

Xavier University  
**BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING**  
 2008-2009 Curriculum, 3<sup>rd</sup> Edition

**FIRST YEAR**

First Semester							
Code		Description	Lec	Lab	Unit	Pre-Req	
ENG	014.1	English Plus: Introduction to Study and Thinking Skills	(3)	0	(3)		
EE	01	Orientation to Electrical Engineering	1	0	1		
ES	01	Engineering Drawing	0	1	1		
FFP	10	Freshman Formation Program	3	0	3		
FIL	22	Komunikasyon sa Akademikong Filipino	3	0	3		
MA	81	College Algebra	3	0	3		
MA	82	Plane and Spherical Trigonometry	3	0	3		
PSC	10.1	Politics and Governance with Philippine Constitution	3	0	3		
PSYC	1	General Psychology	3	0	3		
PE	1	Physical Fitness	2	0	2		
Total			(24)21	1	(25)22		

Second Semester							
Code		Description	Lec	Lab	Unit	Pre-Req	Co-Req
CHEM	81	General Chemistry (Lecture)	3	0	3		
CHEM	81L	General Chemistry (Laboratory)	0	1	1		
ENG	16.1	Study, Thinking and Language Skills in English	3	0	3		
ES	03	Computer Fundamentals & Programming	0	2	2		
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	
RS	15	The Old Testament	3	0	3		
SOC	01.1	Principles of Sociology w/ Population, Family Planning & HIV/AIDS Education	3	0	3		
PE	2	Rhythmic Activities	2	0	2	PE 1	
Total			23	3	26		

**SECOND YEAR**

First Semester							
Code		Description	Lec	Lab	Unit	Pre-Req	
ES	09	Environmental Engineering	2	0	2	CHEM 81,81L	
ES	02	Computer Aided Drafting	0	1	1	ES 01	
HIST	11.1	Rizal's Life, Works, & Writings	3	0	3		
MA	86	Differential Calculus	4	0	4	MA 83, MA 84, MA 85	
PHILO	01	Logic	3	0	3		
PHYS	21	General Physics 1	3	0	3	MA 81, MA 82	
PHYS	21L	General Physics 1 Laboratory	0	1	1	MA 81, MA 82	PHYS 21
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			23	2	25		

Second Semester							
Code		Description	Lec	Lab	Unit	Pre-Req	
ACE	22	Fundamentals of Material Science and Engineering	3	0	3	CHEM 81,81L	
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	
MA	87	Integral Calculus	4	0	4	MA 86	
MA	89	Probability & Statistics	3	0	3	MA 81	
PHILO	15.1	Philosophy of Man and the Human Person	3	0	3	PHILO 01	
PHYS	22	General Physics 2	3	0	3	PHYS 21, PHYS 21L	
PHYS	22L	General Physics 2 Laboratory	0	1	1	PHYS 21, PHYS 21L	PHYS 22
NSTP	2	National Service Training Program 2	3	0	3	NSTP 1	
PE	4	Team Sports/Games	2	0	2	PE 3	
Total			27	1	28		

**THIRD YEAR**

First Semester							
Code		Description	Lec	Lab	Unit	Pre-Req	
ECE	31	Electronic Devices and Circuits	3	1	4	MA 87,PHYS22,22L, ACE 22	
EE	33	Electromagnetics	3	0	3	MA 87, PHYS 22,22L	
EE	35	Electrical Circuit 1	3	1	4	MA 87, PHYS 22,22L	
ENG	41	Humanities: Arts, Aesthetics and Society	3	0	3	ENG 16.1	
ES	04	Statics of Rigid Bodies	3	0	3	PHYS 21,21L, MA 87	
ES	07	Engineering Economy and Accounting	3	0	3	3 <sup>rd</sup> Yr. Standing	
MA	88	Differential Equations	3	0	3	MA 87	
PHILO	30.1	Generic Ethics with PERSON (Philosophical Enrichment and Regeneration for Social Orientation and Networking Program)	3	0	3	PHILO 15.1	
Total			24	2	26		

**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		Description	Lec	Lab	Unit	Pre-Req
ACE	02	Basic Thermodynamics	3	0	3	MA 87, PHYS 22,22L
ECE	32	Electronic Circuit Analysis and Design	3	1	4	ECE 31, EE 35
EE	30	Advanced Engineering Mathematics for EE	3	0	3	MA 88
EE	36	Electrical Circuit 2	3	1	4	EE 35
ENG	27	Writing, Term Paper in the Discipline and Business Correspondence	3	0	3	ENG 16.1
ES	10.1	Safety Management/Engineering	1	0	1	3 <sup>rd</sup> Yr. Standing
ES	05	Dynamics of Rigid Bodies	2	0	2	ES 04
ES	06	Mechanics of Deformable Bodies	3	0	3	ES 04
RS	35	Church and Sacraments	3	0	3	RS 20
Total			24	2	26	

**FOURTH YEAR****First Semester**

Code		Description	Lec	Lab	Unit	Pre-Req
COM	01	Principles of Communications	3	1	4	EE 30, ECE32
ECE	42	Logic Circuits & Switching Theory	3	1	4	ECE 31
EE	42	Electrical Circuit 3	2	1	3	EE 36
EE	43	DC Machinery	2	1	3	EE 36
EE	48	Numerical Methods with Computer Applications	2	1	3	EE 30
EE	45	Control System Analysis	3	0	3	EE 30
RS	55	Christian Morality with Social Teachings of the Church	3	0	3	RS 35
Total			18	5	23	

**Second Semester**

Code		Description	Lec	Lab	Unit	Pre-Req	Co-Req
ACE	40	Mechanics Fluid	2	0	2	ES 06	
ECE	51	Industrial Electronics	3	0	3	ECE 32	
ECE	51L	Industrial Electronics Laboratory	0	1	1	ECE 32	ECE 51
EE	47	Microprocessor Systems	2	1	3	ES 03,ECE 32 ECE 42	
EE	44	AC Machinery	3	1	4	EE 42, EE 43	
EE	46	AC Apparatus and Devices	2	1	3		EE 44
EE	49	Electrical Engineering Safety	1	0	1	ES 10, 4 <sup>th</sup> Yr. Sta	
EE	40	Research Methods for EE	1	0	1	MA 89, 4 <sup>th</sup> Yr Standing	
EETE	01	Technical Elective 1	3	0	3	4 <sup>th</sup> Yr. Standing	
PHILO	25	Philosophy of Religion	3	0	3	PHILO 30.1	
Total			20	4	24		

**Summer**

Code		Description	Hours	Lect.	Lab.	Unit	Pre-Req.
EE	80	On the Job Training	300	0	2	2	EE 46
Total						2	

**FIFTH YEAR****First Semester**

Code		Description	Lec	Lab	Unit	Pre-Req	Co-Req
ACE	41	Information Technology	2	1	3	COM 01	
EE	50	EE Research Project 1	1	1	2	EE 40	
EE	51	Electrical Transmission & Distribution System	3	1	4	EE 44	
EE	52	Illumination Engineering Design	2	1	3		EE 53
EE	53	Electrical System Design	2	1	3	EE 46	
EE	54	Instrumentation and Control	2	1	3	ECE 51/51L	
EETE	2	Technical Elective 2	3	0	3	5 <sup>th</sup> Yr. Standing	
EETE	3	Technical Elective 3	3	0	3	5 <sup>th</sup> Yr. Standing	
Total			18	6	24		

**Second Semester**

Code		Description	Lec	Lab	Unit	Pre-Req	Co-Req
ECON	20.1	Principles of Economics with Taxation, Agrarian Reform and Consumer Education	3	0	3		
EE	55	EE Laws, Contract and Ethics	2	0	2	5 <sup>th</sup> Yr. Standing	
EE	56	Electrical Equipment Operation & Maintenance	3	0	3	EE 46	
EE	57	Power System Analysis & Design	3	1	4	EE 53	
EE	58	Power Plant Engineering	2	1	3		EE 57
EE	59	Seminars and Field Trips	0	1	1	5 <sup>th</sup> Yr. Standing	
EE	60	EE Research Project 2	1	1	2	EE 40	
EETE	4	Technical Elective 4	3	0	3	5 <sup>th</sup> Yr. Standing	
ES	08	Engineering Management	3	0	3	5 <sup>th</sup> Yr Standing	
Total			20	4	24		

**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 of specialization.*

**Note 7:** *Prerequisite subjects of offered Technical Elective is as declared by the EE Department.*

**Technical Elective Tracks:**

1. Advance Electrical Design
2. Machine Automation & Process Control
3. Renewable Energy Resources Design