

XAVIER UNIVERSITY - ATENEO DE CAGAYAN
BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING
 2008-2009 Curriculum, 3rd Edition

FIRST YEAR

FIRST SEMESTER

Code	Number	Description	Lect.	Lab.	Unit	Pre-req.
ENG	014.1	English Plus: Introduction to Study and Thinking Skills	(3)	0	(3)	
ES	01	Engineering Drawing	0	1	1	
FFP	10	Freshmen Formation Program	3	0	3	
FIL	22	Komunikasyon sa Akademikong Filipino	3	0	3	
HIST	11.1	Rizal's Life, Works, and Writings	3	0	3	
MA	81	College Algebra	3	0	3	
MA	82	Plane & Spherical Trigonometry	3	0	3	
ME	01	Orientation to Mechanical Engineering	1	0	1	
SOC	01.1	Principles of Sociology with Population, Family Planning and HIV/AIDS Education	3	0	3	
PE	1	Physical Fitness	2	0	2	
Total			(24)21	1	(25)22	

SECOND SEMESTER

Code	Number	Description	Lect.	Lab.	Unit	Pre-req.	Co-req.
ENG	16.1	Study, Thinking and Language Skills in English	3	0	3		
FIL	33	Pagbasa at Pagsulat Tungo sa Pananaliksik	3	0	3	FIL 22	
MA	83	Advanced Algebra	2	0	2	MA 81	
MA	84	Analytic Geometry	2	0	2	MA 81, MA 82	
MA	85	Solid Mensuration	2	0	2	MA 81, MA 82	
PHYS	21	General Physics 1 Lecture	3	0	3	MA 81, MA 82	
PHYS	21 L	General Physics 1 Laboratory	0	1	1	MA 81, MA 82	PHYS 21
PSC	10.1	Politics and Governance with Philippine Constitution	3	0	3		
PSYC	1	General Psychology	3	0	3		
RS	15	The Old Testament	3	0	3		
PE	2	Rhythmic Activities	2	0	2	PE 1	
Total			26	1	27		

SECOND YEAR

FIRST SEMESTER

Code	Number	Description	Lect.	Lab.	Unit	Pre-req.	Co-req.
CHEM	81	General Chemistry (Lecture)	3	0	3		
CHEM	81 L	General Chemistry (Laboratory)	0	1	1		
ES	02	Computer-Aided Drafting	0	1	1	ES 01	
ES	10.1	Safety Management/Engineering	1	0	1		
MA	86	Differential Calculus	4	0	4	MA 83, MA 84, MA 85	
PHILO	01	Logic	3	0	3		
PHYS	22	General Physics 2	3	0	3	PHYS 21	
PHYS	22L	General Physics 2 Laboratory	0	1	1	PHYS 21,21L	PHYS22
RS	20	Christology	3	0	3	RS 15	
NSTP	1	National Service Training Program 1	3	0	3		
PE	3	Individual/Dual Sports	2	0	2	PE 2	
Total			22	3	25		

SECOND SEMESTER

Code	Number	Description	Lect.	Lab.	Unit	Pre-req.	Co-req.
ENG	34.1	The Literatures of the World	3	0	3	ENG 16.1	
ENG	17	Effective Speech Communication	3	0	3	ENG 16.1	
ES	03	Computer Fundamentals & Programming	0	2	2	2nd year standing	
ES	04	Statics of Rigid Bodies	3	0	3	PHYS 21,21L	MA 87
MA	87	Integral Calculus	4	0	4	MA 86	
ME	21	Workshop Theory & Practice	0	2	2	ES 01, ME 01	
PHILO	15.1	Philosophy of Man and the Human Person	3	0	3	PHILO 01	
NSTP	2	National Service Training Program 2	3	0	3	NSTP 1	
PE	4	Team Sports/Games	2	0	2	PE 3	
Total			21	4	25		

THIRD YEAR

FIRST SEMESTER

Code	Number	Description	Lect.	Lab.	Unit	Pre-req.	Co-req.
ACE	03	Basic Electrical Engineering	2	1	3	PHYS 22,22L	
ES	05	Dynamics of Rigid Bodies	2	0	2	ES 04	
MA	88	Differential Equations	3	0	3	MA 87	
MA	89	Probability and Statistics	3	0	3	MA 81	
ME	22	Thermodynamics 1	3	0	3	MA 87, PHYS 22,22L	
ME	23	Machine Elements 1	2	1	3	ES 04	ES 05
ME	24	Machine Shop Theory	0	2	2	ME 21	
PHILO	30.1	Generic Ethics with PERSON (Philosophical Enrichment and Regeneration for Social Orientation and Networking Program)	3	0	3	PHILO 15.1	
RS	35	Church and Sacraments	3	0	3	RS 20	
Total			21	4	25		

Note 1: Students who do not qualify are required by the English Department to take ENG 014.1, a non-credit subject.

Note 2: FFP10 must be taken within the first year of entry to the University.

SECOND SEMESTER

Code	Number	Description	Lect.	Lab.	Unit	Pre-req.	Co-req.
ACE	04	Basic Electronics 1 (Lecture)	2	0	2	ACE 03, 03L	
ACE	04 L	Basic Electronics 1 (Laboratory)	0	1	1	ACE 03, 03L	ACE 04
ECON	20.1	Principles of Economics with Taxation, Agrarian Reform and Consumer Education	3	0	3		
ES	06	Mechanics of Deformable Bodies	3	0	3	ES 04	
ES	09	Environmental Engineering	2	0	2	CHEM 81, 81L	
ME	25	Thermodynamics 2	3	0	3	ME 22, ES 05	
ME	26	Machine Elements 2	2	1	3	ME 23	
ME	27	Fluid Mechanics	3	1	4	ME 22, ES 05	
ME	28	Engineering Economy for ME	3	0	3	Third year standing	
PHILO	25	Philosophy of Religion	3	0	3	PHILO 30.1	
Total			24	3	27		

FOURTH YEAR**FIRST SEMESTER**

Code	Number	Description	Lect.	Lab.	Unit	Pre-req.	Co-req.
ACE	10	DC/AC Machinery 1	3	0	3	ACE 03	
ACE	10 L	DC/AC Machinery 1L	0	1	1	ACE 03	
ENG	27	Writing Term Paper in the Discipline and Business Correspondence	3	0	3	ENG 16.1	
ME	29	ME lab. 1	0	2	2	ME 27	
ME	30	Machine Design 1	3	1	4	ME 26, ES 06	ME 31
ME	31	Materials Engineering	3	1	4	CHEM 81, ES 06	
ME	32	Heat Transfer	3	0	3	ME 22, MA 88, ME 27	
METE	40	Technical Elective 1	3	0	3	Fourth year standing	
Total			18	5	23		

SECOND SEMESTER

Code	Number	Description	Lect.	Lab.	Unit	Pre-req.
ME	33	Combustion Engineering	3	0	3	ME 25, ME 32
ME	34	ME Lab. 2	0	2	2	ME 29, ME 32
ME	35	Machine Design 2	3	1	4	ME 30
ME	36	Refrigeration Systems	3	0	3	ME 25, ME 32
ME	37	Methods of Research for ME	3	0	3	MA 89, Eng 27
ME	38	Fluid Machinery	3	0	3	ME 27
ME	39	Safety Engineering for ME	2	0	2	Fourth year standing
METE	50	Technical Elective 2	3	0	3	Fourth year standing
RS	55	Christian Morality with Social Teachings of the Church	3	0	3	RS 35
Total			23	3	26	

Summer

Code	Number	Description	Hours	Lect.	Lab.	Unit	Pre-Req.
ME	80	On the Job Training	300	0	2	2	ME 01, ME 39
Total						2	

FIFTH YEAR**FIRST SEMESTER**

Code	Number	Description	Lect.	Lab.	Unit	Pre-requisite	Co-req.
ME	41	Adv. Engg. Math for ME	3	0	3	MA 88	
ME	42	ME Lab. 3	0	2	2	ME 34	
ME	43	Instrumentations & Control Engineering.	2	1	3	ACE 04, ACE 04L	
ME	44	Air-conditioning & Ventilation System	2	1	3	ME 36	
ME	45	Industrial Processes	2	0	2	ME 34, ME 39	
ME	46	Seminars & Plant Inspections	0	1	1	5th year standing	ME 45
ME	47	ME Final Year Project Study 1	1	1	2	ME 37, ME 32, ME 38	
METE	60	Technical Elective 3	3	0	3	5th year standing	
ENG	41	Humanities: Arts, Aesthetics & Society.	3	0	3	ENG 16	
Total			16	6	22		

SECOND SEMESTER

Code	Number	Description	Lect.	Lab.	Unit	Pre-requisite
ME	48	Power Plant Engineering	4	2	6	ME 33, ME 38, ME 32
ME	49	Industrial Plant Engineering	3	1	4	ME 45, ME 80
ME	51	ME Laws, Ethics, Codes & Standards.	3	0	3	ME 01, 5th year standing
ME	52	Engineering Management for ME	3	0	3	ME 28, 5th year standing
ME	53	ME Final Year Project Study 2	1	1	2	ME 47
ME	54	Vibration Engineering	2	0	2	MA 88, ES 05
METE	70	Technical Elective 4	3	0	3	5th year standing
Total			19	4	23	

Note 3: Subjects taken without completing the required pre-requisite will not be credited.

Note 4: Year Level is determined based on completion of at least 75% of the required number of units of the preceding year level prescribed by the curriculum

Note 5: The regular load of a student per semester is as prescribed in this curriculum indicated as TOTAL number of units, which is the MAXIMUM number of units that a student can take in the semester.

Note 6: At least two(2) of the Technical Electives must be under the same track or area of specialization. 1. Energy Engineering and Management 2. Heating, Ventilating, Air-conditioning and Refrigeration 3. Terotechnology 4. Environmental Engineering