

Bachelor of Engineering in Computer and Communications Engineering (BECCE)

Major Electives

Code	Title	Credits	Prerequisites	Corequisites
	Elective	3		
	Elective	3		
	Elective	1		
Total		7		

Core Requirements

Code	Title	Credits	Prerequisites	Corequisites
CSCI250	Introduction to Programming	3		ENGL101 - CSCI250L
CSCI250L	Introduction to Programming Lab	1		ENGL101 - CSCI250
CSCI300	Intermediate Programming with Objects	3	CSCI250L - CSCI250	
EENG250	Electric Circuits I	3	PHYS161 - PHYS160 - MATH161 - MATH160 - ENGL051	ENGG200 - MATH210
ENGG200	Introduction to Engineering	3		
ENGG300	Engineering Economics	3	ENGL201 - MATH225 - MATH220	
MATH210	Calculus II	3	MATH161 - MATH160	
MATH220	Calculus III	3	MATH210	
MATH225	Linear Algebra with Applications	3	ENGL051 - MATH161	
MATH270	Ordinary Differential Equations	3	MATH210	MATH225
MATH310	Probability & Statistics for Scientists & Engineers	3	MATH210 - ENGL201	
PHYS220	Physics for Engineers	3	PHYS161 - ENGL101 - PHYS160	MATH210
Total		34		

Major Requirements

Code	Title	Credits	Prerequisites	Corequisites
CENG250	Digital Logic I	3		EENG250
CENG325	Software Applications and Design	3		CSCI300
CENG335	Digital Logic II	3	CSCI250 - CENG250	
CENG352L	Digital Logic Circuits Lab	1	EENG301L	
CENG375	Introduction to Database Systems	3	CSCI300	
CENG380	Microprocessors and Microcontrollers	3	EENG250 - CSCI250	CENG352L
CENG400	Computer Organization and Design	3	CENG380	
CENG400L	Microcontroller Applications Lab	1	CENG380	
CENG415	Communication Networks	3	CSCI250 - CSCI300	
CENG420	Web Programming and Technologies	3	CSCI300 - CENG375	
CENG430L	Linux Lab	1	CENG325	

CENG435	Mobile Application Development	3	CSCI300 - CENG375	
CENG450L	Scripting Languages Lab	1	CENG430L	
CENG455L	Communication Networks Lab	1	CENG415	
CENG460	Operating Systems	3	CENG380 - CSCI300	
CENG470	Data Structures and Analysis of Algorithms	3	CSCI300	
CENG507	Embedded Systems	3	CENG400	
CENG557	Advanced Network Architectures	3	CENG455L - CENG415	
CENG595	Capstone Project	6	ENGL251 - EENG587 - ENGG450 - CENG435 - CENG420 - CENG557	
CENG685	Information Security	3	CENG557	
EENG300	Electric Circuits II	3	EENG250	EENG301L
EENG301L	Electric Circuits Lab	1	EENG250	EENG300
EENG350	Electronic Circuits I	3	EENG300 - EENG250	EENG350L
EENG350L	Electronic Circuits I Lab	1	EENG300 - EENG250 - EENG301L	EENG350
EENG385	Signals and Systems	3	MATH225 - EENG300	MATH310 - MATH270
EENG388	Electromagnetic Fields and Waves	3	PHYS220 - MATH220 - EENG300	
EENG447	Analog Communication Systems	3	MATH310 - EENG385	EENG467L
EENG467L	Analog Communication Systems Lab	1		EENG447
EENG527	Digital Signal Processing	3	EENG447	
EENG537	Digital Communications	3	EENG388 - EENG447	
EENG587	Wireless Communication	3	EENG537	
EENG637L	Advanced Digital Communication Lab	1	EENG577 - EENG537	
ENGG515	Advanced Engineering Mathematics	3	MATH310 - MATH270 - MATH225 - MATH220	
Total		84		

General Education Requirements

Code	Title	Credits	Prerequisites	Corequisites
ARAB200	Arabic Language and Literature	3		
CULT200	Introduction to Arab - Islamic Civilization	3		
ENGG450	Engineering Ethics and Professional Practice	3	ENGL251	ENGG300
ENGL201	Composition and Research Skills	3	ENGL151	
ENGL251	Communication Skills	3	ENGL201	
Total		15		

General Education Electives

Code	Title	Credits	Prerequisites	Corequisites
	Elective	3		
	Elective	3		
Total		6		

Major Elective Courses

Code	Title	Credits	Prerequisites	Corequisites
CENG566	Machine Learning	3	EENG527-ENGG515	CENG566L
CENG566L	Machine Learning Laboratory	1		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		CENG557
CENG677	Fiber Optics	3		CENG557
CENG678	Image Processing and Computer Vision	3	CENG566-EENG527-ENGG515	
EENG400	Electronic Circuits II	3	EENG350	
EENG435	Control Systems	3	EENG300-EENG385	
EENG577	Advanced Digital Communications	3	ENGG515-EENG537	