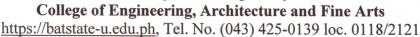


Republic of the Philippines BATANGAS STATE UNIVERSITY

BatStateU Alangilan

Alangilan, Batangas City





CURRICULUM

Straight Bachelor's-Master's in Electronics Engineering (SBM ECE)

Academic Year 2021-2022

References: Final Draft of CMO – PSG for graduate degree programs in Engineering, CMO No. 15 s. 2019, CMO No. 101 s. 2017, CMO No. 4 s. 2018 and CMO No. 20 s. 2013

Curriculum Description

The Honor's Degree Program for the Master of Science in Electronics Engineering is a research degree with strong emphasis on contribution to knowledge and to mastery of the field of electronics engineering.

Electronics Engineering is the branch of engineering that integrates available and emerging technologies with knowledge of mathematics, natural, social and applied sciences to conceptualize, design, and implement new, improved, or innovative electronic, computer and communication systems, devices, goods, services and processes.

Upon completion of the Honor's Degree Program for MSECE, the student shall receive both the Bachelor of Science in Electronics Engineering and the Master of Science in Electronics Engineering degrees.

Program Educational Objectives

The Master of Science in Electronics Engineering alumni three to five years after graduation shall:

- 1. Successfully practice as electronics engineering specialists.
- 2. Uphold a high degree of professionalism, environmental awareness, social and ethical responsibility in engineering practice.
- 3. Contribute to the technological advancement through research for the welfare of society.

Student Outcomes

The graduates of Master of Science in Electronics Engineering from the Straight Bachelor's-Master's Program should have the ability to:

- a. Demonstrate a comprehensive and broad understanding of electronics engineering principles and apply advanced knowledge on this specific discipline;
- b. Analyze, synthesize, create and evaluate electronics engineering systems;
- c. Design components, devices and systems to meet specified electronics engineering needs under real world constraints;
- d. Communicate effectively technical knowledge, both orally and in writing, on complex engineering activities;
- e. Function effectively as an individual, a team member, or as a leader in diverse work environments;
- f. Contribute to the generation, dissemination and preservation of electronics engineering knowledge, methodologies, techniques, and processes;
- g. Engage in professional development and life-long learning;
- h. Conduct oneself within professional and ethical standards; and
- i. Perform independent scientific research that results in creation of new knowledge in the electronics engineering discipline

CURRICULUM COMPONENTS

Classification/Field/Comme	No. of Ho	ours/ Week	C PATE
Classification/ Field/ Course	Lec	Lab	Credit Units
I. TECHNICAL COURSES			
A. Mathematics			
Differential Calculus	3	0	3
Integral Calculus	3	0	3
Engineering Data Analysis	3	0	3
Differential Equations	3	0	3
Sub-total	12	0	12
B. Natural/Physical Sciences			
General Chemistry	3	3	4
Modern Biology	2	3	3
Physics 1	3	3	4
Sub-total	8	9	11
C. Basic Engineering Sciences			
Introduction to Engineering	0	3	1
Engineering Drawing	0	3	1
Computer-Aided Design	0	3	1
Engineering Economics	3	0	3
Engineering Management	2	0	2
Sub-total	5	9	8
D. Allied Courses			
Computer Programming 1	0	3	1
Discrete Mathematics	3	0	3
Circuits 1	3	3	4
Circuits 2	3	3	4
Basic Occupational Safety and Health	3	0	3
Material Science and Engineering	3	0	3
Environmental Science and Engineering	3	0	3
Physics 2	3	3	4
Sub-total	21	12	25
E. Professional Courses		1	
1. Core Courses			
Electromagnetics	4	0	4
Programming for Electronic Tests and Designs	0	3	1
Advanced Engineering Mathematics for ECE	3	0	3
Electronic Devices and Circuits	3	3	4
Digital Principles and Logic Design	3	3	4
Electronic Circuit Analysis and Design	3	3	4
Principles of Communication Systems	3	3	4
Electronic Systems and Design 1	2	3	3
Electronic Systems and Design 2	1	3	2
Modulation and Coding Techniques	3	3	4
Data Communications	3	3	4
Transmission Media and Antenna Systems	3	3	4
Signals, Spectra and Signal Processing	3	3	
Microprocessor & Microcontroller Systems	3	3	4
ECE Review with Comprehensive Examination	0		4
ECE Seminars/Colloquium	0	6	2
ECE Laws and Professional Ethics	3	3	1
		0	3
Sub-total	40	45	55

2. Technical Electives			
ECE Elective 1	2	2	2
ECE Elective 1 ECE Elective 2	2	3	3
ECE Elective 2 ECE Elective 3	2	3	3
	2	3	3
Sub-total	6 (222	9	9
F. On-the Job Training		hours)	4
Total (Technical Courses)	92	84	124
II. NON-TECHNICAL COURSES			
A. General Education Course			
Understanding the Self	3	0	3
Mathematics in the Modern World	3	0	3
The Contemporary World	3	0	3
Readings in Philippine History	3	0	3
Purposive Communication	3	0	3
Ethics	3	0	3
Art Appreciation	3	0	3
Science, Technology and Society	3	0	3
Sub-total Sub-total	24	0	24
B. Filipino/Literature/Mandated Courses			
Kontekstwalisadong Komunikasyon sa Filipino	3	0	3
Filipino sa Iba't Ibang Disiplina	3	0	3
ASEAN Literature	3	0	3
Life and Works of Rizal	3	0	3
Sub-total Sub-total	12	0	12
C. Physical Education			
Physical Fitness, Gymnastics and Aerobics	2	0	2
Rhythmic Activities	2	0	2
Individual and Dual Sports	2	0	2
Team Sports	2	0	2
Sub-total	8	0	8
D. National Service Training Program	<u> </u>		
NSTP 1	3	0	3
NSTP 2	3	0	3
Sub-total	6	0	6
Total (Non-Technical Courses)	50	0	50
III. MASTER'S DEGREE COURSES	30	0	50
A. Foundation Course	6		0
B. Major Course	6	0	9
C. Elective Course	9	0	9
D. Thesis	3	0	6
	6	0	6
Total (Master's Degree Courses) GRAND TOTAL	24	0	30
OKAND IOTAL	166	84	204

SUMMARY						
Courses	Number of Units					
I. Technical Courses						
A. Mathematics	12					
B. Natural/Physical Sciences	11					
C. Basic Engineering Sciences	8					
D. Allied Courses	25					
E. Professional Courses						
1. Core Courses	55					
2. Elective Courses	9					
F. OJT	4					
II. Non-Technical Courses						
A. General Education Courses	24					
B. Filipino/Literature/Mandated Courses	12					
C. Physical Education	8					
D. NSTP	6					
III. Master's Degree Courses						
A. Core Course	9					
B. Major Course	9					
C. Elective Course	6					
D. Thesis	6					
GRAND TOTA	AL 204					

PROGRAM OF STUDY

		RST YEAR				
	FIRS	SEMESTE		**		
Code	Course	Units	No. of Lec	Hours Lab	Prerequisite	Co-requisite
ИАТН 401	Differential Calculus	3	3	0		
CI 401	General Chemistry	4	3	3		
NGG 401	Introduction to Engineering	1	0	3		
Ed 102	Mathematics in the Modern World	3	3	0		
Ed 101	Understanding the Self	3	3	0		
Ed 105	Readings in Philippine History	3	3	0		
Ed 106	Purposive Communication	3	3	0		1
PE 101	Physical Fitness, Gymnastics and Aerobics	2	2	0		
NSTP 111	National Service Training Program 1	3	3	0		
1511 111	Tota		23	6		
		RST YEAR	23		I	
		ND SEMEST	TER			
	SECO.	J SEIVIES!		Hours		T
Code	Course	Units	Lec	Lab	Prerequisite	Co-requisite
MATH 402	Integral Calculus	3	3	0	MATH 401	
SCI 403						14.777.400
	Physics 1	4	3	3	MATH 401	MATH 402
NGG 402	Engineering Drawing	1	0	3		-
PE 401	Computer Programming 1	1	0	3		
GEd 104	The Contemporary World	3	3	0		
GEd 108	Art Appreciation	3	3	0		
GEd 109	Science, Technology and Society	3	3	0		
PE 102	Rhythmic Activities	2	2	0	PE 101	
NSTP 121	National Service Training Program 2	3	3	0	NSTP 111	
	Tota	1 23	20	9		
	F	RST YEAR				
	N	IIDTERM				
			No. of	Hours		T
Code	Course	Units	Lec	Lab	Prerequisite	Co-requisite
SCI 402	Modern Biology	3	2	3	 	
GEd 103	Life and Works of Rizal	3				
Ed 103			3	0		
JEG 107	Ethics	3	3	0		
	Tota		8	3		
		COND YEAR				
	FIRS	T SEMEST	ER			
Code	Course	Units	No. of	Hours	Prerequisite	Co-requisite
	Course	Cints	Lec	Lab	Trerequisite	Co-requisite
MATH 404	Differential Equations	3	3	0	MATH 402	
SCI 404	Physics 2	4	3	3	SCI 403	
MATH 403	Engineering Data Analysis	3	3	0	MATH 402	
ENGG 403	Computer-Aided Design	1	0	3	ENGG 402	
ENGG 413	Environmental Science and Engineering	3	3	0	SCI 401	
EE 424	Circuits 1	4	3	3	MATH 402	007.404
ECE 401	Electromagnetics				101/1111 402	1801 404
			1	0		SCI 404
		4	4	0	Q F 401	
ECE 402	Programming for Electronic Tests and Designs	1	0	3	CpE 401	
ECE 402	Programming for Electronic Tests and Designs Individual and Dual Sports	1 2	0 2	3	CpE 401 PE 101	
ECE 402	Programming for Electronic Tests and Designs Individual and Dual Sports Tot	1 2 al 25	0 2 21	3		
ECE 402	Programming for Electronic Tests and Designs Individual and Dual Sports Tot SEG	1 2 al 25 COND YEA	0 2 21 R	3		SCI 404 MATH 404, SCI 404
ECE 402	Programming for Electronic Tests and Designs Individual and Dual Sports Tot SEG	1 2 al 25	0 2 21 R	3 0 12		
ECE 402	Programming for Electronic Tests and Designs Individual and Dual Sports Tot SECO	1 2 al 25 COND YEA ND SEMES	0 2 21 R	3	PE 101	MATH 404, SCI 404
PE 103 Code	Programming for Electronic Tests and Designs Individual and Dual Sports Tot SECO Course	1 2 al 25 COND YEA	0 2 21 R	3 0 12		
PE 103 Code	Programming for Electronic Tests and Designs Individual and Dual Sports Tot SECO	1 2 al 25 COND YEA ND SEMES	0 2 21 R ΓΕR	3 0 12 Hours	PE 101	MATH 404, SCI 404
Code ENGG 412 CpE 405	Programming for Electronic Tests and Designs Individual and Dual Sports Tot SECO Course	1 2 al 25 COND YEA ND SEMES Units	0 2 21 R FER No. 01 Lec	3 0 12 Hours Lab	PE 101 Prerequisite	MATH 404, SCI 404
Code ENGG 412 CpE 405	Programming for Electronic Tests and Designs Individual and Dual Sports Tot SECO Course Material Science and Engineering	1 2 al 25 COND YEA ND SEMES Units 3	0 2 21 R FER No. of Lec 3	3 0 12 F Hours Lab 0	Prerequisite SCI 401 MATH 402	MATH 404, SCI 404
Code ENGG 412 CpE 405 EE 425	Programming for Electronic Tests and Designs Individual and Dual Sports Tot SECO Course Material Science and Engineering Discrete Mathematics Circuits 2	1 2 2 2 2 5 COND YEAR ND SEMES Units 3 3 4	0 2 21 R FER No. of Lec 3 3 3 3 3	3 0 12 Hours Lab 0 0 3	Prerequisite SCI 401 MATH 402 EE 424	MATH 404, SCI 404
Code ENGG 412 CpE 405 EE 425 ECE 403	Programming for Electronic Tests and Designs Individual and Dual Sports Tot SECO Course Material Science and Engineering Discrete Mathematics Circuits 2 Advanced Engineering Mathematics for ECE	1 2 2 3 25 COND YEAR ND SEMES Units 3 3 4 4 3	0 2 21 R FER No. of Lec 3 3 3 3 3 3 3	3 0 12 12 14 15 16 10 0 0 0 3 0	Prerequisite SCI 401 MATH 402 EE 424 MATH 404	MATH 404, SCI 404
Code ENGG 412 CpE 405 EE 425 ECE 403 ECE 404	Programming for Electronic Tests and Designs Individual and Dual Sports Tot SECO Course Material Science and Engineering Discrete Mathematics Circuits 2 Advanced Engineering Mathematics for ECE Electronic Devices and Circuits	1 2 2 3 25 COND YEAR ND SEMES Units 3 3 4 4 3 4	0 2 21 R FER No. of Lec 3 3 3 3 3 3 3 3 3	3 0 12 12 14 15 16 17 18 18 18 18 18 18 18 18 18 18 18 18 18	Prerequisite SCI 401 MATH 402 EE 424 MATH 404 EE 424, SCI 404	MATH 404, SCI 404 Co-requisite
Code ENGG 412 CpE 405 EE 425 ECE 403 ECE 404 ECE 405	Programming for Electronic Tests and Designs Individual and Dual Sports Tot SECO Course Material Science and Engineering Discrete Mathematics Circuits 2 Advanced Engineering Mathematics for ECE Electronic Devices and Circuits Digital Principles and Logic Design	1 2 2 3 25 COND YEAR ND SEMES Units 3 3 4 4 4 4	0 2 21 R FER No. of Lec 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	3 0 12 12 14 15 16 17 18 18 18 18 18 18 18 18 18 18 18 18 18	Prerequisite SCI 401 MATH 402 EE 424 MATH 404 EE 424, SCI 404 EE 424	MATH 404, SCI 404
Code ENGG 412 CpE 405 EE 425 ECE 403 ECE 404 ECE 405 PE 104	Programming for Electronic Tests and Designs Individual and Dual Sports Tot SECO Course Material Science and Engineering Discrete Mathematics Circuits 2 Advanced Engineering Mathematics for ECE Electronic Devices and Circuits Digital Principles and Logic Design Team Sports	1 2 2 3 25 COND YEAR ND SEMES Units 3 3 4 4 4 4 2	0 2 21 R FER No. of Lec 3 3 3 3 3 3 3 3 2	3 0 12 12 14 15 16 17 18 18 18 18 18 18 18 18 18 18 18 18 18	Prerequisite SCI 401 MATH 402 EE 424 MATH 404 EE 424, SCI 404	MATH 404, SCI 404 Co-requisite
Code ENGG 412 CpE 405 EE 425 ECE 403 ECE 404 ECE 405 PE 104	Programming for Electronic Tests and Designs Individual and Dual Sports Tot SECO Course Material Science and Engineering Discrete Mathematics Circuits 2 Advanced Engineering Mathematics for ECE Electronic Devices and Circuits Digital Principles and Logic Design Team Sports Kontekstwalisadong Komunikasyon sa Filipino	1 2 2 3 1 2 5 COND YEAL ND SEMES Units 3 3 4 4 4 4 2 3 3	0 2 21 R FER No. of Lec 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	3 0 12 12 14 15 16 10 0 0 0 3 0 0 3 0 0 0 0 0 0 0 0 0 0 0	Prerequisite SCI 401 MATH 402 EE 424 MATH 404 EE 424, SCI 404 EE 424	MATH 404, SCI 404 Co-requisite
Code ENGG 412 CpE 405 EC 403 EC 404 EC 405 EC 404 EC 405 EC 405 EC 405 EC 404	Programming for Electronic Tests and Designs Individual and Dual Sports Tot SECO Course Material Science and Engineering Discrete Mathematics Circuits 2 Advanced Engineering Mathematics for ECE Electronic Devices and Circuits Digital Principles and Logic Design Team Sports Kontekstwalisadong Komunikasyon sa Filipino Tot	1 2 2 3 3 al 26	0 2 21 R FER No. of Lec 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	3 0 12 12 14 15 16 17 18 18 18 18 18 18 18 18 18 18 18 18 18	Prerequisite SCI 401 MATH 402 EE 424 MATH 404 EE 424, SCI 404 EE 424	MATH 404, SCI 404 Co-requisite
Code ENGG 412 CpE 405 EC 403 EC 404 EC 405 EC 404 EC 405 EC 405 EC 405 EC 404	Programming for Electronic Tests and Designs Individual and Dual Sports Tot SECO Course Material Science and Engineering Discrete Mathematics Circuits 2 Advanced Engineering Mathematics for ECE Electronic Devices and Circuits Digital Principles and Logic Design Team Sports Kontekstwalisadong Komunikasyon sa Filipino Tot	1 2 2 3 3 4 4 4 2 2 3 3 aal 26 HIRD YEAR	0 2 21 R FER No. of Lec 3 3 3 3 3 3 3 3 2 2 3 3 23 8	3 0 12 12 14 15 16 10 0 0 0 3 0 0 3 0 0 0 0 0 0 0 0 0 0 0	Prerequisite SCI 401 MATH 402 EE 424 MATH 404 EE 424, SCI 404 EE 424	MATH 404, SCI 404 Co-requisite
Code ENGG 412 CpE 405 EE 425 ECE 403 ECE 404 ECE 405 PE 104	Programming for Electronic Tests and Designs Individual and Dual Sports Tot SECO Course Material Science and Engineering Discrete Mathematics Circuits 2 Advanced Engineering Mathematics for ECE Electronic Devices and Circuits Digital Principles and Logic Design Team Sports Kontekstwalisadong Komunikasyon sa Filipino Tot	1 2 2 3 3 al 26	0 2 21 R FER No. of Lec 3 3 3 3 3 3 3 2 2 3 8 EER	3 0 12 12 14 15 16 10 0 0 3 0 3 0 3 0 0 0 3 0 0 0 9 0 0 0 0	Prerequisite SCI 401 MATH 402 EE 424 MATH 404 EE 424, SCI 404 EE 424	MATH 404, SCI 404 Co-requisite
ECE 402 PE 103	Programming for Electronic Tests and Designs Individual and Dual Sports Tot SECO Course Material Science and Engineering Discrete Mathematics Circuits 2 Advanced Engineering Mathematics for ECE Electronic Devices and Circuits Digital Principles and Logic Design Team Sports Kontekstwalisadong Komunikasyon sa Filipino Tot FIRS	1 2 2 al 25 COND YEAND SEMES Units 3 3 4 4 4 2 2 3 3 al 26 HIRD YEAR ST SEMEST	0 2 21 R FER No. of Lec 3 3 3 3 3 3 3 2 2 3 8 EER	3 0 12 12 14 15 16 10 0 0 0 3 0 0 3 0 0 0 0 0 0 0 0 0 0 0	Prerequisite SCI 401 MATH 402 EE 424 MATH 404 EE 424, SCI 404 EE 424 PE 101	Co-requisite ECE 404
Code ENGG 412 CpE 405 EE 425 ECE 403 ECE 404 ECE 404 ECE 405 PE 104 Fili 101	Programming for Electronic Tests and Designs Individual and Dual Sports Tot SECO Course Material Science and Engineering Discrete Mathematics Circuits 2 Advanced Engineering Mathematics for ECE Electronic Devices and Circuits Digital Principles and Logic Design Team Sports Kontekstwalisadong Komunikasyon sa Filipino Tot Tirefirst Course	1 2 2 3 3 4 4 4 2 2 3 3 aal 26 HIRD YEAR	0 2 21 R FER No. of Lec 3 3 3 3 3 3 3 2 2 3 8 EER	3 0 12 12 14 15 16 10 0 0 3 0 3 0 3 0 0 0 3 0 0 0 9 0 0 0 0	Prerequisite SCI 401 MATH 402 EE 424 MATH 404 EE 424, SCI 404 EE 424	MATH 404, SCI 404 Co-requisite
Code ENGG 412 CpE 405 EE 425 ECE 403 ECE 404 ECE 405 PE 104 Fili 101 Code ENGG 501	Programming for Electronic Tests and Designs Individual and Dual Sports Tot SECO Course Material Science and Engineering Discrete Mathematics Circuits 2 Advanced Engineering Mathematics for ECE Electronic Devices and Circuits Digital Principles and Logic Design Team Sports Kontekstwalisadong Komunikasyon sa Filipino Tot FIRS	1 2 2 al 25 COND YEAND SEMES Units 3 3 4 4 4 2 2 3 3 al 26 HIRD YEAR ST SEMEST	0 2 21 R FER No. of Lec 3 3 3 3 3 3 3 2 2 3 8 EER No. o	3 0 12 12 14 15 16 10 0 0 0 3 0 3 0 0 3 0 0 0 9 9 9 9 9 9 9	Prerequisite SCI 401 MATH 402 EE 424 MATH 404 EE 424, SCI 404 EE 424 PE 101	Co-requisite ECE 404
Code ENGG 412 CpE 405 EE 425 ECE 403 ECE 404 ECE 405 PE 104 Fili 101 Code	Programming for Electronic Tests and Designs Individual and Dual Sports Tot SECO Course Material Science and Engineering Discrete Mathematics Circuits 2 Advanced Engineering Mathematics for ECE Electronic Devices and Circuits Digital Principles and Logic Design Team Sports Kontekstwalisadong Komunikasyon sa Filipino Tot Tirefirst Course	1 2 2 3 3 4 4 4 4 2 2 3 3 4 4 4 4 5 5 5 5 5 6 6 6 6 6 6 6 6 6 6 6	0 2 21 R FER No. of Lec 3 3 3 3 3 3 3 2 2 3 8 ER No. o Lec Lec Lec	3 0 12 FHours Lab 0 0 3 0 3 0 9 FHours Lab Lab	Prerequisite SCI 401 MATH 402 EE 424 MATH 404 EE 424, SCI 404 EE 424 PE 101 Prerequisite	Co-requisite ECE 404
Code ENGG 412 CpE 405 EE 425 ECE 403 ECE 404 ECE 405 ECE 404 ECE 405 ECE 404 ECE 405 ECE 405 ECE 406 ECE 406 ECE 405 E	Programming for Electronic Tests and Designs Individual and Dual Sports Tot SECO Course Material Science and Engineering Discrete Mathematics Circuits 2 Advanced Engineering Mathematics for ECE Electronic Devices and Circuits Digital Principles and Logic Design Team Sports Kontekstwalisadong Komunikasyon sa Filipino Tot Tir FIRS Course Computational Mathematics 1	1 2 2 3 3 4 4 4 4 2 2 3 3 4 4 4 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5	0 2 21 R FER No. of Lec 3 3 3 3 3 3 3 3 3 3 2 2 3 8 ER No. o Lec 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	3 0 12 FHours Lab 0 0 3 0 3 0 9 FHours Lab 0 3 3 3 0 3 3 0 3 3 3 0 3 3 3 0 3 3 3 0 3 3 3 0 3 3 3 3 0 3 3 3 3 0 3 3 3 3 0 3 3 3 3 0 3 3 3 3 3 0 3	Prerequisite SCI 401 MATH 402 EE 424 MATH 404 EE 424, SCI 404 EE 424 PE 101	Co-requisite Co-requisite Co-requisite
Code ENGG 412 CDE 405 EE 425 ECE 403 ECE 404 ECE 405 ECE 405 ECE 406 ECE 406 ECE 406 ECE 407	Programming for Electronic Tests and Designs Individual and Dual Sports Tot SECO Course Material Science and Engineering Discrete Mathematics Circuits 2 Advanced Engineering Mathematics for ECE Electronic Devices and Circuits Digital Principles and Logic Design Team Sports Kontekstwalisadong Komunikasyon sa Filipino Tot Tirefirst Course Computational Mathematics 1 Electronic Circuit Analysis and Design Principles of Communication Systems	1 2 2 3 3 4 4 4 2 2 3 3 4 4 4 4 2 2 3 3 4 4 4 4	0 2 21 R FER No. of Lec 3 3 3 3 22 3 8 EER No. o Lec 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	3 0 12 FHours Lab 0 0 3 0 3 0 9 FHours Lab 0 0 3 3 0 0 3 3 0 0 3 3 3 0 0 3 3 3 0 0 3 3 3 0 0 3 3 3 0 0 3 3 3 0 0 3 3 3 0 0 3 3 3 0 0 3 3 3 0 0 3 3 3 0 0 3 3 3 0 0 3 3 3 0 0 3 3 3 0 0 3 3 3 3 0 0 0 3 3 3 3 0 0 0 3 3 3 3 0 0 0 3 3 3 3 0 0 0 3 3 3 3 0 0 0 3 3 3 3 0 0 0 3 3 3 3 0 0 0 3 3 3 3 0 0 0 3 3 3 3 0 0 0 3 3 3 0 0 0 3 3 3 3 0 0 0 0 9 9	Prerequisite SCI 401 MATH 402 EE 424 MATH 404 EE 424, SCI 404 EE 424 PE 101 Prerequisite ECE 404	Co-requisite ECE 404
Code ENGG 412 CpE 405 EE 425 ECE 403 ECE 404 ECE 405 ECE 404 ECE 405 ECE 406 ECE 406 ECE 407 GECE 502	Programming for Electronic Tests and Designs Individual and Dual Sports Tot SECO Course Material Science and Engineering Discrete Mathematics Circuits 2 Advanced Engineering Mathematics for ECE Electronic Devices and Circuits Digital Principles and Logic Design Team Sports Kontekstwalisadong Komunikasyon sa Filipino Tot Ti FIRS Course Computational Mathematics 1 Electronic Circuit Analysis and Design Principles of Communication Systems Modern Control Theory and Applications*	1 2 2 3 3 4 4 4 2 2 3 3 4 4 4 4 2 2 3 3 4 4 4 4	0 2 21 R FER No. of Lec 3 3 3 23 8 EER No. o 6 Lec 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	3 0 12	Prerequisite SCI 401 MATH 402 EE 424 MATH 404 EE 424, SCI 404 EE 424 PE 101 Prerequisite ECE 404 ECE 403, EE 425	Co-requisite ECE 404 Co-requisite
Code ENGG 412 CpE 405 EE 425 ECE 403 ECE 404 ECE 405 ECE 406 ECE 406 ECE 407 GECE 502 ECE 409	Programming for Electronic Tests and Designs Individual and Dual Sports Tot SECO Course Material Science and Engineering Discrete Mathematics Circuits 2 Advanced Engineering Mathematics for ECE Electronic Devices and Circuits Digital Principles and Logic Design Team Sports Kontekstwalisadong Komunikasyon sa Filipino Tot Ti FIRS Course Computational Mathematics 1 Electronic Circuit Analysis and Design Principles of Communication Systems Modern Control Theory and Applications* Electronic Systems and Design 1	1 2 2 al 25 COND YEAR ND SEMES Units 3 3 4 4 4 2 2 3 al 26 HIRD YEAR ST SEMEST Units 3 4 4 4 3 3 3 3 3	0 2 21 R FER No. of Lec 3 3 3 23 R EER No. o 6 Lec 3 3 3 3 3 3 2 2 3 8 EER	3 0 12	Prerequisite SCI 401 MATH 402 EE 424 MATH 404 EE 424, SCI 404 EE 424 PE 101 Prerequisite ECE 404 ECE 403, EE 425 ECE 404	Co-requisite Co-requisite Co-requisite
Code ENGG 412 CpE 405 EE 425 ECE 403 ECE 404 ECE 405 ECE 404 ECE 405 ECE 406 ECE 406 ECE 407 GECE 502	Programming for Electronic Tests and Designs Individual and Dual Sports Tot SECO Course Material Science and Engineering Discrete Mathematics Circuits 2 Advanced Engineering Mathematics for ECE Electronic Devices and Circuits Digital Principles and Logic Design Team Sports Kontekstwalisadong Komunikasyon sa Filipino Tot Ti FIRS Course Computational Mathematics 1 Electronic Circuit Analysis and Design Principles of Communication Systems Modern Control Theory and Applications*	1 2 2 3 3 4 4 4 2 2 3 3 4 4 4 4 2 2 3 3 4 4 4 4	0 2 21 R FER No. of Lec 3 3 3 23 8 EER No. o 6 Lec 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	3 0 12	Prerequisite SCI 401 MATH 402 EE 424 MATH 404 EE 424, SCI 404 EE 424 PE 101 Prerequisite ECE 404 ECE 403, EE 425	Co-requisite Co-requisite Co-requisite

		RD YEAR	ED			
	SECON	D SEMEST			T	
Code	Course	Units	No. of		Prerequisite	Co-requisite
ECE 410	Electronic Systems and Design 2	2	Lec 1	Lab 3	ECE 406 ECE 405	
ECE 411	Modulation and Coding Techniques	4	3	3	ECE 406, ECE 405 ECE 407	
ECE 412	Data Communications	4	3	3	ECE 407	
ECE 413	Transmission Media and Antenna Systems	4	3	3	ECE 407	
ECE 414	Signals, Spectra, and Signal Processing	4	3	3	ECE 407 ECE 403, MATH 403	
	Foundation/Major/Elective Course 1*	3	3	0	ECE 403, MATH 403	
	Foundation/Major/Elective Course 1*	3	2	3		
	Total		18	18		
		RD YEAR	10	10		
		IDTERM				
	141	DIERWI	No of	Hours		
Code	Course	Units	Lec	Lab	Prerequisite	Co-requisite
ECE 415	Microprocessor & Microcontroller Systems and Design	4	3	3	CpE 401, ECE 405	
ENGG 404	Engineering Economics	3	3	0	MATH 403	
	Total		6	3	1117111 4U3	
		RTH YEAR				
		SEMESTE				
				Hours		
Course	Course	Units	Lec	Lab	Prerequisite	Co-requisite
Litr 102	ASEAN Literature	3	3	0		
GECE 503	Management of Technology	3	3	0	4th year standing	
ENGG 417	On-the-Job Training	4	-	hours	4th year standing	
	Foundation/Major/Elective Course 2*	3	-	I	tti year standing	
	Foundation/Major/Elective Course 3*	3				
	Total		6	3		
		RTH YEAR				
		D SEMEST				
0				Hours	T	
Course	Course	Units	Lec	Lab	Prerequisite	Co-requisite
ENGG 411	Basic Occupational Safety & Health	3	3	0		
ECE 417	ECE Review with Comprehensive Examination	2	0	6		-
ECE 418	ECE Seminars/Colloquium	1	0	3	4th year standing	
ECE 420	ECE Laws and Professional Ethics	3	3	0	4th year standing	
ENGG 406	Engineering Management	2	2	0	ENGG 404	
ECEE 403	ECE Elective 3	3	2	3	ECEE 402	
	Foundation/Major/Elective Course 4*	3				
ENGG 503	Design of Experiments and Data Analytics*	3	3	0		
	Total	20	10	15		
	FIF	TH YEAR	•			
		SEMESTE	R			
				Hours		
Codo	Course	Units	Lec	Lab	Prerequisite	Co-requisite
Code		3				
	Master's Thesis 1*	1 2				
			0	0		
	Total	3	0	0		
	Total FIF	3 TH YEAR		0		
GECE 601	Total FIF SECON	3 TH YEAR D SEMEST	ER			
	Total FIF	3 TH YEAR	ER No. of	Hours	Prerequisite	Co-requisite
GECE 601	Total FIF SECON	3 TH YEAR D SEMEST	ER		Prerequisite	Co-requisite

^{*}MS Courses

	Cours	e Crediting				
	MS COURSE	BS COURSE				
Course Code	Course Code		Course Title			
	Computational Mathematics 1	ENGG 415	Numerical Methods & Analysis			
ENGG 503	Design of Experiments and Data Analytics		Research Methods			
GECE 502	Modern Control Theory and Applications	ECE 408	Feedback and Control Systems			
	Management of Technology	ENGG 405	Technopreneurship			

MAPPING OF CURRICULUM COURSES TO PROGRAM OUTCOMES

	C P L I		STUDENT OUTCOMES								
Course Code	Course Description	1	2	3	4	5	6	7			
First Year											
MATH 401	Differential Calculus	I						I			
SCI 401	General Chemistry	I	-				I	I			
ENGG 401	Introduction to Engineering	I		I		I		I			
GEd 102	Mathematics in the Modern World	I									
GEd 101 GEd 105	Understanding the Self			I				Y			
GEd 105 GEd 106	Readings in Philippine History Purposive Communication			I				I			
PE 101	Physical Fitness, Gymnastics and Aerobics			1				I			
NSTP 111	National Service Training Program 1			I				1			
MATH 402	Integral Calculus	I		1				I			
SCI 403	Physics 1	I					I	I			
ENGG 402	Engineering Drawing							I			
CPE 401	Computer Programming 1							I			
GEd 104	The Contemporary World			I				I			
GEd 108	Art Appreciation			I							
GEd 109	Science, Technology and Society							I			
PE 102	Rhythmic Activities							I			
NSTP 121 SCI 402	National Service Training Program 2	-		I							
GEd 103	Modern Biology Life and Works of Rizal	I		т т				I			
GEd 103 GEd 107	Ethics			I	I						
Second Year	Denies				1						
MATH 404	Differential Equations	I		T		T		I			
SCI 404	Physics 2	I					I	I			
MATH 403	Engineering Data Analysis	I					1	I			
ENGG 403	Computer-Aided Design	_	I					I			
ENGG 413	Environmental Science and Engineering	I						Ī			
EE 424	Circuits 1	I					I	I			
ECE 401	Electromagnetics	I						I			
ECE 402	Programming for Electronic Tests and Designs		I					I			
PE 103	Individual and Dual Sports							I			
ENGG 412 CpE 405	Material Science and Engineering	I						I			
EE 425	Discrete Mathematics Circuits 2	I						I			
ECE 423	Advanced Engineering Mathematics for ECE	I				-	I	I			
ECE 404	Electronic Devices and Circuits	I						I			
ECE 405	Digital Principles and Logic Design	I	I			-	I	I			
PE 104	Team Sports	1	1	-		I	I	I			
Fili 101	Kontekstwalisadong Komunikasyon sa Filipino			I		1		I			
Third Year	g seemand of the first			1				1			
ENGG 415	Numerical Methods & Analysis	Е					1	Е			
ECE 406	Electronic Circuit Analysis and Design	Е	Е				Е	E			
ECE 407	Principles of Communication Systems	Е	Е				E	E			
ECE 408	Feedback and Control Systems	Е	Е				E	E			
ECE 409	Electronic Systems and Design 1	D				D		D			
ECEE 401	ECE Elective 1	Е	Е	Е				Е			
Fili 102	Filipino sa Iba't Ibang Disiplina			I				I			
ECE 410	Electronic Systems and Design 2	D				D		D			
ECE 411	Modulation and Coding Techniques	Е	Е				E	Е			
ECE 412 ECE 413	Data Communications Transmission Madis and Antonna Systems	Е	E	-			E	Е			
ECE 413	Transmission Media and Antenna Systems Signals, Spectra, and Signal Processing	E	E	-			E	Е			
ENGG 416	Research Methods	Е	Е	F	T .	F	Е	E			
ECEE 402	ECE Elective 2	Е	Е	E E	I	Е		E			
ECE 415	Microprocessor & Microcontroller Systems and Design	E	E	- E			Е	E			
ENGG 404	Engineering Economics	I	L	+			Е	E			
Fourth Year								1			
Litr 102	ASEAN Literature			I				I			
ECE 416	ECE Capstone Design 1	D	D	1	Е		D	D			
ENGG 405	Technopreneurship			D			1	D			
ENGG 417	On-the-Job Training			D		D		D			
ENGG 411	Basic Occupational Safety & Health	I	I					I			
ECE 417	ECE Review with Comprehensive Examination							D			
ECE 418	ECE Seminars/Colloquium							D			
ECE 419	ECE Capstone Design 2	D	D		D		D	D			
LECT 400	ECE Laws and Professional Ethics			D	D	D					
ECE 420											
ENGG 406 ECEE 403	Engineering Management ECE Elective 3	D	D	E D	Е			I			

COURSE CODE	COURSES	PROGRAM OUTCOMES								
		a	b	С	d	e	f	g	h	i
ENGG 501	COMPUTATIONAL MATHEMATICS 1	x								
ENGG 502	COMPUTATIONAL MATHEMATICS 2	x								
ENGG 503	DESIGN OF EXPERIMENTS AND DATA ANALYTICS		х	x	x					
ENGG 504	APPLIED MATERIALS SCIENCE AND ENGINEERING	x			x					
GECE 501	LINEAR SYSTEMS THEORY	X			x					
GECE 502	MODERN CONTROL THEORY AND APPLICATIONS	x	x		x					\vdash
GECE 503	MANAGEMENT OF TECHNOLOGY				x	X		х		
GECE 504	ADVANCED DIGITAL SIGNAL PROCESSING				X	X		X		_
GECE 505	ADVANCED ELECTROMAGNETIC THEORY	1			X	X		X		
GECE 506	ANTENNAS AND RADIOWAVE PROPAGATION				X	X		X	-	_
GECE 507	OPTICAL FIBER COMMUNICATIONS				X	X		X	-	-
GECE 508	SPECIAL TOPICS IN COMMUNICATIONS				X	X		X.		
GECE 509	ADAPTIVE CONTROL	1			X	X		X		\vdash
GECE 510	DIGITAL CONTROL	1			X	X		X	-	\vdash
GECE 511	MULTIVARIABLE CONTROL SYSTEM	1			X	X		X		-
GECE 512	NONLINEAR SYSTEMS	1			X	X				-
GECE 513	OPTIMAL CONTROL	1			X	X		X		-
GECE 514	ADVANCED IMAGE PROCESSING				X	X		X		\vdash
GECE 515	ARTIFICIAL INTELLIGENCE FOR CYBER-PHYSICAL SYSTEMS				X	X		X		-
GECE 516	DATA MINING				X	X				_
GECE 517	MACHINE LEARNING	1			X	X	-,	X		+-
GECE 518	NEURAL NETWORKS	1			X	X			-	-
GECE 519	ADVANCED ANALOG IC DESIGN	1			X	X		X		-
GECE 520	ADVANCED DIGITAL IC DESIGN	1			X	X		X	-	+-
GECE 521	MIXED-SIGNAL IC DESIGN	1			X	X		X	-	-
GECE 522	SPECIAL TOPICS IN ELECTRONICS				X	X		X	-	-
GECE 523	SPECIAL TOPICS IN SYSTEMS AND CONTROL						-	X		+-
GECE 601	MASTER'S THESIS 1	 			X	X		X		-
GECE 602	MASTER'S THESIS 2	-		x			X		X	X