



University of Southeastern Philippines
College of Engineering

BACHELOR OF SCIENCE in ELECTRONICS ENGINEERING (BSECE)

CMO 101 Series of 2017

Approved per BOR Resolution No. 58 Series of 2018

Revised per BOR Resolution No. 75 Series of 2019

Effective S.Y. 2018-2019

1st Semester					2nd Semester						
Course No.	Course Title	Credit		Total Units	Pre/Co-Requisite	Course No.	Course Title	Credit		Total Units	Pre/Co-Requisite
		Lec	Lab					Lec	Lab		
GE 111	Purposive Communication	3	0	3	None	GE 113	Understanding the Self	3	0	3	None
GE 112	Mathematics in the Modern World	3	0	3	None	GE 114	Ethics	3	0	3	None
GE 217	Science, Technology, and Society	3	0	3	None	Math 121	Engineering Calculus 2	3	0	3	Math 111
Math 111	Engineering Calculus 1	3	0	3	None	Nat Sci 2	Physics for Engineers	3	1	4	Math 111
Nat Sci 1	Chemistry for Engineers	3	1	4	None	Nat Sci 6	College Physics 2	3	1	4	co-req: Nat Sci 2
BES 101	Engineering Drawing and Plans	0	1	1	None	BES 102	Computer Aided Drafting	0	1	1	BES 101
ECE 111	Computer Programming (Object Oriented Programming)	0	2	2	None	ECE IC2	Integration Course for ECE 2	0	1	1	None
ECE IC1	Integration Course for ECE 1	0	1	1	None	PE 122	Fitness Exercise	2	0	2	PE 111
PE 111	Movement Enhancement	2	0	2	None	NSTP 122	National Service Training Program 2	3	0	3	NSTP 111
NSTP 111	National Service Training Program 1	3	0	3	None						
TOTAL					25	TOTAL					24

1st Semester					2nd Semester						
Course No.	Course Title	Credit		Total Units	Pre/Co-Requisite	Course No.	Course Title	Credit		Total Units	Pre/Co-Requisite
		Lec	Lab					Lec	Lab		
GE 215	The Life and Works of Rizal	3	0	3	None	ECE 311	General Education Elective 1	3	0	3	None
GE 216	Readings in Philippine History	3	0	3	None	BES 106	Engineering Economics	3	0	3	Math 121
Math 211	Differential Equations	3	0	3	Math 121	EE 221	Electrical Circuits 2	3	0	3	EE 211, EE 211L
Math 212	Engineering Data Analysis	3	0	3	Math 121	EE 221L	Electrical Circuits 2 Lab	0	1	1	EE 211, EE 211L
EE 211	Electrical Circuits 1	3	0	3	Nat Sci 3	ECE 221	Electronic Circuit Analysis & Design	3	0	3	ECE 211, ECE 211L
EE 211L	Electrical Circuits 1 Lab	0	1	1	co-req: EE 211	ECE 221L	Electronic Circuit Analysis & Design Lab	0	1	1	ECE 211, ECE 211L
ECE 211	Electronic Devices and Circuits	3	0	3	co-req: EE 211	ECE 222	Principles of Communication Systems	3	0	3	ECE 211, ECE 211L
ECE 211L	Electronic Devices and Circuits Lab	0	1	1	co-req: EE 211	ECE 222L	Principles of Communication Systems Lab	0	1	1	ECE 211, ECE 211L
ECE 212	Fundamentals of Scientific Computing	0	1	1	Math 121, ECE 111	ECE 223	Advanced Eng'g Mathematics for ECE	3	0	3	Math 211, ECE 212
ECE IC3	Integration Course for ECE 3	0	1	1	ECE IC 2	ECE 223L	Advanced Eng'g Mathematics for ECE Lab	0	1	1	Math 211, ECE 212
PE 213	Physical Activities Towards Health & Fitness I	2	0	2	PE 122	ECE IC4	Integration Course for ECE 4	0	1	1	ECE IC3
						PE 224	Physical Activities Towards Health & Fitness II	2	0	2	PE 213
TOTAL					24	TOTAL					25

OFF SEMESTER (Refer below for the off-semester courses)

1st Semester					2nd Semester						
Course No.	Course Title	Credit		Total Units	Pre/Co-Requisite	Course No.	Course Title	Credit		Total Units	Pre/Co-Requisite
		Lec	Lab					Lec	Lab		
ECE 311	Electronic Systems and Designs	3	0	3	ECE 221, ECE 221L	ECE 321	Data Communications	3	0	3	ECE 313, ECE 313L
ECE 311L	Electronic Systems and Designs Lab	0	1	1	ECE 221, ECE 221L	ECE 321L	Data Communications Lab	0	1	1	ECE 313, ECE 313L
ECE 312	Signals, Spectra, Signal Processing	3	0	3	ECE 223, ECE 223L	ECE 322	Transmission Media, Antenna System & Design	3	0	3	ECE 313, ECE 313L
ECE 312L	Signals, Spectra, Signal Processing Lab	0	1	1	ECE 223, ECE 223L	ECE 322L	Transmission Media, Antenna System & Design Lab	0	1	1	ECE 313, ECE 313L
ECE 313	Modulation & Coding Techniques	3	0	3	ECE 222, ECE 222L	ECE 323	Feedback and Control Systems	3	0	3	ECE 312, ECE 312L
ECE 313L	Modulation & Coding Techniques Lab	0	1	1	ECE 222, ECE 222L	ECE 323L	Feedback and Control Systems Lab	0	1	1	ECE 312, ECE 312L
ECE 314	Logic Circuits Design & Switching Theory	3	0	3	ECE 221, ECE 221L	ECE 324	Microprocessor & Microcontroller Systems	3	0	3	ECE 314, ECE 314L
ECE 314L	Logic Circuits Design & Switching Theory Lab	0	1	1	ECE 221, ECE 221L	ECE 324L	Microprocessor & Microcontroller Systems Lab	0	1	1	ECE 314, ECE 314L
ECE 315	Electromagnetics for ECE	4	0	4	Math 211	ECE EL1	ECE Elective 1	3	0	3	
GE 218	Arts Appreciation	3	0	3	None	ECE EL1L	ECE Elective 1L	0	1	1	
EGE 313	General Education Elective 3	3	0	3	None	BES 107	Methods of Research	3	0	3	Math 212, GE 111
TOTAL					26	TOTAL					23

1st Semester					2nd Semester						
Course No.	Course Title	Credit		Total Units	Pre/Co-Requisite	Course No.	Course Title	Credit		Total Units	Pre/Co-Requisite
		Lec	Lab					Lec	Lab		
BES 109	Engineering Management	3	0	3	Math 212	ECE 400	Capstone Project	0	3	3	Continuing
BES 110	Technopreneurship	3	0	3	co-req: BES 109	ECE 421	Correlation Course for ECE	0	2	2	All prior courses completed
BES 112	Environmental Science and Engineering	3	0	3	Nat Sci 1	ECE 422	On-the-Job Training (320 Hours)	0	2	2	
BES 114	Material Science and Engineering	3	0	3	Nat Sci 1						
ECE 400	Capstone Project	0	3	3		TOTAL					7
ECE 411	ECE Laws, Contracts, Ethics Standards & Safety	3	0	3	All prior professional courses						
ECE 412	Industrial Plant Visits and Seminars	0	1	1							
ECE 413	Free Elective	0	1	1							
ECE EL2	ECE Elective 2	3	0	3							
ECE EL2L	ECE Elective 2L	0	1	1							
TOTAL					24	TOTAL					7

OFF - SEMESTER

Course No.	Course Title	Credit		Total Units	Pre/Co-Requisite
		Lec	Lab		
EGE 312	General Education Elective 2	3	0	3	None
GE 319	Contemporary World	3	0	3	None
TOTAL					6

SUMMARY

TECHNICAL COURSES		
Mathematics		12
Natural/Physical Sciences		8
Basic Engineering Sciences		11
Allied Courses		20
Professional Courses		65
Technical Electives		8
QJT		2
ECE Integration Courses & Free Elective		6
Correlation Course		2
NON-TECHNICAL COURSES		
General Education Courses		24
GE Electives & Mandatory Course		12
PE		8
NSTP		16
TOTAL		184

SUGGESTED TECHNICAL ELECTIVE COURSES

BIOTECH/BIOMEDICAL ELECTRONICS			
ECE EL1	Fundamentals of Biomedical Engineering	4	ECE 311, ECE 311L
ECE EL2	Medical Imaging	4	ECE EL1, ECE 312, ECE 312L
BUILDING INFORMATION & COMMUNICATIONS TECHNOLOGY INFRASTRUCTURE			
ECE EL1	ICT Infrastructure	4	ECE 311, ECE 311L
ECE EL2	Electronics Ancillary System	4	ECE 311, ECE 311L
COMPUTER			
ECE EL1	Computer Systems Architecture	4	ECE 111
ECE EL2	Operating Systems & Advanced Programming	4	ECE 111
EMERGING TECHNOLOGIES			
ECE EL1	Digital Graphics, Digital Imaging and Animation	4	ECE 111
ECE EL2	Emerging Trends and Technologies in ECE	4	ECE 322, ECE 322L
POWER ELECTRONICS			
ECE EL1	Advanced Power Supply Systems	4	ECE 221, ECE 221L
ECE EL2	Renewable Energy Systems	4	EE 221, EE 221L
TELECOMMUNICATION			
ECE EL1	Advanced Communication System & Design (Wireless)	4	co-req: ECE 322L, ECE 322L
ECE EL2	Advanced Networking	4	ECE 322, ECE 322L

SUGGESTED GENERAL EDUCATION ELECTIVES

	People and the Earth's Ecosystem	3	None
	The Entrepreneurial Mind	3	None
	Living in the IT Era	3	None
	Gender and Society	3	None
	Popular Literature	3	None
	Foreign Language	3	None
	Transpersonal Psychology	3	None