CENG685	Information Security	3	CENG557	
CENG557	Advanced Network Architectures	3	ENGG515 - CENG455L - CENG415	
EENG587	Wireless Communication	3	EENG537	
	Elective	1		
EENG637L	Advanced Digital Communication Lab	1	EENG577 - EENG537	
Total		14		
Summer Semester				
Code	Title	Credits	Prerequisites	Corequisites
CENG595	Capstone Project	6	ENGL251 - EENG587 - ENGG450 - CENG435 - CENG420 - CENG557	
Total		6		
Major Elective Courses				
Code	Title	Credits	Prerequisites	Corequisites
CENG566	Machine Learning	3	EENG527 - ENGG515	CENG566L
CENG566L	Machine Learning Laboratory	1	ENGG515 - EENG527	CENG566
CENG625	Cryptography & Advanced Computer Security	3	CENG557 - ENGG515	
CENG643	Distributed Systems and Network Programming	3		CENG557
CENG644	Image Processing	3	EENG527	
CENG646	Data Mining	3	CENG566 - CENG375	
CENG655	Queueing Theory	3	EENG447	CENG557
CENG675	Multimedia Networks	3	EENG527 - CENG415	CENG557
CENG677	Fiber Optics	3		CENG557
CENG678	Image Processing and Computer Vision	3	CENG675 - CENG566 - EENG527 - ENGG515	
EENG400	Electronic Circuits II	3	EENG350	
EENG435	Control Systems	3	PHYS220 - MATH270 - MATH225 - MATH310 - EENG300 - EENG385	
EENG577	Advanced Digital Communications	3	ENGG515 - EENG537	