



University of Southeastern Philippines
College of Engineering

BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING

CMO. 88 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			Pre/Co-Requisite	Course No.	Course Title	Credit			Pre/Co-Requisite
		Lec	Lab	Total Units Credit				Lec	Lab	Total Units Credit	
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 215	The Life and Works of Rizal	3	0	3	None	Math 121	Engineering Calculus 2	3	0	3	Math 111
GE 216	Readings in Philippine History	3	0	3	None	Math 122	Engineering Data Analysis	3	0	3	Math 111
Math 111	Engineering Calculus 1	3	0	3	None	Nat Sci 2	Physics for Engineers	3	1	4	co-req. Math 121
Nat Sci 1	Chemistry for Engineers	3	1	4	None	BES 102	Computer Aided Drafting	0	1	1	BES 101
BES 101	Engineering Drawing and Plans	0	1	1	None	BES 102	Computer Fundamentals and Programming	1	2	3	None
PE 111	Movement Enhancement	2	0	2	None	PE 122	Fitness Exercises	2	0	2	PE 111
NSTP 111	National Service Training Program 1	3	0	3	None	NSTP 122	National Service Training Program 2	3	0	3	NSTP 111
Total				25		Total				25	

OFF SEMESTER 1 (refer below for ***OFF SEMESTER COURSES***)

1st Semester					2nd Semester						
Course No.	Course Title	Credit			Pre/Co-Requisite	Course No.	Course Title	Credit			Pre/Co-Requisite
		Lec	Lab	Total Units Credit				Lec	Lab	Total Units Credit	
Math 211	Differential Equations	3	0	3	Math 121	EGE 311	General Education Elective 1	3	0	3	None
EE 211	Electrical Circuits 1	3	0	3	Nat Sci 2, Math 121	GE 218	Arts Appreciation	3	0	3	None
EE 211L	Electrical Circuits 1 Lab	0	1	1	co-req. EE 211	EE 221	Electrical Circuits 2	3	0	3	EE 211, EE 211L
BES 104	Engineering Mechanics	3	0	3	Nat Sci 2, Math 121	EE 221L	Electrical Circuits 2 Lab	0	1	1	co-req. EE 221
BES 108	Fluid Mechanics	3	0	3	Nat Sci 2	EE 222	Advanced Engineering Mathematics for EE	3	0	3	Math 211
AEE 213	Basic Thermodynamics	2	0	2	Nat Sci 2	EE 223	Electromagnetics 1	3	0	3	Nat Sci 2, Math 211
BES 113	Basic Occupational Health and Safety	3	0	3	None	AEE 221	Electronic Circuits: Devices and Analysis	3	0	3	EE 211, EE 211L
GE 217	Science and Technology and Society	3	0	3	None	AEE 221L	Electronic Circuits: Devices and Analysis Lab	0	1	1	co-req. AEE 221
PE 213	Physical Activities Towards Health and Fitness I	2	0	2	PE 122	AEE 222	Fundamentals of Deformable Bodies	2	0	2	BES 104
						PE 224	Physical Activities Towards Health and Fitness II	2	0	2	PE 213
Total				23		Total				24	

OFF SEMESTER 2 (refer below for ***OFF SEMESTER COURSES***)

1st Semester					2nd Semester						
Course No.	Course Title	Credit			Pre/Co-Requisite	Course No.	Course Title	Credit			Pre/Co-Requisite
		Lec	Lab	Total Units Credit				Lec	Lab	Total Units Credit	
EGE 313	General Education Elective 3	3	0	3	None	BES 109	Engineering Management	3	0	3	Math 212
EE 311	Electrical Machines 1	3	0	3	EE 221, EE 221L	BES 110	Technopreneurship	3	0	3	co-req. BES 109
EE 311L	Electrical Machines 1 Lab	0	1	1	co-req. EE 311	EE 321	Electrical Machines 2	3	0	3	EE 311, EE 311L
EE 312	EE Laws, Codes, and Professional Ethics	2	0	2	GE 114	EE 321L	Electrical Machines 2 Lab	0	1	1	co-req. EE 321
EE 313	Feedback Control Systems	3	0	3	EE 222, AEE 221	EE 322L	Electrical Standards and Practice	0	1	1	EE 312
BES 114	Material Science and Engineering	3	0	3	Nat Sci 1, AEE 222	EE 323	Instrumentation and Control	2	0	2	EE 313
AEE 311	Industrial Electronics	3	0	3	AEE 221, AEE 221L	EE 323L	Instrumentation and Control Lab	0	1	1	co-req. EE 323
AEE 311L	Industrial Electronics Lab	0	1	1	co-req. AEE 311	AEE 321	Microprocessor Systems	2	0	2	AEE 313, AEE 313L
AEE 313	Logic Circuits Design and Switching Theory	2	0	2	AEE 221, AEE 221L	AEE 321L	Microprocessor Systems Lab	0	1	1	co-req. AEE 321
AEE 313L	Logic Circuits Design and Switching Theory Lab	0	1	1	co-req. AEE 313	BES 107	Methods of Research	3	0	3	Math 212, GE 111
ECE 222	Principles of Communication Systems	3	0	3	AEE 221, AEE 221L	EE EL1	EE Elective 1	3	0	3	EE 311
						EE 324	Numerical Methods and Analysis	2	0	2	EE 222
						EE 324L	Numerical Methods and Analysis Lab	0	1	1	co-req. EE 224
Total				25		Total				26	

FOURTH YEAR

1st Semester					2nd Semester						
Course No.	Course Title	Credit			Pre/Co-Requisite	Course No.	Course Title	Credit			Pre/Co-Requisite
		Lec	Lab	Total Units Credit				Lec	Lab	Total Units Credit	
EE 400	Capstone Design Project*	0	3	3	BES 107	EE 400	Capstone Design Project*	0	3	3	All prior Subjects Completed
EE 411	Power System Analysis	3	0	3	ALL PROFESSIONAL SUBJECTS COMPLETED	EE 421	On-the-Job Training (320 hrs)	0	2	2	
EE 411L	Power System Analysis Lab	0	1	1	co-req. EE 411	EE EL3	EE Elective 3: Correlation Course 1	0	2	2	
EE 412	Industrial Plant Visits and Seminars	0	1	1	co-req. EE 411, EE 411L	EE EL4	Free Elective	0	1	1	
EE 413	Electrical Systems & Illumination Engg Design	3	0	3	EE 321, EE 321L	Total				8	
EE 413L	Electrical Systems & Illumination Engg Design Lab	0	2	2	co-req. EE 413	OFF SEMESTER 1					
EE 414L	Fundamentals of Power Plant Engineering Design	0	1	1	co-req. EE 411, EE 411L	Course No.	Course Title	Lec	Lab	Total Units Credit	Pre/Co-Requisite
EE 415	Distribution Systems and Substation Design	2	0	2	co-req. EE 411, EE 411L	BES 106	Engineering Economics	3	0	3	Math 212
EE 415L	Distribution Systems and Substation Design Lab	0	1	1	co-req. EE 415	BES 112	Environmental Science and Engineering	3	0	3	Nat Sci 1
EE EL2	EE Elective 2	3	0	3	co-req. EE 411, EE 411L	Total				6	
EE 416	Electrical Apparatus and Devices	2	0	2	EE 221, EE 221L	OFF SEMESTER 2					
EE 416L	Electrical Apparatus and Devices Lab	0	1	1	co-req. EE 225	Course No.	Course Title	Lec	Lab	Total Units Credit	Pre/Co-Requisite
Total				23		GE 319	Contemporary World	3	0	3	None
						EGE 312	General Education Elective 2	3	0	3	None
Total				23		Total				6	

*Note: *A subject to be enrolled continuously until the last prescribed semester where student's grade will appear.*

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

Summary

Mathematics	12
Natural/Physical Sciences	8
Basic Engineering Sciences	11
Allied Courses	39
Professional Courses	71
General Education Courses	36
PE	8
NSTP	6
Total	191

SUGGESTED TECHNICAL EE ELECTIVE COURSES

POWER SYSTEM PROTECTION				
EE EL1	Power System Protection1 (Protection Relaying)	3		EE 311
EE EL2	Power System Protection 2 (Insulation System)	3		co-req. EE 411, EE 411L
POWER SYSTEMS				
EE EL1	Power System - Generation and Transmission	3		EE 311
EE EL2	Power System - Distributions Systems and Supply	3		co-req. EE 411, EE 411L
POWER ELECTRONICS				
EE EL1	Advanced Power Supply Systems	3		EE 311
EE EL2	Renewable Energy for Sustainable Development	3		co-req. EE 411, EE 411L