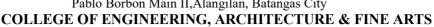


Republic of the Philippines **BATANGAS STATE UNIVERSITY**

Pablo Borbon Main II, Alangilan, Batangas City





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CURRICULUM

Bachelor of Science in Mechanical Engineering (BSME)

Academic Year 2018-2019

Reference CMOs: CMO No. 97 s. 2017, CMO No. 4 s. 2018 and CMO No. 20, s. 2013

Curriculum Description

Mechanical Engineering is a profession that concerns itself with mechanical design, energy conversion, fuel and combustion technologies, heat transfer, materials, noise control, and acoustics, manufacturing processes, rail transport, automatic control, product safety and reliability, solar energy, and technological impacts to society.

Program Educational Objectives of Mechanical Engineering

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

- 1. Successfully practice in mechanical and thermal systems for the advancement of society.
- 2. Promote professionalism in mechanical engineering practice.

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	umber of Ho	ours Per Wee	Credit
Classification/ Field / Course	Lec	Lab	Units
I. TECHNICAL COURSES			
A. Mathematics			
Differential Calculus	3	0	3
Integral Calculus	3	0	3
Differential Equations	3	0	3
Engineering Data Analysis	3	0	3
Numerical Methods	3	0	3
Sub-Total	15	0	15
B. Natural/Physical Sciences		· · · · · · · · · · · · · · · · · · ·	
General Chemistry	3	3	4
Physics I	3	3	4
Modern Biology	2	3	3
Sub-Total	8	9	11
C. Basic Engineering Sciences	•	· · · · · · · · · · · · · · · · · · ·	
Engineering Drawing	0	3	1
Computer-Aided Drafting	0	3	1
Computer Fundamentals and Programming	0	3	1
Statics of Rigid Bodies	3	0	3
Dynamics of Rigid Bodies	2	0	2
Mechanics of Deformable Bodies	3	0	3
Engineering Economics	3	0	3
Engineering Management	2	0	2
Technopreneurship	3	0	3
Introduction to Engineering	0	3	1
Environmental Science and Engineering	3	0	3
Sub-Total	19	12	23
D. Allied Courses			
Basic Electrical Engineering	2	3	3
Basic Electronics	2	3	3
DC and AC Machinery	2	3	3
Sub-Total	6	9	9
E. Fundamental Mechanical Engineering Courses			1
Mechanical Engineering Orientation	1	0	1
Advanced Mathematics for ME	3	0	3
Methods of Research for ME	3	0	3
Fluid Mechanics	3	0	3
Machine Elements	2	3	3
Materials Engineering & Testing	2	3	
Thermodynamics 1 Thermodynamics 2	3	0	3
	3	0	3
Combustion Engineering Heat Transfer		0	
ME Laboratory 1	3	3	3
, , , , , , , , , , , , , , , , , , ,		6	
ME Laboratory 2 Manufacturing and Industrial Processes with Plant Visits	0		2 2
Manufacturing and Industrial Processes with Plant Visits	3	3	3
Basic Occupational Safety and Health Workshop Theory and Practice	0	3	1
Workshop Theory and Practice Machine Shop Theory	0	6	2
	2	3	3
Control System Engineering Fluid Machineries	3	0	3
	3	0	3
Refrigeration Systems	3		
Airconditioning and Ventilation Systems		0	3
Vibration Engineering	0	0	2 1
Computer Applications for ME	0	3 6	
ME Practice with Comprehensive Examination		_	2
On the-Job-Training		hrs	4
Sub-Total	43	39	60

F. Professional Mechanical Engineering Courses			
Machine Design 1	3	0	3
Machine Design 2	2	3	3
ME Laboratory 3	0	6	2
Industrial Plant Engineering	3	3	4
Power Plant Design with Renewable Energy	4	3	5
ME Laws, Ethics, Codes and Standards	2	0	2
ME Project Study 1	0	3	1
ME Project Study 2	0	3	1
Sub-Total	14	21	21
G. Elective Courses			
ME Electives (2 units each)	4	0	4
Sub-Total	4	0	4
TOTAL TECHNICAL COURSES	109	90	143
II. NON-TECHNICAL COURSES		•	
A. General Education Courses			
Purposive Communication	3	0	3
Mathematics in the Modern World	3	0	3
Understanding the Self	3	0	3
Art Appreciation	3	0	3
Ethics	3	0	3
Readings in Philippine History	3	0	3
Contemporary World	3	0	3
Science, Technology and Society	3	0	3
Sub-Total	24	0	24
B. General Education Elective and 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	12	0	12
C. Physical Education		•	
PE 1,2,3,4 (2 units each)	8	0	8
Sub-Total	8	0	8
D. National Service Training Program		•	
NSTP 1&2 (3 units each)	6	0	6
Sub-Total	6	0	6
TOTAL NON-TECHNICAL COURSES	50	0	50
GRAND TOTAL	159	90	193

SUMMARY					
Courses	Number of Units				
A. Mathematics	15				
B. Natural and Physical Sciences	11				
C. Basic Engineering Sciences	23				
D. Allied Courses	9				
E. Fundamental Courses	54				
F. Professional Mechanical Engineering Courses	27				
G. Technical Electives	4				
II. Non-Technical Courses					
A. General Education Courses	24				
B. General Education Elective/Mandated Courses	12				
C. Physical Education and NSTP	14				
TOTAL	193				

PROGRAM OF STUDY

	STUDY					
	FIRST YE.	45.7				
	First Semes		TT /	Γ		Γ
Course Code	Course Title	No. of		Unit/s	Pre-requisite/s	Co-requisite/s
GEd 102	Mathematics in the Modern World	Lec 3	Lab 0	3		
GEd 102 GEd 105	Readings in Philippine History	3	0	3		
GEd 103	Understanding the Self	3	0	3		
SCI 401	General Chemistry	3	3	4		
GEd 106	Purposive Communication	3	0	3		
MATH 401	Differential Calculus	3	0	3		
ENGG 401	Introduction to Engineering	0	3	1		
PE 101	Physical Fitness, Gymnastics and Aerobics	2	0	2		
NSTP 111	National Service Training Program 1	3	0	3		
14511 111	Total	23	6	25		
-	FIRST YE.		, ,			
	Second Semo					
		No. of	Hour/s			
Course Code	Course Title	Lec	Lab	Unit/s	Pre-requisite/s	Co-requisite/s
MATH 402	Integral Calculus	3	0	3	MATH 401	
SCI 403	Physics 1	3	3	4	MATH 401	MATH 402
GEd 104	The Contemporary World	3	0	3		
GEd 104 GEd 109	Science, Technology and Society	3	0	3		
GEd 108	Art Appreciation	3	0	3		
CpE 401	Computer Programming 1	0	3	1		
ENGG 402	Engineering Drawing	0	3	1		
PE 102	Rhythmic Activities	2	0	2	PE 101	
NSTP 121	National Service Training Program 2	3	0	3	NSTP 1	
1,511 121	Total	-	9	23	11011 1	
	FIRST YE.					
	Midtern					
		No. of	Hour/s			
Course Code	Course Title	Lec	Lab	Unit/s	Pre-requisite/s	Co-requisite/s
GEd 107	Ethics	3	0	3		
GEd 103	Life and Works of Rizal	3	0	3		
SCI 402	Modern Biology	2	3	3		
	Total	8	3	9		
	SECOND Y	EAR				ı
	First Semes	ster				
	G TIG	No. of	Hour/s	TT *//	D 1111	a
Course Code	Course Title	Lec	Lab	Unit/s	Pre-requisite/s	Co-requisite/s
ME 401	ME Orientation	1	0	1	ENGG 401	
MATH 404	Differential Equations					
		3	0	3	MATH 402	
ENGG 407	Statics of Rigid Bodies	3	0	3	MATH 402 SCI 403, MATH 402	
	· · · · · · · · · · · · · · · · · · ·					
ENGG 407	Statics of Rigid Bodies	3	0	3	SCI 403, MATH 402	
ENGG 407 ME 402	Statics of Rigid Bodies Thermodynamics 1	3	0	3	SCI 403, MATH 402 SCI 403, MATH 402	
ENGG 407 ME 402 EE 419	Statics of Rigid Bodies Thermodynamics 1 Basic Electrical Engineering	3 3 2	0 0 3	3 3	SCI 403, MATH 402 SCI 403, MATH 402 SCI 403, MATH 402	
ENGG 407 ME 402 EE 419 MATH 403	Statics of Rigid Bodies Thermodynamics 1 Basic Electrical Engineering Engineering Data Analysis	3 3 2 3	0 0 3 0	3 3 3	SCI 403, MATH 402 SCI 403, MATH 402 SCI 403, MATH 402 MATH 401	
ENGG 407 ME 402 EE 419 MATH 403 ENGG 403	Statics of Rigid Bodies Thermodynamics 1 Basic Electrical Engineering Engineering Data Analysis Computer Aided Design	3 3 2 3 0	0 0 3 0 3	3 3 3 1	SCI 403, MATH 402 SCI 403, MATH 402 SCI 403, MATH 402 MATH 401	
ENGG 407 ME 402 EE 419 MATH 403 ENGG 403 ME 403	Statics of Rigid Bodies Thermodynamics 1 Basic Electrical Engineering Engineering Data Analysis Computer Aided Design Workshop Theory and Practice	3 3 2 3 0	0 0 3 0 3 3	3 3 3 1 1	SCI 403, MATH 402 SCI 403, MATH 402 SCI 403, MATH 402 MATH 401 ENGG 402	
ENGG 407 ME 402 EE 419 MATH 403 ENGG 403 ME 403 PE 103	Statics of Rigid Bodies Thermodynamics 1 Basic Electrical Engineering Engineering Data Analysis Computer Aided Design Workshop Theory and Practice Individual and Dual Sports	3 3 2 3 0 0 2 3	0 0 3 0 3 3 0	3 3 3 1 1 2	SCI 403, MATH 402 SCI 403, MATH 402 SCI 403, MATH 402 MATH 401 ENGG 402	
ENGG 407 ME 402 EE 419 MATH 403 ENGG 403 ME 403 PE 103	Statics of Rigid Bodies Thermodynamics 1 Basic Electrical Engineering Engineering Data Analysis Computer Aided Design Workshop Theory and Practice Individual and Dual Sports Kontekstwalisadong Komunikasyon sa Filipino	3 3 2 3 0 0 2 3 20	0 0 3 0 3 3 3 0	3 3 3 1 1 2 3	SCI 403, MATH 402 SCI 403, MATH 402 SCI 403, MATH 402 MATH 401 ENGG 402	
ENGG 407 ME 402 EE 419 MATH 403 ENGG 403 ME 403 PE 103	Statics of Rigid Bodies Thermodynamics 1 Basic Electrical Engineering Engineering Data Analysis Computer Aided Design Workshop Theory and Practice Individual and Dual Sports Kontekstwalisadong Komunikasyon sa Filipino Total	3 3 2 3 0 0 0 2 3 20 EAR	0 0 3 0 3 3 3 0	3 3 3 1 1 2 3	SCI 403, MATH 402 SCI 403, MATH 402 SCI 403, MATH 402 MATH 401 ENGG 402	
ENGG 407 ME 402 EE 419 MATH 403 ENGG 403 ME 403 PE 103 Fili 101	Statics of Rigid Bodies Thermodynamics 1 Basic Electrical Engineering Engineering Data Analysis Computer Aided Design Workshop Theory and Practice Individual and Dual Sports Kontekstwalisadong Komunikasyon sa Filipino Total SECOND Y Second Semo	3 3 2 3 0 0 2 3 20 EAR	0 0 3 0 3 3 3 0	3 3 3 1 1 2 3 23	SCI 403, MATH 402 SCI 403, MATH 402 SCI 403, MATH 402 MATH 401 ENGG 402	
ENGG 407 ME 402 EE 419 MATH 403 ENGG 403 ME 403 PE 103	Statics of Rigid Bodies Thermodynamics 1 Basic Electrical Engineering Engineering Data Analysis Computer Aided Design Workshop Theory and Practice Individual and Dual Sports Kontekstwalisadong Komunikasyon sa Filipino Total SECOND Y	3 3 2 3 0 0 2 3 20 EAR	0 0 3 0 3 3 0 0 0 9	3 3 3 1 1 2 3	SCI 403, MATH 402 SCI 403, MATH 402 SCI 403, MATH 402 MATH 401 ENGG 402	Co-requisite/s
ENGG 407 ME 402 EE 419 MATH 403 ENGG 403 ME 403 PE 103 Fili 101	Statics of Rigid Bodies Thermodynamics 1 Basic Electrical Engineering Engineering Data Analysis Computer Aided Design Workshop Theory and Practice Individual and Dual Sports Kontekstwalisadong Komunikasyon sa Filipino Total SECOND Y Second Semo	3 3 2 3 0 0 2 3 20 EAR ester	0 0 3 0 3 3 0 0 0 9	3 3 3 1 1 2 3 23	SCI 403, MATH 402 SCI 403, MATH 402 SCI 403, MATH 402 MATH 401 ENGG 402	Co-requisite/s
ENGG 407 ME 402 EE 419 MATH 403 ENGG 403 ME 403 PE 103 Fili 101 Course Code	Statics of Rigid Bodies Thermodynamics 1 Basic Electrical Engineering Engineering Data Analysis Computer Aided Design Workshop Theory and Practice Individual and Dual Sports Kontekstwalisadong Komunikasyon sa Filipino Total SECOND YI Second Seme	3 3 2 3 0 0 2 3 20 EAR ester No. of Lec	0 0 3 0 3 3 0 0 0 9	3 3 3 1 1 2 3 23	SCI 403, MATH 402 SCI 403, MATH 402 SCI 403, MATH 402 MATH 401 ENGG 402 PE 101	Co-requisite/s
ENGG 407 ME 402 EE 419 MATH 403 ENGG 403 ME 403 PE 103 Fili 101 Course Code ME 404	Statics of Rigid Bodies Thermodynamics 1 Basic Electrical Engineering Engineering Data Analysis Computer Aided Design Workshop Theory and Practice Individual and Dual Sports Kontekstwalisadong Komunikasyon sa Filipino Total SECOND Y Second Semo Course Title Advanced Mathematics for ME	3 3 2 3 0 0 2 3 20 EAR ester No. of Lec 3	0 0 3 0 3 3 0 0 9 Hour/s	3 3 3 1 1 2 3 23 Unit/s	SCI 403, MATH 402 SCI 403, MATH 402 SCI 403, MATH 402 MATH 401 ENGG 402 PE 101 Pre-requisite/s MATH 404	Co-requisite/s
ENGG 407 ME 402 EE 419 MATH 403 ENGG 403 ME 403 PE 103 Fili 101 Course Code ME 404 ENGG 408	Statics of Rigid Bodies Thermodynamics 1 Basic Electrical Engineering Engineering Data Analysis Computer Aided Design Workshop Theory and Practice Individual and Dual Sports Kontekstwalisadong Komunikasyon sa Filipino Total SECOND Y Second Semo Course Title Advanced Mathematics for ME Dynamics of Rigid Bodies Thermodynamics 2	3 3 2 3 0 0 2 3 20 EAR ester No. of Lec 3 2	0 0 3 0 3 3 0 0 9 Hour/s Lab 0	3 3 3 1 1 2 3 23 Unit/s	SCI 403, MATH 402 SCI 403, MATH 402 SCI 403, MATH 401 ENGG 402 PE 101 Pre-requisite/s MATH 404 ENGG 407	Co-requisite/s
ENGG 407 ME 402 EE 419 MATH 403 ENGG 403 ME 403 PE 103 Fili 101 Course Code ME 404 ENGG 408 ME 405 EE 422	Statics of Rigid Bodies Thermodynamics 1 Basic Electrical Engineering Engineering Data Analysis Computer Aided Design Workshop Theory and Practice Individual and Dual Sports Kontekstwalisadong Komunikasyon sa Filipino Total SECOND Y Second Semo Course Title Advanced Mathematics for ME Dynamics of Rigid Bodies	3 3 2 3 0 0 2 3 20 EAR ester No. of Lec 3	0 0 3 0 3 3 0 0 9 Hour/s Lab 0	3 3 3 1 1 2 3 23 Unit/s 3 2 3	SCI 403, MATH 402 SCI 403, MATH 402 SCI 403, MATH 402 MATH 401 ENGG 402 PE 101 Pre-requisite/s MATH 404 ENGG 407 ME 402	Co-requisite/s
ENGG 407 ME 402 EE 419 MATH 403 ENGG 403 ME 403 PE 103 Fili 101 Course Code ME 404 ENGG 408 ME 405 EE 422 ME 406	Statics of Rigid Bodies Thermodynamics 1 Basic Electrical Engineering Engineering Data Analysis Computer Aided Design Workshop Theory and Practice Individual and Dual Sports Kontekstwalisadong Komunikasyon sa Filipino Total SECOND Y Second Semo Course Title Advanced Mathematics for ME Dynamics of Rigid Bodies Thermodynamics 2 DC and AC Machinery Fluid Mechanics	3 3 2 3 0 0 2 3 20 EAR ester No. of Lec 3 2 3 2	0 0 3 0 3 3 0 0 9 Hour/s Lab 0 0	3 3 3 1 1 2 3 23 Unit/s 3 2 3 3	SCI 403, MATH 402 SCI 403, MATH 402 SCI 403, MATH 402 MATH 401 ENGG 402 PE 101 Pre-requisite/s MATH 404 ENGG 407 ME 402 EE 419 ME 402	
ENGG 407 ME 402 EE 419 MATH 403 ENGG 403 ME 403 PE 103 Fili 101 Course Code ME 404 ENGG 408 ME 405 EE 422 ME 406 ENGG 418	Statics of Rigid Bodies Thermodynamics 1 Basic Electrical Engineering Engineering Data Analysis Computer Aided Design Workshop Theory and Practice Individual and Dual Sports Kontekstwalisadong Komunikasyon sa Filipino Total SECOND Y Second Semo Course Title Advanced Mathematics for ME Dynamics of Rigid Bodies Thermodynamics 2 DC and AC Machinery Fluid Mechanics Mechanics of Deformable Bodies	3 3 0 0 0 2 3 20 EAR Ster No. of Lec 3 2 3 2 3 3 3	0 0 3 0 3 3 0 0 9 Hour/s Lab 0 0	3 3 3 1 1 1 2 3 23 Unit/s 3 2 3 3 3 3	SCI 403, MATH 402 SCI 403, MATH 402 SCI 403, MATH 402 MATH 401 ENGG 402 PE 101 Pre-requisite/s MATH 404 ENGG 407 ME 402 EE 419 ME 402 ENGG 407	Co-requisite/s
ENGG 407 ME 402 EE 419 MATH 403 ENGG 403 ME 403 PE 103 Fili 101 Course Code ME 404 ENGG 408 ME 405 EE 422 ME 406 ENGG 418 ME 407	Statics of Rigid Bodies Thermodynamics 1 Basic Electrical Engineering Engineering Data Analysis Computer Aided Design Workshop Theory and Practice Individual and Dual Sports Kontekstwalisadong Komunikasyon sa Filipino Total SECOND Y Second Semo Course Title Advanced Mathematics for ME Dynamics of Rigid Bodies Thermodynamics 2 DC and AC Machinery Fluid Mechanics Mechanics of Deformable Bodies Computer Applications for ME	3 3 0 0 0 2 3 20 EAR ester No. of Lec 3 2 3 0 0	0 0 3 0 3 3 0 0 9 Hour/s Lab 0 0 0 3 0	3 3 3 1 1 2 3 23 Unit/s 3 2 3 3 1	SCI 403, MATH 402 SCI 403, MATH 402 SCI 403, MATH 402 MATH 401 ENGG 402 PE 101 Pre-requisite/s MATH 404 ENGG 407 ME 402 EE 419 ME 402 ENGG 407 ENGG 403	
ENGG 407 ME 402 EE 419 MATH 403 ENGG 403 ME 403 PE 103 Fili 101 Course Code ME 404 ENGG 408 ME 405 EE 422 ME 406 ENGG 418 ME 407 ME 408	Statics of Rigid Bodies Thermodynamics 1 Basic Electrical Engineering Engineering Data Analysis Computer Aided Design Workshop Theory and Practice Individual and Dual Sports Kontekstwalisadong Komunikasyon sa Filipino Total SECOND YI Second Seme Course Title Advanced Mathematics for ME Dynamics of Rigid Bodies Thermodynamics 2 DC and AC Machinery Fluid Mechanics Mechanics of Deformable Bodies Computer Applications for ME Machine Shop Theory and Practice	3 3 0 0 0 2 3 20 EAR ester No. of Lec 3 2 3 0 0 0	0 0 3 0 3 3 0 0 9 Hour/s Lab 0 0 0 0 3 0 3	3 3 3 1 1 2 3 23 Unit/s 3 2 3 3 1 1 2	SCI 403, MATH 402 SCI 403, MATH 402 SCI 403, MATH 402 MATH 401 ENGG 402 PE 101 Pre-requisite/s MATH 404 ENGG 407 ME 402 EE 419 ME 402 ENGG 407 ENGG 403 ME 403	
ENGG 407 ME 402 EE 419 MATH 403 ENGG 403 ME 403 PE 103 Fili 101 Course Code ME 404 ENGG 408 ME 405 EE 422 ME 406 ENGG 418 ME 407	Statics of Rigid Bodies Thermodynamics 1 Basic Electrical Engineering Engineering Data Analysis Computer Aided Design Workshop Theory and Practice Individual and Dual Sports Kontekstwalisadong Komunikasyon sa Filipino Total SECOND Y Second Semo Course Title Advanced Mathematics for ME Dynamics of Rigid Bodies Thermodynamics 2 DC and AC Machinery Fluid Mechanics Mechanics of Deformable Bodies Computer Applications for ME	3 3 0 0 0 2 3 20 EAR ester No. of Lec 3 2 3 0 0	0 0 3 0 3 3 0 0 9 Hour/s Lab 0 0 0 0 3 0 0	3 3 3 1 1 2 3 23 Unit/s 3 2 3 3 1	SCI 403, MATH 402 SCI 403, MATH 402 SCI 403, MATH 402 MATH 401 ENGG 402 PE 101 Pre-requisite/s MATH 404 ENGG 407 ME 402 EE 419 ME 402 ENGG 407 ENGG 403	Co-requisite/s ENGG 408

	THIRD YE					
	First Semes		TT			
Course Code	Course Title	No. of Lec	Lab	Unit/s	Pre-requisite/s	Co-requisite/s
ENGG 416	Research Methods	3	0	3	MATH 403	
ME 409	Heat Transfer	3	0	3	ME 405	
ME 410	Combustion Engineering	3	0	3	ME 405	
ME 411	Fluid Machinery	3	0	3	ME 406	
ME 412	Machine Elements	2	3	3	ENGG 408	
ME 413	Materials Engineering and Testing	2	3	3	ENGG 418, SCI 401	
ME 414	ME Elective 1	2	0	2		
ME 415	ME Laboratory 1	0	3	1	ME 405	
ENGG 414	Numerical Methods	3	0	3	ME 404	
Litr 102	ASEAN Literature	3	0	3		
	Total	24	9	27		
	THIRD YE Second Sem					
	Second Seme	No. of	Llaunde			I
Course Code	Course Title	Lec	Lab	Unit/s	Pre-requisite/s	Co-requisite/s
ME 416	Vibration Projection				MATII 404	
ME 416 ME 417	Vibration Engineering	3	0	3	MATH 404 ME 409	-
	Refrigeration Systems Machine Design 1		0		ME 409 ME 412, ME 413	ME 421
ME 418 ME 419	Machine Design 1 ME Elective 2	3		3	ME 412, ME 413	WIE 421
ME 419 ECE 422		2	0	2	EE 419	-
ME 420	Basic Electronics ME Laboratory 2	0	6	2	ME 411, ME 415	
ENGG 404	Engineering Economics	3	0	3	MATH 402	
ME 421	ME Laws, Ethics, Contracts, Codes and Standards	2	0	2	GEd 107	
ME 421 ME 422	ME Project Study 1	0	3	1	ENGG 416	
ME 422			12	21	ENGG 410	
	Total THIRD YE		12	21		
	Midtern					
	Wildern	No. of	Llouwle			Τ
Course Code	Course Title	Lec	Lab	Unit/s	Pre-requisite/s	Co-requisite/s
ME 423	Airconditioning and Ventilation Systems	3	0	3	ME 417	
ENGG 411	Basic Occupational Safety and Health	3	0	3	MIE 41/	
ME 424	Machine Design 2	2	3	3	ME 418	
WIL 424	Total		3	9	WIL 416	
	FOURTH Y			9		
	First Semes					
	Phst Semes	No. of	Hour/s			
Course Code	Course Title	Lec	Lab	Unit/s	Pre-requisite/s	Co-requisite/s
ENGG 417	On-the-Job Training				441.37 Gt 1:	
ENGG 413	Environmental Science and Engineering		20	1 4	4th Year Standing	
			20 0	3	4th Year Standing	
ME 425		3	0	3	SCI 401	
ME 425	Power Plant Design with Renewable Energy	3 4	0	3 5		
ME 425	Power Plant Design with Renewable Energy Total	3 4 7	0	3	SCI 401	
ME 425	Power Plant Design with Renewable Energy Total FOURTH Y	3 4 7 EAR	0	3 5	SCI 401	
	Power Plant Design with Renewable Energy Total FOURTH Y Second Seme	3 4 7 EAR ester	0 3 3	3 5 12	SCI 401 ME 410, ME 411	
ME 425 Course Code	Power Plant Design with Renewable Energy Total FOURTH Y	3 4 7 EAR ester No. of	0 3 3 Hour/s	3 5	SCI 401	Co-requisite/s
Course Code	Power Plant Design with Renewable Energy Total FOURTH Y Second Seme	3 4 7 EAR ester No. of Lec	0 3 3	3 5 12 Unit/s	SCI 401 ME 410, ME 411 Pre-requisite/s	Co-requisite/s
	Power Plant Design with Renewable Energy Total FOURTH Y Second Seme	3 4 7 EAR ester No. of	0 3 3 Hour/s	3 5 12	SCI 401 ME 410, ME 411	_
Course Code ENGG 405	Power Plant Design with Renewable Energy Total FOURTH YI Second Seme Course Title Technopreneurship Industrial Plant Engineering	3 4 7 EAR ester No. of Lec 3	0 3 3 Hour/s Lab 0	3 5 12 Unit/s	SCI 401 ME 410, ME 411 Pre-requisite/s 4th Year Standing	Co-requisite/s ME 428
Course Code ENGG 405 ME 426	Power Plant Design with Renewable Energy Total FOURTH YI Second Seme Course Title Technopreneurship	3 4 7 EAR ester No. of Lec 3 3	0 3 3 Hour/s Lab 0 3	3 5 12 Unit/s 3 4	SCI 401 ME 410, ME 411 Pre-requisite/s 4th Year Standing ME 423, ME 411	_
Course Code ENGG 405 ME 426 ME 427	Power Plant Design with Renewable Energy Total FOURTH YI Second Semo Course Title Technopreneurship Industrial Plant Engineering ME Project Study 2	3 4 7 EAR ester No. of Lec 3 3 0	0 3 3 Hour/s Lab 0 3 3	3 5 12 Unit/s 3 4	SCI 401 ME 410, ME 411 Pre-requisite/s 4th Year Standing ME 423, ME 411 ME 422	ME 428
Course Code ENGG 405 ME 426 ME 427 ME 428	Power Plant Design with Renewable Energy Total FOURTH YI Second Semo Course Title Technopreneurship Industrial Plant Engineering ME Project Study 2 Manufacturing and Industrial Processes with Plant Visits	3 4 7 EAR ester No. of Lec 3 3 0	0 3 3 Hour/s Lab 0 3 3 3	3 5 12 Unit/s 3 4 1 2	SCI 401 ME 410, ME 411 Pre-requisite/s 4th Year Standing ME 423, ME 411 ME 422 ENGG 411	ME 428
Course Code ENGG 405 ME 426 ME 427 ME 428 ME 429	Power Plant Design with Renewable Energy Total FOURTH YI Second Semo Course Title Technopreneurship Industrial Plant Engineering ME Project Study 2 Manufacturing and Industrial Processes with Plant Visits ME Laboratory 3	3 4 7 EAR ester No. of Lec 3 3 0	0 3 3 Hour/s Lab 0 3 3 3 6	3 5 12 Unit/s 3 4 1 2 2	SCI 401 ME 410, ME 411 Pre-requisite/s 4th Year Standing ME 423, ME 411 ME 422 ENGG 411	ME 428
Course Code ENGG 405 ME 426 ME 427 ME 428 ME 429 ENGG 406	Power Plant Design with Renewable Energy Total FOURTH YI Second Semo Course Title Technopreneurship Industrial Plant Engineering ME Project Study 2 Manufacturing and Industrial Processes with Plant Visits ME Laboratory 3 Engineering Management	3 4 7 EAR ester No. of Lec 3 3 0 1 0 2	0 3 3 Hour/s Lab 0 3 3 3 6	3 5 12 Unit/s 3 4 1 2 2 2	Pre-requisite/s 4th Year Standing ME 423, ME 411 ME 422 ENGG 411 ME 425	ME 428
Course Code ENGG 405 ME 426 ME 427 ME 428 ME 429 ENGG 406 ME 430	Power Plant Design with Renewable Energy Total FOURTH YI Second Semo Course Title Technopreneurship Industrial Plant Engineering ME Project Study 2 Manufacturing and Industrial Processes with Plant Visits ME Laboratory 3 Engineering Management ME Practice with Comprehensive Examination	3 4 7 EAR ester No. of Lec 3 3 0 1 0 2	Hour/s Lab 0 3 3 3 6 0 6	3 5 12 Unit/s 3 4 1 2 2 2 2	Pre-requisite/s 4th Year Standing ME 423, ME 411 ME 422 ENGG 411 ME 425 Graduating	ME 428
Course Code ENGG 405 ME 426 ME 427 ME 428 ME 429 ENGG 406 ME 430	Power Plant Design with Renewable Energy Total FOURTH YI Second Seme Course Title Technopreneurship Industrial Plant Engineering ME Project Study 2 Manufacturing and Industrial Processes with Plant Visits ME Laboratory 3 Engineering Management ME Practice with Comprehensive Examination Control System Engineering	3 4 7 EAR ester No. of Lec 3 3 0 1 0 2	0 3 3 Hour/s Lab 0 3 3 6 0 6 3	3 5 12 Unit/s 3 4 1 2 2 2 2 2 2 3	Pre-requisite/s 4th Year Standing ME 423, ME 411 ME 422 ENGG 411 ME 425 Graduating	ME 428
Course Code ENGG 405 ME 426 ME 427 ME 428 ME 429 ENGG 406 ME 430	Power Plant Design with Renewable Energy Total FOURTH YI Second Semo Course Title Technopreneurship Industrial Plant Engineering ME Project Study 2 Manufacturing and Industrial Processes with Plant Visits ME Laboratory 3 Engineering Management ME Practice with Comprehensive Examination Control System Engineering Total	3 4 7 EAR ester No. of Lec 3 3 0 1 0 2 0 2	0 3 3 Hour/s Lab 0 3 3 3 6 0 6 0 6 3	3 5 12 Unit/s 3 4 1 2 2 2 2 2 3 19	Pre-requisite/s 4th Year Standing ME 423, ME 411 ME 422 ENGG 411 ME 425 Graduating	ME 428
Course Code ENGG 405 ME 426 ME 427 ME 428 ME 429 ENGG 406 ME 430	Power Plant Design with Renewable Energy Total FOURTH YI Second Semo Course Title Technopreneurship Industrial Plant Engineering ME Project Study 2 Manufacturing and Industrial Processes with Plant Visits ME Laboratory 3 Engineering Management ME Practice with Comprehensive Examination Control System Engineering Total	3 4 7 EAR ester No. of Lec 3 3 0 1 0 2 0 2	0 3 3 Hour/s Lab 0 3 3 3 6 0 6 0 6 3	3 5 12 Unit/s 3 4 1 2 2 2 2 2 3 19	Pre-requisite/s 4th Year Standing ME 423, ME 411 ME 422 ENGG 411 ME 425 Graduating	ME 428
Course Code ENGG 405 ME 426 ME 427 ME 428 ME 429 ENGG 406 ME 430 ECE 425	Power Plant Design with Renewable Energy Total FOURTH YI Second Seme Course Title Technopreneurship Industrial Plant Engineering ME Project Study 2 Manufacturing and Industrial Processes with Plant Visits ME Laboratory 3 Engineering Management ME Practice with Comprehensive Examination Control System Engineering Total GRAND TOTAL UNITS	3 4 7 EAR ester No. of Lec 3 3 0 1 0 2 0 2	0 3 3 Hour/s Lab 0 3 3 3 6 0 6 0 6 3	3 5 12 Unit/s 3 4 1 2 2 2 2 2 3 19	Pre-requisite/s 4th Year Standing ME 423, ME 411 ME 422 ENGG 411 ME 425 Graduating	ME 428
Course Code ENGG 405 ME 426 ME 427 ME 428 ME 429 ENGG 406 ME 430 ECE 425	Power Plant Design with Renewable Energy Total FOURTH YI Second Seme Course Title Technopreneurship Industrial Plant Engineering ME Project Study 2 Manufacturing and Industrial Processes with Plant Visits ME Laboratory 3 Engineering Management ME Practice with Comprehensive Examination Control System Engineering Total GRAND TOTAL UNITS	3 4 7 EAR ester No. of Lec 3 3 0 1 0 2 0 2	0 3 3 Hour/s Lab 0 3 3 3 6 0 6 0 6 3	3 5 12 Unit/s 3 4 1 2 2 2 2 2 3 19	Pre-requisite/s 4th Year Standing ME 423, ME 411 ME 422 ENGG 411 ME 425 Graduating	
Course Code ENGG 405 ME 426 ME 427 ME 428 ME 429 ENGG 406 ME 430 ECE 425 ME Electives: 1. Introduction to 2. Industrial Robo	Power Plant Design with Renewable Energy Total FOURTH YI Second Seme Course Title Technopreneurship Industrial Plant Engineering ME Project Study 2 Manufacturing and Industrial Processes with Plant Visits ME Laboratory 3 Engineering Management ME Practice with Comprehensive Examination Control System Engineering Total GRAND TOTAL UNITS	3 4 7 EAR ester No. of Lec 3 3 0 1 0 2 0 2	0 3 3 Hour/s Lab 0 3 3 3 6 0 6 0 6 3	3 5 12 Unit/s 3 4 1 2 2 2 2 2 3 19	Pre-requisite/s 4th Year Standing ME 423, ME 411 ME 422 ENGG 411 ME 425 Graduating	ME 428
Course Code ENGG 405 ME 426 ME 427 ME 428 ME 429 ENGG 406 ME 430 ECE 425 ME Electives: 1. Introduction to 2. Industrial Robo 3. Engine Friction	Power Plant Design with Renewable Energy Total FOURTH YI Second Seme Course Title Technopreneurship Industrial Plant Engineering ME Project Study 2 Manufacturing and Industrial Processes with Plant Visits ME Laboratory 3 Engineering Management ME Practice with Comprehensive Examination Control System Engineering Total GRAND TOTAL UNITS	3 4 7 EAR ester No. of Lec 3 3 0 1 0 2 0 2	0 3 3 Hour/s Lab 0 3 3 3 6 0 6 0 6 3	3 5 12 Unit/s 3 4 1 2 2 2 2 2 3 19	Pre-requisite/s 4th Year Standing ME 423, ME 411 ME 422 ENGG 411 ME 425 Graduating	ME 428