

Republic of the Philippines BATANGAS STATE UNIVERSITY

Pablo Borbon Main II, Alangilan Batangas





COLLEGE OF ENGINEERING, ARCHITECTURE & FINE ARTS www.batstate-u.edu.ph Tel. No. (043) 425-0139 loc 118

CURRICULUM

Bachelor of Science in Mechatronics Engineering (BSMexE)

Academic Year 2018-2019 Reference CMOs: CMO No. 4 s. 2018 and CMO No. 20 s. 2013

Curriculum Description

Mechatronics Engineering deals with the branch of engineering that integrates available and emerging technologies with knowledge in mathematics, natural, social and applied sciences to conceptualize, design, and implement new, improved, or innovative mechatronics systems, devices, goods, services and processes.

Program Educational Objectives

The mechatronics engineering alumni three to five years after graduation shall:

- 1. Apply knowledge, skills and abilities in mechanical engineering, electrical engineering, electronics engineering, and computing in solving inter-disciplinary problems.
- 2. Work and lead competently, efficiently and effectively in multi-disciplinary teams to achieve design and/or project objectives.
- 3. Participate in lifelong learning to maintain professional, ethical and societal responsibilities.

Student Outcomes

The following skills, knowledge, and behaviors are expected to be attained by students as they progress through the program:

- a. Ability to apply knowledge of mathematics and science to solve engineering problems.
- b. Ability to design and conduct experiments, as well as to analyze and interpret data.
- c. Ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability, in accordance with standards.
- d. Ability to function on multidisciplinary teams.
- e. Ability to identify, formulate, and solve engineering problems.
- f. Understanding of professional and ethical responsibility.
- g. Ability to communicate effectively.
- h. Broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.
- i. Recognition of the need for, and an ability to engage in life-long learning.
- j. Knowledge of contemporary issues.
- k. Ability to use techniques, skills, and modern engineering tools necessary for engineering practice.
- 1. Knowledge and understanding of engineering and management principles as a member and leader in a team, to manage projects and in multidisciplinary environments.

CURRICULUM COMPONENTS

CURRICULUM COMPONENTS	NI CII	/XX7 I	1
Classification/ Field / Course		ours/Week	Credit Units
T MECHANICAL COLIDORS	Lec	Lab	
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	<u> </u>	,	11
Introduction to Engineering	0	3	1
Engineering Drawing	0	3	1
Computer-Aided Design	0	3	1
Engineering Economics	3	0	3
Technopreneurship	3	0	3
Engineering Management	2	0	2
Sub-total	8	9	11
D. Allied Courses			
Computer Programming 1	0	3	1
Digital Principles and Logic Design	3	3	4
Electronics Circuits: Devices and Analysis	3	3	4
Control Systems Engineering	2	3	3
Fundamentals of Data Communications	3	0	3
Power Electronics	1		2
		3	
Circuits 1	3	3	4
Circuits 2	3	3	4
Thermodynamics	3	0	3
Engineering Mechanics	3	0	3
Basic Occupational Safety and Health	3	0	3
Materials Science and Engineering	3	0	3
Environmental Science and Engineering	3	0	3
Physics 2	3	3	4
Sub-total	36	24	44
E. Professional Courses			
1. Core Courses			
Advanced Engineering Mathematics for MexE	3	0	3
Introduction to Electro-mechanical Systems and Automation	3	0	3
Pneumatics and Hydraulics Systems	2	3	3
Physical Systems Modelling of Machine Elements	1	3	2
Basic Workshop and Machining	1	3	2
Robotics 1	3	0	3
PLC Fundamentals and Programming	2	3	3
CAD/CAM and CNC	0	3	1
Robotics 2	2	3	3
Codes, Standards and Professional Ethics	3	0	3
MexE Seminars/Colloquium	0	3	1
Advanced PLC and Systems Integration	3	3	4
MexE Capstone Design 1	0	3	1
MexE Capstone Design 2	0	3	1
Microprocessor and Microcontroller Systems and Design	3	3	4
Electronics Measurements and Instrumentation	1	3	2
Sensors Engineering	2	3	3
Industrial Drives and Control	2	3	3
Research Methods	3	0	3
Manufacturing and Quality Control	3	0	3
Sub-total	37	42	51
Sub-total	31	72	31

2. Technical Electives			
MexE Elective 1	3	0	3
MexE Elective 2	3	0	3
Sub-total	6	0	6
F. On-the-Job Training	320 hrs		4
Total (Technical Courses)	107	84	139
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	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	8	0	8
D. National Service Training Program			
NSTP 1	3	0	3
NSTP 2	3	0	3
Sub-total	6	0	6
Total (Non-Technical Courses)	50	0	50
GRAND TOTAL	157	84	189

SUMMARY					
Courses	Number of Units				
I. Technical Courses					
A. Mathematics	12				
B. Natural/Physical Sciences	11				
C. Basic Engineering Sciences	11				
D. Allied Courses	44				
E. Professional Courses					
1. Core Courses	51				
2. Elective Courses	6				
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				
GRAND TOTAL	189				

PROGRAM OF STUDY

	FIRST YEAR First Semester					
	First Semester	No of	Hour/s			
Course Code	Course Title			Unit/s	Pre-requisite/s	Co-requisite/s
MATH 401	Differential Calculus	Lec	Lab	2		
MATH 401		3	0	3		
SCI 401	General Chemistry	3	3	4		
ENGG 401	Introduction to Engineering	0	3	1		
GEd 102	Mathematics in the Modern World	3	0	3		
GEd 105	Readings in Philippine History	3	0	3		
GEd 101	Understanding the Self	3	0	3		
GEd 106	Purposive Communication	3	0	3		
PE 101	Physical Fitness, Gymnastics and Aerobics	2	0	2		
NSTP 111	National Service Training Program 1	3	0	3		
	Total	23	6	25		
	FIRST YEAR	•			•	
	Second Semester					
			Hour/s			
Course Code	Course Title	Lec	Lab	Unit/s	Pre-requisite/s	Co-requisite/s
MATH 402	Internal Calculus	3		2	MATH 401	
	Integral Calculus	_	0	3	MATH 401 MATH 401	MATH 402
SCI 403	Physics 1	3	3	-	MA1H 401	MATH 402
GEd 104	The Contemporary World	3	0	3		
GEd 109	Science, Technology and Society	3	0	3		
GEd 108	Art Appreciation	3	0	3		
ENGG 402	Engineering Drawing	0	3	1		
CpE 401	Computer Programming 1	0	3	1		
PE 102	Rhythmic Activities	2	0	2	PE 101	
NSTP 121	National Service Training Program 2	3	0	3	NSTP 111	
	Total	20	9	23		
	FIRST YEAR					
	Midterm					
	Witterin	No of	Hour/s			
Course Code	Course Title		Lab	Unit/s	Pre-requisite/s	Co-requisite/s
CE 1 102	I'C 1W 1 CD' 1	Lec		2		
GEd 103	Life and Works of Rizal	3	0	3		
GEd 107	Ethics	3	0	3		
SCI 402	Modern Biology	2	3	3		
	Total	8	3	9		
	SECOND YEAR					
	First Semester					
Course Code	Course Title	No. of Hour/s		Unit/s	Pre-requisite/s	Co-requisite
Course Coue	Course Title	Lec	Lab	UIIIU/S	rre-requisite/s	
MATTI 404		Lec	Lau			Co-requisite/s
MA 1H 404	Differential Equations		0	3	MATH 402	Co-requisite/s
MATH 404 SCI 404	Differential Equations Physics 2	3	0	3	MATH 402 SCI 403	Co-requisite/s
SCI 404	Physics 2	3	0 3	4	SCI 403	Co-requisite/s
SCI 404 ENGG 403	Physics 2 Computer-Aided Design	3 3 0	0 3 3	4	SCI 403 ENGG 402	Co-requisite/s
SCI 404 ENGG 403 MATH 403	Physics 2 Computer-Aided Design Engineering Data Analysis	3 3 0 3	0 3 3 0	4 1 3	SCI 403 ENGG 402 MATH 402	co-requisite/s
SCI 404 ENGG 403 MATH 403 ENGG 413	Physics 2 Computer-Aided Design Engineering Data Analysis Environmental Science and Engineering	3 3 0 3 3	0 3 3 0 0	4 1 3 3	SCI 403 ENGG 402 MATH 402 SCI 401	Co-requisitors
SCI 404 ENGG 403 MATH 403 ENGG 413 ENGG 409	Physics 2 Computer-Aided Design Engineering Data Analysis Environmental Science and Engineering Engineering Mechanics	3 3 0 3 3 3	0 3 3 0 0	4 1 3 3 3	SCI 403 ENGG 402 MATH 402 SCI 401 SCI 403	
SCI 404 ENGG 403 MATH 403 ENGG 413 ENGG 409 EE 424	Physics 2 Computer-Aided Design Engineering Data Analysis Environmental Science and Engineering Engineering Mechanics Circuits 1	3 3 0 3 3 3	0 3 3 0 0 0 3	4 1 3 3 3 4	SCI 403 ENGG 402 MATH 402 SCI 401 SCI 403 MATH 402	SCI 404
SCI 404 ENGG 403 MATH 403 ENGG 413 ENGG 409 EE 424 ME 431	Physics 2 Computer-Aided Design Engineering Data Analysis Environmental Science and Engineering Engineering Mechanics Circuits 1 Thermodynamics	3 3 0 3 3 3 3	0 3 3 0 0 0 3 0	4 1 3 3 3 4 3	SCI 403 ENGG 402 MATH 402 SCI 401 SCI 403 MATH 402 SCI 403, MATH 402	
SCI 404 ENGG 403 MATH 403 ENGG 413 ENGG 409 EE 424	Physics 2 Computer-Aided Design Engineering Data Analysis Environmental Science and Engineering Engineering Mechanics Circuits 1 Thermodynamics Individual and Dual Sports	3 0 3 3 3 3 3 2	0 3 3 0 0 0 0 3 0	4 1 3 3 3 4 3 2	SCI 403 ENGG 402 MATH 402 SCI 401 SCI 403 MATH 402	
SCI 404 ENGG 403 MATH 403 ENGG 413 ENGG 409 EE 424 ME 431	Physics 2 Computer-Aided Design Engineering Data Analysis Environmental Science and Engineering Engineering Mechanics Circuits 1 Thermodynamics Individual and Dual Sports Total	3 0 3 3 3 3 3 2 23	0 3 3 0 0 0 3 0	4 1 3 3 3 4 3	SCI 403 ENGG 402 MATH 402 SCI 401 SCI 403 MATH 402 SCI 403, MATH 402	
SCI 404 ENGG 403 MATH 403 ENGG 413 ENGG 409 EE 424 ME 431	Physics 2 Computer-Aided Design Engineering Data Analysis Environmental Science and Engineering Engineering Mechanics Circuits 1 Thermodynamics Individual and Dual Sports	3 0 3 3 3 3 3 2 23	0 3 3 0 0 0 0 3 0	4 1 3 3 3 4 3 2	SCI 403 ENGG 402 MATH 402 SCI 401 SCI 403 MATH 402 SCI 403, MATH 402	
SCI 404 ENGG 403 MATH 403 ENGG 413 ENGG 409 EE 424 ME 431	Physics 2 Computer-Aided Design Engineering Data Analysis Environmental Science and Engineering Engineering Mechanics Circuits 1 Thermodynamics Individual and Dual Sports Total	3 3 0 3 3 3 3 2 23	0 3 3 0 0 0 0 3 0	4 1 3 3 3 4 3 2	SCI 403 ENGG 402 MATH 402 SCI 401 SCI 403 MATH 402 SCI 403, MATH 402	
SCI 404 ENGG 403 MATH 403 ENGG 413 ENGG 409 EE 424 ME 431 PE 103	Physics 2 Computer-Aided Design Engineering Data Analysis Environmental Science and Engineering Engineering Mechanics Circuits 1 Thermodynamics Individual and Dual Sports Total SECOND YEAR Second Semester	3 3 0 3 3 3 3 3 2 23	0 3 3 0 0 0 0 3 0	4 1 3 3 3 4 3 2 26	SCI 403 ENGG 402 MATH 402 SCI 401 SCI 403 MATH 402 SCI 403, MATH 402 PE 101	SCI 404
SCI 404 ENGG 403 MATH 403 ENGG 413 ENGG 409 EE 424 ME 431	Physics 2 Computer-Aided Design Engineering Data Analysis Environmental Science and Engineering Engineering Mechanics Circuits 1 Thermodynamics Individual and Dual Sports Total SECOND YEAR	3 3 0 3 3 3 3 3 2 23	0 3 3 0 0 0 3 0 0 9	4 1 3 3 3 4 3 2	SCI 403 ENGG 402 MATH 402 SCI 401 SCI 403 MATH 402 SCI 403, MATH 402	SCI 404
SCI 404 ENGG 403 MATH 403 ENGG 413 ENGG 409 EE 424 ME 431 PE 103	Physics 2 Computer-Aided Design Engineering Data Analysis Environmental Science and Engineering Engineering Mechanics Circuits 1 Thermodynamics Individual and Dual Sports Total SECOND YEAR Second Semester Course Title	3 3 0 3 3 3 3 2 23	0 3 3 0 0 0 3 0 0 9	4 1 3 3 3 4 3 2 26	SCI 403 ENGG 402 MATH 402 SCI 401 SCI 403 MATH 402 SCI 403, MATH 402 PE 101 Pre-requisite/s	SCI 404
SCI 404 ENGG 403 MATH 403 ENGG 413 ENGG 409 EE 424 ME 431 PE 103 Course Code MexE 401	Physics 2 Computer-Aided Design Engineering Data Analysis Environmental Science and Engineering Engineering Mechanics Circuits 1 Thermodynamics Individual and Dual Sports Total SECOND YEAR Second Semester Course Title Advanced Engineering Mathematics for MexE	3 3 0 3 3 3 3 2 23 No. of Lec	0 3 3 0 0 0 3 0 0 9	4 1 3 3 4 3 2 26 Unit/s	SCI 403 ENGG 402 MATH 402 SCI 401 SCI 403 MATH 402 SCI 403, MATH 402 PE 101 Pre-requisite/s MATH 404	SCI 404
SCI 404 ENGG 403 MATH 403 ENGG 413 ENGG 409 EE 424 ME 431 PE 103 Course Code MexE 401 MexE 402	Physics 2 Computer-Aided Design Engineering Data Analysis Environmental Science and Engineering Engineering Mechanics Circuits 1 Thermodynamics Individual and Dual Sports Total SECOND YEAR Second Semester Course Title Advanced Engineering Mathematics for MexE Introduction to Electro-mechanical Systems and Automation	3 3 0 3 3 3 3 2 23 No. of Lec 3	0 3 3 0 0 0 3 0 0 9	4 1 3 3 4 3 2 26 Unit/s	SCI 403 ENGG 402 MATH 402 SCI 401 SCI 403 MATH 402 SCI 403, MATH 402 PE 101 Pre-requisite/s MATH 404 EE 424, ENGG 409	SCI 404
SCI 404 ENGG 403 MATH 403 ENGG 413 ENGG 409 EE 424 ME 431 PE 103 Course Code MexE 401 MexE 402 MexE 403	Physics 2 Computer-Aided Design Engineering Data Analysis Environmental Science and Engineering Engineering Mechanics Circuits 1 Thermodynamics Individual and Dual Sports Total SECOND YEAR Second Semester Course Title Advanced Engineering Mathematics for MexE Introduction to Electro-mechanical Systems and Automation Pneumatics and Hydraulics Systems	3 3 0 3 3 3 2 23 No. of Lec 3 3	0 3 3 0 0 0 0 0 9 Hour/s Lab 0 0	4 1 3 3 4 3 2 26 Unit/s	SCI 403 ENGG 402 MATH 402 SCI 401 SCI 403 MATH 402 SCI 403, MATH 402 PE 101 Pre-requisite/s MATH 404 EE 424, ENGG 409 ME 431	SCI 404
SCI 404 ENGG 403 MATH 403 ENGG 413 ENGG 409 EE 424 ME 431 PE 103 Course Code MexE 401 MexE 402 MexE 403 MexE 404	Physics 2 Computer-Aided Design Engineering Data Analysis Environmental Science and Engineering Engineering Mechanics Circuits 1 Thermodynamics Individual and Dual Sports Total SECOND YEAR Second Semester Course Title Advanced Engineering Mathematics for MexE Introduction to Electro-mechanical Systems and Automation Pneumatics and Hydraulics Systems Physical Systems Modelling of Machine Elements	3 3 0 3 3 3 3 2 23 No. of Lec 3 3 2 1	0 3 3 0 0 0 0 0 9 Hour/s Lab 0 0 3 3	4 1 3 3 4 3 2 26 Unit/s	SCI 403 ENGG 402 MATH 402 SCI 401 SCI 403 MATH 402 SCI 403, MATH 402 PE 101 Pre-requisite/s MATH 404 EE 424, ENGG 409 ME 431 ENGG 403, ENGG 409	SCI 404 Co-requisite/s
SCI 404 ENGG 403 MATH 403 ENGG 413 ENGG 409 EE 424 ME 431 PE 103 Course Code MexE 401 MexE 402 MexE 403 MexE 404 ECE 405	Physics 2 Computer-Aided Design Engineering Data Analysis Environmental Science and Engineering Engineering Mechanics Circuits 1 Thermodynamics Individual and Dual Sports Total SECOND YEAR Second Semester Course Title Advanced Engineering Mathematics for MexE Introduction to Electro-mechanical Systems and Automation Pneumatics and Hydraulics Systems Physical Systems Modelling of Machine Elements Digital Principles and Logic Design	3 3 0 3 3 3 3 2 23 No. of Lec 3 3 2	0 3 3 0 0 0 0 9 Hour/s Lab 0 0 3 3 3	4 1 3 3 4 3 2 26 Unit/s 3 3 3 4 24 4 3 2 4 4 4 3 2 4 4 4 4 4 4	SCI 403 ENGG 402 MATH 402 SCI 401 SCI 403 MATH 402 SCI 403, MATH 402 PE 101 Pre-requisite/s MATH 404 EE 424, ENGG 409 ME 431 ENGG 403, ENGG 409 EE 424	SCI 404
SCI 404 ENGG 403 MATH 403 ENGG 413 ENGG 409 EE 424 ME 431 PE 103 Course Code MexE 401 MexE 402 MexE 403 MexE 404 ECE 405 ECE 421	Physics 2 Computer-Aided Design Engineering Data Analysis Environmental Science and Engineering Engineering Mechanics Circuits 1 Thermodynamics Individual and Dual Sports Total SECOND YEAR Second Semester Course Title Advanced Engineering Mathematics for MexE Introduction to Electro-mechanical Systems and Automation Pneumatics and Hydraulics Systems Physical Systems Modelling of Machine Elements Digital Principles and Logic Design Electronics Circuits: Devices and Analysis	3 3 0 3 3 3 3 2 23 No. of Lec 3 3 2 1 3 3 3	0 3 3 0 0 0 3 0 0 9 Hour/s Lab 0 0 3 3 3 3 3 3	4 1 3 3 4 3 2 26 Unit/s 3 3 3 4 4 3 2 2 4 4 4 4 4 4 4 4 4 4 4 4	SCI 403 ENGG 402 MATH 402 SCI 401 SCI 403 MATH 402 SCI 403, MATH 402 PE 101 Pre-requisite/s MATH 404 EE 424, ENGG 409 ME 431 ENGG 403, ENGG 409 EE 424 EE 424	SCI 404 Co-requisite/s ECE 421
SCI 404 ENGG 403 MATH 403 ENGG 413 ENGG 409 EE 424 ME 431 PE 103 Course Code MexE 401 MexE 402 MexE 403 MexE 404 ECE 405 ECE 421 EE 425	Physics 2 Computer-Aided Design Engineering Data Analysis Environmental Science and Engineering Engineering Mechanics Circuits 1 Thermodynamics Individual and Dual Sports Total SECOND YEAR Second Semester Course Title Advanced Engineering Mathematics for MexE Introduction to Electro-mechanical Systems and Automation Pneumatics and Hydraulics Systems Physical Systems Modelling of Machine Elements Digital Principles and Logic Design Electronics Circuits: Devices and Analysis Circuits 2	3 3 0 3 3 3 3 2 23 No. of Lec 3 2 1 3 3 3 3	0 3 3 0 0 0 0 9 Hour/s Lab 0 0 3 3 3 3 3 3	4 1 3 3 4 3 2 26 Unit/s 3 3 3 2 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	SCI 403 ENGG 402 MATH 402 SCI 401 SCI 403 MATH 402 SCI 403, MATH 402 PE 101 Pre-requisite/s MATH 404 EE 424, ENGG 409 ME 431 ENGG 403, ENGG 409 EE 424 EE 424 EE 424	SCI 404 Co-requisite/s
SCI 404 ENGG 403 MATH 403 ENGG 413 ENGG 409 EE 424 ME 431 PE 103 Course Code MexE 401 MexE 402 MexE 403 MexE 404 ECE 405 ECE 421	Physics 2 Computer-Aided Design Engineering Data Analysis Environmental Science and Engineering Engineering Mechanics Circuits 1 Thermodynamics Individual and Dual Sports Total SECOND YEAR Second Semester Course Title Advanced Engineering Mathematics for MexE Introduction to Electro-mechanical Systems and Automation Pneumatics and Hydraulics Systems Physical Systems Modelling of Machine Elements Digital Principles and Logic Design Electronics Circuits: Devices and Analysis	3 3 0 3 3 3 3 2 23 No. of Lec 3 3 2 1 3 3 2	0 3 3 0 0 0 3 0 0 9 Hour/s Lab 0 0 3 3 3 3 3 3	4 1 3 3 4 3 2 26 Unit/s 3 3 3 4 4 3 2 2 4 4 4 4 4 4 4 4 4 4 4 4	SCI 403 ENGG 402 MATH 402 SCI 401 SCI 403 MATH 402 SCI 403, MATH 402 PE 101 Pre-requisite/s MATH 404 EE 424, ENGG 409 ME 431 ENGG 403, ENGG 409 EE 424 EE 424	SCI 404 Co-requisite/s ECE 421

	THIRD YEAR					
	First Semester					
6 61	C THE	No. of	No. of Hour/s		D :://	G
Course Code	Course Title	Lec	Lab	Unit/s	Pre-requisite/s	Co-requisite/s
MexE 405	Basic Workshop and Machining	1	3	2	MexE 404	ENGG 412
MexE 406	Robotics 1	3	0	3	ENGG 410, MexE 401	
MexE 407	PLC Fundamentals and Programming	2	3	3	ECE 405, MexE 403	
ECE 426	Fundamentals of Data Communications	3	0	3		
ECE 427	Electronics Measurements and Instrumentation	1	3	2	ECE 421, CpE 401	
ECE 428	Power Electronics	1	3	2	ECE 421	
ENGG 404	Engineering Economics	3	0	3	MATH 402	
ENGG 412	Materials Science and Engineering	3	0	3	SCI 401	
	Total	17	12	21		
	THIRD YEAR	•				
	Second Semester	į				
Course Code	Course Title	No. of	Hour/s	Unit/s	Duo noquigito/s	Co mognicitals
Course Code	Course Title	Lec	Lab	Unit/s	Pre-requisite/s	Co-requisite/s
MexE 408	CAD/CAM and CNC	0	3	1	MexE 405	
MexE 409	Robotics 2	2	3	3	MexE 406	
ECE 425	Control Systems Engineering	2	3	3	MATH 404, EE 425	
ICE 405	Sensors Engineering	2	3	3		ECE 427
ICE 406	Industrial Drives and Control	2	3	3	EE 425	
Fili 101	Kontekstwalisadong Komunikasyon sa Filipino	3	0	3		
ENGG 416	Research Methods	3	0	3	MATH 403	
MexEE 401	MexE Elective 1	3	0	3	3rd year standing	
	Total	17	15	22	,	
	THIRD YEAR					
	Midterm					
6 61	C THE	No. of	Hour/s	TT *//	D	6
Course Code	Course Title	Lec	Lab	Unit/s	Pre-requisite/s	Co-requisite/s
ECE 415	Microprocessor and Microcontroller Systems and Design	3	3	4	CpE 401, ECE 405	
MexE 410	Codes, Standards and Professional Ethics for MexE	3	0	3	4th year standing	
ENGG 411	Basic Occupational Safety and Health	3	0	3	-	
	Total	9	3	10		
	FOURTH YEAR					
	First Semester					
Course Code	Course Title	No. of	Hour/s	Unit/s	Duo noquigito/s	Ca magnisitals
Course Code	Course Title	Lec	Lab	Unit/s	Pre-requisite/s	Co-requisite/s
MexE 411	MexE Seminars/Colloquium	0	3	1	4th year standing	
MexE 412	Advanced PLC and Systems Integration	3	3	4	MexE 407	
MexE 413	MexE Capstone Design 1	0	3	1	ENGG 416	
ENGG 406	Engineering Management	2	0	2		
IE 425	Manufacturing and Quality Control	3	0	3	MATH 403	
	Filipino sa Iba't Ibang Disiplina	3	0	3		
Fili 102	Thipino sa toa t toang Disipinia					
	MexE Elective 2	3	0	3	MexEE 401	
Fili 102			0 9	3 17	MexEE 401	
Fili 102	MexE Elective 2	3 14	-		MexEE 401	
Fili 102	MexE Elective 2 Total	3 14	9		MexEE 401	
Fili 102 MexEE 402	MexE Elective 2 Total FOURTH YEAR Second Semester	3 14	-	17		Co-requisite/s
Fili 102 MexEE 402 Course Code	MexE Elective 2 Total FOURTH YEAR	3 14 No. of Lec	9	17 Unit/s		Co-requisite/s
Fili 102 MexEE 402 Course Code Litr 102	MexE Elective 2 Total FOURTH YEAR Second Semester Course Title ASEAN Literature	3 14 No. of Lec 3	9 Hour/s	Unit/s		Co-requisite/s
Fili 102 MexEE 402 Course Code Litr 102 ENGG 405	MexE Elective 2 Total FOURTH YEAR Second Semester Course Title ASEAN Literature Technopreneurship	3 14 No. of Lec 3	Hour/s Lab 0	17 Unit/s	Pre-requisite/s 4th year standing	Co-requisite/s
Fili 102 MexEE 402 Course Code Litr 102 ENGG 405 MexE 414	MexE Elective 2 Total FOURTH YEAR Second Semester Course Title ASEAN Literature Technopreneurship MexE Capstone Design 2	3 14 No. of Lec 3 3	9 Hour/s Lab 0 0 3	Unit/s	Pre-requisite/s 4th year standing Graduating	Co-requisite/s
Fili 102 MexEE 402 Course Code Litr 102 ENGG 405	MexE Elective 2 Total FOURTH YEAR Second Semester Course Title ASEAN Literature Technopreneurship	3 14 No. of Lec 3 3	Hour/s Lab 0	17 Unit/s 3 3	Pre-requisite/s 4th year standing	Co-requisite/s
Fili 102 MexEE 402 Course Code Litr 102 ENGG 405 MexE 414	MexE Elective 2 Total FOURTH YEAR Second Semester Course Title ASEAN Literature Technopreneurship MexE Capstone Design 2	3 14 No. of Lec 3 3	9 Hour/s Lab 0 0 3	17 Unit/s 3 3 1	Pre-requisite/s 4th year standing Graduating	Co-requisite/s