Ahlia University
COLLEGE OF ENGINEERING
BACHELOR'S DEGREE IN COMPUTER AND COMMUNICATION ENGINEERING
BSCCE 24-25

BSCCE 24-25 - FIRST YEAR (35 CREDITS)

First Semester

Course	Code	Course Title	Lec	Lab	Cr	Prerequisite
ARAB	101	Composition for Native Speakers of Arabic I	3	0	3	
ENGL	101	Academic English I	3	0	3	ENGL 052 AND ENGL 055 or passing placement test
ITCS	101	Introduction to Computers & IT	2	2	3	
MATH	101	Calculus I	3	0	3	MATH 053 or passing placement test
PHYS	101	General Physics I	3	0	3	MATH 053 or passing placement test
STAT	101	Introduction to Statistics	3	0	3	MATH 053 or passing placement test
					18	

Second Semester

Course	Code	Course Title	Lec	Lab	Cr	Prerequisite
ENGL	102	Academic English II	3	0	3	ENGL 101
HIST	121	Modern History of Bahrain	3	0	3	
HUMR	101	Principles of Human Rights	2	0	2	
ITCS	122	Introduction to Programming Techniques	2	2	3	ITCS 101
MATH	102	Calculus II	3	0	3	MATH 101
PHYS	102	Physics II	2	2	3	PHYS 101
					17	

BSCCE 24-25 - SECOND YEAR (33 CREDITS)

First Semester

Course	Code	Course Title	Lec	Lab	Cr	Prerequisite
ECCE	201	Electric Circuits	2	2	3	PHYS 102 AND MATH 102
ENGL	201	Academic English III	3	0	3	ENGL 102
ITCS	201	Object-Oriented Programming I	2	2	3	ITCS 122
ITCS	209	Discrete Structures	3	0	3	MATH 101
MATH	205	Differential Equations	3	0	3	MATH 102
					15	

Second Semester

Course	Code	Course Title	Lec	Lab	Cr	Prerequisite
ECCE	203	Digital Logic	2	2	3	ITCS 101
ECCE	221	Electronic Circuits	2	2	3	ECCE 201
ECTE	224	Signals & Systems	2	2	3	MATH 205
ENGL	213	Report Writing	3	0	3	ENGL 201
ITCS	224	Data Structures	2	2	3	ITCS 201
MATH	223	Linear Algebra and Complex Analysis	3	0	3	MATH 101
					18	

BSCCE 24-25 - THIRD YEAR (36 CREDITS)

First Semester

Course	Code	Course Title	Lec	Lab	Cr	Prerequisite
ECCE	303	Computer Architecture and Organization	2	2	3	ECCE 203
ECCE	326	Digital Logic Design	2	2	3	ECCE 203
ECTE	314	Communication Systems I	2	2	3	ECTE 224 AND ECCE 221
ECTE	329	Computer Networks	2	2	3	ITCS 214 OR ECCE 203
ITCS	323	Database Systems: Design and Application	2	2	3	ITCS 224
					15	

Second Semester

Course	Code	Course Title	Lec	Lab	Cr	Prerequisite
ECCE	323	Microprocessors	2	2	3	ECCE 303
ECTE	322	Antenna and Wave Propagation	2	2	3	MATH 205 AND MATH 223
ECTE	324	Communication Systems II	2	2	3	ECTE 314
ETHC	392	Ethics and Professional Practice in IT and Engineering	3	0	3	Completion of at least 66 credits
HU/SS	XXX	Humanities/Social Sciences	3	0	3	
STAT	302	Applied Probability	3	0	3	STAT 101 AND MATH 102
					18	

Summer Semester

Course	Code	Course Title	Lec	Lab	Cr	Prerequisite
INTR	461	BSCCE Internship	0	0	3	Completion of at least 90 credits And Minimum CGPA 2
					3	

BSCCE 24-25 - FOURTH YEAR (30 CREDITS)

First Semester

Course	Code	Course Title	Lec	Lab	Cr	Prerequisite
ECCE	403	Embedded Systems	2	2	3	ECCE 323
ECTE	450	Digital Signal Processing	2	2	3	ECTE 224
IERM	498	Research Methods in Information Technology & Engineering	3	0	3	Completion of at least 90 credits
ECCE	4XX	ECCE Major Elective	X	X	3	
XXXX	XXX	Minor Elective	X	X	3	
					15	

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Second Semester

Course	Code	Course Title	Lec	Lab	Cr	Prerequisite
ECTE	424	Wireless Communications	2	2	3	ECTE 324 AND ECTE 322
ECCE	499	Major Project	0	6	3	IERM 498 AND ETHC 392
ITCS	409	Operating Systems	3	0	3	ECCE 203 OR ITCS 303
ECCE	4XX	ECCE Major Elective	X	X	3	
XXXX	XXX	Minor Elective	X	X	3	
					15	

LIST OF ELECTIVE COURSES

	Course	Code	Course Title	Lec	Lab	Cr	Prerequisite
ECCE Major Elective	ECCE	413	Internet of Things	2	2	3	ECTE 329
	ECCE	424	Cyber Security	2	2	3	STAT 302
	ECCE	443	Applied Robotics	2	2	3	ECCE 323
	ECCE	451	Machine Learning	2	2	3	STAT 302 AND MATH 205
	ECCE	452	Computer Vision	2	2	3	ITCS 224
Minor Elective	ECCE	425	Engineering Management	3	0	3	Completion of at least 90 credits
	ECTE	406	Multimedia Communications	2	2	3	ECTE 450
	ECTE	474	Optical Communications	2	2	3	ECTE 324
	ITCS	422	Distributed Systems	2	2	3	ITCS 409
	ITMS	437	Cloud Services Development	2	2	3	ITCS 323

*Student are required to take two ECCE Major Elective courses and two Minor Elective Courses.