

**COLLEGE OF ENGINEERING
BACHELOR OF SCIENCE IN ELECTRONICS ENGINEERING (BSECE)
School Year 2012-2013**

THIRD YEAR

First Semester

Subject Code	Description	Hrs Lec	Hrs Lab	Units Credit	Pre-requisites
Math 6	Differential Equations	3	0	3	Math 5B
Mech 311S	Statics of Rigid Bodies	3	0	3	Phys 1A Lec/Lab
EE 311 Lec	Circuits 1	3	0	3	Phys 2A Lec/Lab
EE 311 Lab	Circuits 1 Lab	0	3	1	Phys 2A Lec/Lab
ECE 311 Lec	Electronic Devices and Circuits	3	0	3	Phys 2A Lec/Lab
ECE 311 Lab	Electronic Devices and Circuits Lab	0	3	1	Phys 2A Lec/Lab
ME 311	Thermodynamics	3	0	3	Math 5B / Phys 2A Lec/Lab
Math 9	Discrete Math	3	0	3	Math 5B
TOTAL				20	

Second Semester

Subject Code	Description	Hrs Lec	Hrs Lab	Units Credit	Pre-requisites
Math 8	Advanced Engineering Mathematics for ECE	3	0	3	Math 6
EE 322 Lec	Circuits 2	3	0	3	EE 311 Lec/Lab
EE 322 Lab	Circuits 2 Lab	0	3	1	EE 311 Lec/Lab
ECE 322 Lec	Electronic Circuit Analysis and Design	3	0	3	ECE 311 Lec/Lab
ECE 322 Lab	Electronic Circuit Analysis and Design Lab	0	3	1	ECE 311 Lec/Lab
CpE 321 Lec	Computer Fundamentals and Programming	2	0	2	CpE 211 Lec/Lab
CpE 321 Lab	Computer Fundamentals and Programming Lab	0	3	1	CpE 211 Lec/Lab
Mech 322D	Dynamics of Rigid Bodies	2	0	2	Mech 311S
Mech 323	Mechanics of Deformable Bodies	3	0	3	Mech 311S
Emat	Fundamentals of Materials Science and Engineering	3	0	3	Chem 2 Lec/Lab
Math 10	Vector Analysis	3	0	3	Math 9
TOTAL				25	

FOURTH YEAR

First Semester

Subject Code	Description	Hrs Lec	Hrs Lab	Units Credit	Pre-requisites
ECE 413 Lec	Signals Spectra, Signal Processing	3	0	3	Math 8
ECE 413 Lab	Signals Spectra, Signal Processing Lab	0	3	1	Math 8
Eco 1	Basic Economics with TLR	3	0	3	-
ECE Elec 1	ECE Elective 1 (Wireless Communication)	3	0	3	-
ECE 414 Lec	Industrial Electronics	3	0	3	ECE 322 Lec/Lab
ECE 414 Lab	Industrial Electronics Lab	0	3	1	ECE 322 Lec/Lab
ECE 415	Electromagnetics	3	0	3	Math 10
ECE 416 Lec	Principles of Communications	3	0	3	ECE 322 Lec/Lab & Math 8
ECE 416 Lab	Principles of Communications Lab	0	3	1	ECE 322 Lec/Lab & Math 8
SFT MGMT	Safety Management	1	0	1	-
TOTAL				22	

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Second Semester

Subject Code	Description	Hrs Lec	Hrs Lab	Units Credit	Pre-requisites
Emgt	Engineering Management	3	0	3	EEco
CpE 419 Lec	Logic Circuits and Switching Theory	3	0	3	ECE 311 Lec/Lab
CpE 419 Lab	Logic Circuits and Switching Theory Lab	0	3	1	ECE 311 Lec/Lab
ECE 427 Lec	Feedback and Control Systems	3	0	3	Math 8
ECE 427 Lab	Feedback and Control Systems Lab	0	3	1	Math 8
ECE 428 Lec	Digital Communications	3	0	3	ECE 416 Lec/Lab
ECE 428 Lab	Digital Communications Lab	0	3	1	ECE 416 Lec/Lab
EE 423 Lec	Energy Conversion	3	0	3	EE 322 Lec/Lab
EE 423 Lab	Energy Conversion Lab	0	3	1	EE 322 Lec/Lab
ECE 5111 Lec	Transmission Media and Antenna	3	0	3	-
ECE 5111 Lab	Transmission Media and Antenna Lab	0	3	1	-
TOTAL				23	

Summer

Subject Code	Description	Hrs Lec	Hrs Lab	Units Credit	Pre-requisites
CpE 5114 Lec	Microprocessor System	3	0	3	CpE 419 Lec/Lab
CpE 5114 Lab	Microprocessor System Lab	0	3	1	CpE 419 Lec/Lab
ECE Elec 2	ECE Elective 2 (Communication System Design)	3	0	3	ECE 428 Lec/Lab
ECE 5110	Project Study 1	0	3	1	-
TOTAL				8	

FIFTH YEAR

First Semester

Subject Code	Description	Hrs Lec	Hrs Lab	Units Credit	Pre-requisites
ECE Ethics	ECE Laws, Contracts and Ethics	3	0	3	-
ECE Elec 3	ECE Elective 3 (Broadcast System Design)	3	0	3	ECE 5111 Lec/Lab
ECE 519 Lec	Numerical Methods	3	0	3	Math 8 & CpE 321 Lec/Lab
ECE 519 Lab	Numerical Methods Lab	0	3	1	Math 8 & CpE 321 Lec/Lab
ECE 5112 Lec	Data Communications	3	0	3	ECE 428 Lec/Lab
ECE 5112 Lab	Data Communications Lab	0	3	1	ECE 428 Lec/Lab
ECE Elec 4	ECE Elective 4 (Navigational Aids)	3	0	3	ECE 5111 Lec/Lab
ECE 5213	Project Study 2	0	3	1	ECE 5110
ECE 5214	Seminars and Fieldtrips	0	3	1	-
ECE 5215	ECE Special Topics	3	0	3	-
EEco	Engineering Economy	3	0	3	Eco 1
TOTAL				25	

Second Semester

Subject Code	Description	Hrs Lec	Hrs Lab	Units Credit	Pre-requisites
OJT	On-The-Job Training	0	600	3	-
TOTAL				3	

Suggested ECE Electives:

Track 1 Communications

Wireless Communications
Communications System Design
Broadcast System Design
Electronic Navigational Aids
Microwave System Design

Track 2 Information Technology

I/O Memory System
Computer Systems Architecture
Operating Systems
Digital Graphics, Digital Imaging and Animation

Track 3 Microelectronics

Introduction to Analog Integrated Circuits Design
Introduction to Digital VLSI Design
VLSI Test and Measurement
CAD – Tool Design