

Ahlia University
COLLEGE OF ENGINEERING
BACHELOR'S DEGREE IN MOBILE AND NETWORK ENGINEERING
BSMNE 24-25

BSMNE 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
HUMR	101	Principles of Human Rights	2	0	2	
ENGL	102	Academic English II	3	0	3	ENGL 101
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
HIST	121	Modern History of Bahrain	3	0	3	
					17	

BSMNE 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
ENGL	213	Report Writing	3	0	3	ENGL 201
ECCE	221	Electronic Circuits	2	2	3	ECCE 201
MATH	223	Linear Algebra and Complex Analysis	3	0	3	MATH 101
ITCS	224	Data Structures	2	2	3	ITCS 201
ECTE	224	Signals & Systems	2	2	3	MATH 205
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BSMNE 24-25 - THIRD YEAR (36 CREDITS)

First Semester

Course	Code	Course Title	Lec	Lab	Cr	Prerequisite
ECTE	314	Communication Systems I	2	2	3	ECTE 224 AND ECCE 221
ECTE	322	Antenna and Wave Propagation	2	2	3	MATH 205 AND MATH 223
ECTE	328	Mobile Application Development	2	2	3	ITCS 201 AND ITCS 224
ECTE	329	Computer Networks	2	2	3	ITCS 214 OR ECCE 203
ITCS	323	Database Systems: Design and Application	2	2	3	ITCS 224
HU/SS	XXX	Humanities/Social Sciences	3	0	3	
					18	

Second Semester

Course	Code	Course Title	Lec	Lab	Cr	Prerequisite
ECTE	324	Communication Systems II	2	2	3	ECTE 314
ECTE	340	Mobile Computing	2	2	3	ECTE 328
ECTE	349	Network Routing & Switching	2	2	3	ECTE 329
ETHC	392	Ethics and Professional Practice in IT and Engineering	3	0	3	Completion of at least 66 credits
STAT	302	Applied Probability	3	0	3	STAT 101 AND MATH 102
					15	

Summer Semester

Course	Code	Course Title	Lec	Lab	Cr	Prerequisite
INTR	462	BSMNE Internship	0	0	3	Completion of at least 90 credits And Minimum CGPA 2
					3	

BSMNE 24-25 - FOURTH YEAR (30 CREDITS)

First Semester

Course	Code	Course Title	Lec	Lab	Cr	Prerequisite
ECTE	421	Network Design & Security	2	2	3	ECTE 349
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
ECTE	4XX	ECTE 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	406	Multimedia Communications	2	2	3	ECTE 450
ECTE	415	Network Management and Administration	2	2	3	ECTE 349
ECTE	499	Major Project	0	6	3	IERM 498 AND ETHC 392
ECTE	4XX	ECTE Major Elective	X	X	3	
XXXX	XXX	Minor Elective	X	X	3	
					15	

LIST OF ELECTIVE COURSES

	Course	Code	Course Title	Lec	La b	Cr	Prerequisite
ECTE Major Elective	ECTE	414	WAN Technology	2	2	3	ECTE 329
	ECTE	424	Wireless Communications	2	2	3	ECTE 324
	ECTE	454	Satellite and Space Communications	2	2	3	ECTE 322
	ECTE	472	Software-Defined Radio	2	2	3	ECTE 324
	ECTE	474	Optical Communications	2	2	3	ECTE 324
Minor Elective	ECCE	413	Internet of Things	2	2	3	ECCE 303 AND ECTE 329
	ECCE	424	Cyber Security	2	2	3	STAT 302
	ECCE	425	Engineering Management	3	0	3	Completion of at least 90 credits
	ECCE	452	Computer Vision	2	2	3	ITCS 224
	ITMS	437	Cloud Services Development	2	2	3	ITMS 435

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