Republic of the Philippines
BATANGAS STATE UNIVERSITY
Pablo Borbon Campus II, Alangilan, Batangas City, Philippines 4200
COLLEGE OF INDUSTRIAL TECHNOLOGY
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CURRICULUM
Bachelor of Industrial Technology
ELECTRICAL TECHNOLOGY
Academic Year 2018-2019
Reference: CMO No. 20 S. 2013 and Based on PACUIT Proposal

Curriculum Description

The program in Bachelor of Industrial Technology Major in Electrical Technology will prepare graduates with the skills necessary to enter careers in the design, application, installation, manufacturing, operation and/or maintenance of electrical systems. Graduates of this degree program typically have strengths in the building, testing, operation, and maintenance of existing electrical systems and well prepared for development and implementation of electrical systems.

Program Objectives

1. Successfully practice as engineering technologists for the welfare of the society.
2. Demonstrate a high degree of professionalism at all times.

Program Outcomes

Graduates will have:
a. An appropriate mastery of the knowledge, techniques, skills and modern tools of technology
b. An ability to apply current knowledge and adapt to emerging applications of mathematics, science and technology
c. An ability to conduct, analyze and interpret experiments and apply experimental results to improve processes
d. An ability to apply creativity in the design of systems, components or processes appropriate to program objectives
e. An ability to function effectively on teams
f. An ability to identify, analyze and solve technical problems
g. An ability to communicate effectively in writing and in oral presentation
h. A recognition of the need for, and an ability to engage in lifelong learning
i. An ability to understand professional, ethical and social responsibilities
j. The knowledge of and respect for diverse backgrounds, contemporary societal and global issues concerning the profession
k. A commitment to quality, timeliness and continuous improvement

Curriculum Components

Code	Courses	Units	Total
	A. General Education Courses (CMO No. 20, series of 2013)		**36 units**
	B. Professional and Management Courses		**32 units**
PM 101	Occupational Health and Safety Management	2	
PM 102	Industrial Operation & Management Practices	3	
PM 103	Production and Operations Management	3	
PM 104	Technology Research I	3	
PM 105	Materials Technology Management	3	
PM 106	Professional Ethics	3	
PM 107	Technology Research II	3	
PM 108	Manufacturing Technology	3	
PM 109	Total Quality Management	3	
PM 110	Environmental Technology	3	
ENGG 405	Technopreneurship	3	
	C. Applied Sciences and Tools Courses		**27 units**
AST 111	Math for Technology	3	
AST 102	Applied Chemistry	3	
AST 105	Applied Physics	3	
AST 133	Production Drawing	2	

AST 128	Electrical Measurements	2	
AST 135	Computer Aided Design	2	
AST 134	Computer Programming	3	
AST 110	Data Analytics	3	
AST 117	Industrial Power Electronics	3	
AST 119	Instrumentation and Process Control	3	
	D. Major Specialization Courses		**36 units**
ELC 111	Circuits I (DC Circuits)	3	
ELC 112	Signal and Commmunication System	3	
ELC 121	Circuits II (AC Circuits)	3	
ELC 122	Residential and Commercial Power System and Design	3	
ELC 211	Industrial Power System and Design	3	
ELC 212	Electrical Machines (AC and DC)	3	
ELC 221	Motor Control and Sequential Control	3	
ELC 222	Electric Power Production	2	
ELC 223	Estimating and Costing	2	
ELC 311	PLC System and Programming	3	
ELC 312	Electric Power Transmission and Distribution	2	
ELC 321	Automatic Control System	3	
ELC 322	Photovoltaic Technologies	3	
	E. Mandated Courses		**14 units**
PE 101	Physical Fitness, Gymnastics and Aerobics	2	
PE 102	Rhythmic Activities	2	
PE 103	Individual and Dual Sports	2	
PE 104	Team Sports	2	
NSTP 111	National Service Training Program 1	3	
NSTP 121	National Service Training Program 2	3	
	F. Supervised Industrial Training/OJT		**20 units**

SUMMARY	
Courses	**Number of Units**
General Education	36
Applied Sciences and Tool Courses	27
Professional and Management Courses	32
Specialization/Major Courses	36
Supervised Industrial Training/OJT	20
Mandated Courses (PE & NSTP)	14
TOTAL	**165**

PROGRAM OF STUDY

FIRST YEAR						
First Semester						
COURSE CODE	**COURSE TITLE**	**CREDIT**		**UNITS**	**NO. OF HRS.**	**PRE-REQUISITE**
		LEC	**LB/SW**			
AST 111	Math for Technology	3	0	3	3	
AST 102	Applied Chemistry	2	3	3	5	
AST 105	Applied Physics	2	3	3	5	
AST 133	Production Drawing	1	3	2	4	
AST 128	Electrical Measurements	1	3	2	4	
PM 101	Occupational Health and Safety Management	2	0	2	2	
ELC 111	Circuits I (DC Circuits)	2	3	3	5	
ELC 112	Signal and Commmunication System	2	3	3	5	
NSTP 111	National Service Training Program 1	3	0	3	3	
PE 101	Physical Fitness, Gymnastics and Aerobics	2	0	2	2	
	TOTAL	**18**	**18**	**26**	**33**	

FIRST YEAR						
Second Semester						
COURSE CODE	**COURSE TITLE**	**CREDIT**		**UNITS**	**NO. OF HRS.**	**PRE-REQUISITE**
		LEC	**LB/SW**			
GEd 101	Understanding the Self	3	0	3	3	
GEd 102	Mathematics in the Modern World	3	0	3	3	
GEd 106	Purposive Communication	3	0	3	3	
GEd 109	Science, Technology and Society	3	0	3	3	
ELC 121	Circuits II (AC Circuits)	2	3	3	5	ELC 111
ELC 122	Residential and Commercial Power System and Design	2	3	3	5	
AST 135	Computer Aided Design	1	3	2	4	AST 133
NSTP 121	National Service Training Program 2	3	0	3	3	NSTP 111
PE 102	Rhythmic Activities	2	0	2	2	PE 101
	TOTAL	**20**	**9**	**25**	**26**	

SECOND YEAR						
First Semester						
COURSE CODE	**COURSE TITLE**	**CREDIT**		**UNITS**	**NO. OF HRS.**	**PRE-REQUISITE**
		LEC	**LB/SW**			
GEd 103	Life and Works of Rizal	3	0	3	3	
GEd 104	The Contemporary World	3	0	3	3	
Fili 101	Kontekstwalisadong Komunikasyon sa Filipino	3	0	3	3	
PM 102	Industrial Operation & Management Practices	3	0	3	3	
AST 134	Computer Programming	2	3	3	5	
ELC 211	Industrial Power System and Design	2	3	3	5	ELC 122
ELC 212	Electrical Machines (AC and DC)	2	3	3	5	ELC 121
PE 103	Individual and Dual Sports	2	0	2	2	PE 101
	TOTAL	**20**	**9**	**23**	**29**	

SECOND YEAR						
Second Semester						
COURSE CODE	**COURSE TITLE**	**CREDIT**		**UNITS**	**NO. OF HRS.**	**PRE-REQUISITE**
		LEC	**LB/SW**			
Fili 102	Filipino sa iba't ibang Disiplina	3	0	3	3	
GEd 107	Ethics	3	0	3	3	
PM 103	Production and Operations Management	3	0	3	3	
AST 110	Data Analytics	3	0	3	3	GEd 102, AST 111
AST 117	Industrial Power Electronics	2	3	3	5	ELC 212
ELC 221	Motor Control and Sequential Control	2	3	3	5	ELC 212
ELC 222	Electric Power Production	2	0	2	2	ELC 121
ELC 223	Estimating and Costing	2	0	2	2	ELC 211
PE 104	Team Sports	2	0	2	2	PE 101
	TOTAL	**22**	**6**	**24**	**28**	

THIRD YEAR						
First Semester						
COURSE CODE	**COURSE TITLE**	**CREDIT**		**UNITS**	**NO. OF HRS.**	**PRE-REQUISITE**
		LEC	**LB/SW**			
Litr 102	ASEAN Literature	3	0	3	3	
GEd 105	Readings in Philippine History	3	0	3	3	
PM 104	Technology Research I	3	0	3	3	ELC 221, ELC 222, ELC 223
PM 105	Materials Technology Management	3	0	3	3	ELC 221, ELC 222, ELC 223
PM 106	Professional Ethics	3	0	3	3	
ELC 311	PLC System and Programming	2	3	3	5	ELC 221
ELC 312	Electric Power Transmission and Distribution	2	0	2	2	ELC 222
AST 119	Instrumentation and Process Control	2	3	3	5	ELC 221
	TOTAL	**21**	**6**	**23**	**27**	

THIRD YEAR						
Second Semester						
COURSE CODE	**COURSE TITLE**	**CREDIT**		**UNITS**	**NO. OF HRS.**	**PRE-REQUISITE**
		LEC	**LB/SW**			
GEd 108	Art Appreciation	3	0	3	3	
PM 107	Technology Research II	3	0	3	3	*Regular Standing
PM 108	Manufacturing Technology	3	0	3	3	*Regular Standing
PM 109	Total Quality Management	3	0	3	3	*Regular Standing
PM 110	Environmental Technology	3	0	3	3	*Regular Standing
ENGG 405	Technopreneurship	3	0	3	3	*Regular Standing
ELC 321	Automatic Control System	2	3	3	5	ELC 311
ELC 322	Photovoltaic Technologies	2	3	3	5	ELC 222
	TOTAL	**22**	**6**	**24**	**28**	

FOURTH YEAR						
First Semester						
COURSE CODE	**COURSE TITLE**	**CREDIT**		**UNITS**	**NO. OF HRS.**	**PRE-REQUISITE**
		LEC	**LB/SW**			
OJT 105	Supervised Industrial Training 1 (540hrs)	0	10	10	540	ELC 321, ELC 322
	TOTAL			**10**	**540**	

FOURTH YEAR						
Second Semester						
COURSE CODE	**COURSE TITLE**	**CREDIT**		**UNITS**	**NO. OF HRS.**	**PRE-REQUISITE**
		LEC	**LB/SW**			
OJT 106	Supervised Industrial Training 2 (540hrs)	0	10	10	540	OJT 105
	TOTAL			**10**	**540**	

** Regular Standing: No deficiencies on the previous semester.*

TOTAL UNITS: 165