

**Bachelor of Science in Electrical Engineering
Study Plan (Fall Start)
First Year (Freshman)**

Total Credit Hours: 138

Semester 1

Code	Title	Cr.	Prerequisite
ARL101(A)	Comm. Skills in Arabic Lang.	3	Nil
ECS100	Intro. to Engr. & Computing	3	Nil
MIT102	Calculus I	3	Math Placement Test or MIT101 (C grade)
STT100	General Statistics	3	Nil
ISL100(A)	Islamic Culture	3	Nil

Total Credit Hours 15

Semester 2

Code	Title	Cr.	Prerequisite
FW5205	UAE and GCC Society	3	ENG102 (P) & FW5100 (E)/ US5001 as pre-requisite FW5100(E)/ US5001 as co-requisite if students enter to ENG200 directly
ENG200	English II	3	ENG102
COE101	Introductory Artificial Intelligence	3	STT100
PHY102	Physics & Engr. Applications I	3	MIT102
PHY102L	Physics & Engr. Applications I Lab	1	MIT102, PHY102(co)
MIT200	Calculus II	3	MIT102

Total Credit Hours 16

Second Year (Sophomore)

Semester 3

Code	Title	Cr.	Prerequisite
CSC201	Computer Programming I	3	MIT101 or higher
PHY201	Physics & Engr. Applications II	3	PHY102
PHY201L	Physics & Engr. Applications II Lab	1	PHY102, PHY201(co)
EEN210L	Digital Circuits Lab	1	EEN210(co)
EEN210	Digital Circuits	3	ECS100
CHE205	General Chemistry I	3	ENG200/ENG102(co)
CHE201L	Chemistry Lab	1	CHE205(co)
MIT201	Calculus III	3	MIT200

Total Credit Hours 18

Third Year (Junior)

Semester 5

Code	Title	Cr.	Prerequisite
CEN320	Signals and Systems	3	MIT 205, CEN201
EEN220	Electric Circuits II	3	CEN201
CEN425	IoT: Applications and Edge AI	3	CEN325
FW5310	Fund. of Innovation & Entrepreneurship	3	ENG200 +min 60 credits
EEN338	Electromagnetic Fields and Waves	3	MIT201(co),MIT205
CEN304	Electronic Devices and Circuits	3	CEN201

Total Credit Hours 18

Summer Semester

Code	Title	Cr.	Prerequisite
EEN399i	Internship in Electrical Engineering I	2	90 Credit Hours

Total Credit Hours 2

Fourth Year (Senior)

Winter Semester

Code	Title	Cr.	Prerequisite
EEN399ii	Internship in Electrical Engineering II	1	EEN399i

Total Credit Hours 1

Semester 8

Code	Title	Cr.	Prerequisite
EEN340	Energy Conversion	3	EEN220, EEN338
ME3	Major Elective III	3	
EEN449	Renewable Energy	3	EEN345
EEN452	Electrical Engineering Design Project II	2	EEN451
EEN339	Communication Systems	3	CEN330, EEN337
OE2	Open Elective II	3	

Total Credit Hours 17

Semester 7

Code	Title	Cr.	Prerequisite
EEN448	Electrical Installation and Design	3	EEN345
CSC305	Data Communications and Networks	3	Junior Level
ME2	Major Elective II	3	
CEN464L	Signal Processing Lab	1	CEN464(co)
OE1	Open Elective I	3	
CEN464	Digital Signal Processing	3	CEN320
EEN451	Electrical Engineering Design Project I	1	Senior Level

Total Credit Hours 17

Semester 6

Code	Title	Cr.	Prerequisite
EEN345	Power Systems	3	EEN220
CEN401L	Embedded and IoT Lab	1	CEN425(co), EEN210L
EEN337	Analog and Digital Communication	3	CEN320
CEN324	Digital and Analog Electronics	3	CEN304
ME1	Major Elective I	3	
CEN330	Probability and Stochastic Processes	3	CEN320, STT100

Total Credit Hours 16