



CURRICULUM
Bachelor of Industrial Technology
MECHANICAL TECHNOLOGY
 Academic Year 2018-2019

Reference: CMO No. 20 S. 2013 and Based on PACUIT Proposal

Curriculum Description

The Bachelor of Industrial Technology Major in Mechanical Technology provides the knowledge, skills and attitudes in the various machining process that can be applied on their on-the-job training and on their future careers. It encompasses measurements, metallurgy and heat treatment, welding drive components, repair and maintenance, pipelifting, lubrication and principle of tool and die. Likewise, pneumatics and hydraulics, CNC, inspection and quality control are also vital elements of the curriculum.

Program Objectives

1. Successfully practice as engineering technologies 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 130	Mechanical Measurements	2	
AST 135	Computer Aided Design	2	
AST 122	Drive Components	3	
AST 134	Computer Programming	3	
AST 110	Data Analytics	3	
AST 112	Electrical Principles	3	
	D. Major Specialization Courses		35 units
MT 111	Benchworking, Plumbing and Pipe Bending	4	
MT 121	Machining: Turning and Shaping	4	
MT 211	Machining: Milling and Grinding	4	
MT 212	Mettalurgy and Heat Treatment	2	
MT 213	Pnuematics	2	
MT 221	Basic Arc and Gas Welding	3	
MT 222	Advanced Pipefitting and Pattern Development	2	
MT 223	Basic CNC (Lathe)	2	
MT 224	Hydraulics	2	
MT 311	Repair, Maintenance and Lubrication	2	
MT 312	Principle of Tool and Die	2	
MT 313	Basic CNC (Milling)	2	
MT 321	Advanced CNC	2	
MT 322	Inspection and Quality Control	2	
	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	35
Supervised Industrial Training/OJT	20
Mandated Courses (PE & NSTP)	14
TOTAL	164

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 130	Mechanical Measurements	1	3	2	4	
PM 101	Occupational Health and Safety Management	2	0	2	2	
MT 111	Benchworking, Plumbing and Pipe Bending	1	9	4	10	
NSTP 111	National Service Training Program 1	3	0	3	3	
PE 101	Physical Fitness, Gymnastics and Aerobics	2	0	2	2	
TOTAL		15	21	24	33	

FIRST YEAR						
Second Semester						
COURSE CODE	COURSE TITLE	CREDIT		UNITS	NO. OF HRS.	PRE-REQUISITE
		LEC	LB/SW			
GEEd 101	Understanding the Self	3	0	3	3	
GEEd 102	Mathematics in the Modern World	3	0	3	3	
GEEd 106	Purposive Communication	3	0	3	3	
GEEd 109	Science, Technology and Society	3	0	3	3	
AST 135	Computer Aided Design	1	3	2	4	AST 133
AST 122	Drive Components	3	0	3	3	
MT 121	Machining: Turning and Shaping	1	9	4	10	AST 130, MT 111
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	12	26	29	

SECOND YEAR						
First Semester						
COURSE CODE	COURSE TITLE	CREDIT		UNITS	NO. OF HRS.	PRE-REQUISITE
		LEC	LB/SW			
GEEd 103	Life and Works of Rizal	3	0	3	3	
GEEd 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	
MT 211	Machining: Milling and Grinding	1	9	4	10	MT 121
MT 212	Mettalurgy and Heat Treatment	2	0	2	2	AST 102, AST 105
MT 213	Pneumatics	1	3	2	4	AST 105
PE 103	Individual and Dual Sports	2	0	2	2	PE 101
TOTAL		20	15	25	35	

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	
GEEd 107	Ethics	3	0	3	3	
PM 103	Production and Operations Management	3	0	3	3	
AST 110	Data Analytics	3	0	3	3	GEEd 102, AST 111
AST 112	Electrical Principles	2	3	3	5	AST 105
MT 221	Basic Arc and Gas Welding	1	6	3	7	MT 212
MT 222	Advanced Pipefitting and Pattern Development	1	3	2	4	MT 111
MT 223	Basic CNC (Lathe)	1	3	2	4	MT 121
MT 224	Hydraulics	1	3	2	4	MT 213
PE 104	Team Sports	2	0	2	2	PE 101
TOTAL		20	18	26	38	

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	
GEEd 105	Readings in Philippine History	3	0	3	3	
PM 104	Technology Research I	3	0	3	3	MT 222, MT 223, MT 224
PM 105	Materials Technology Management	3	0	3	3	MT 222, MT 223, MT 224
PM 106	Professional Ethics	3	0	3	3	
MT 311	Repair, Maintenance and Lubrication	1	3	2	4	MT 211
MT 312	Principle of Tool and Die	1	3	2	4	AST 133
MT 313	Basic CNC (Milling)	1	3	2	4	MT 211, MT 223
TOTAL		18	9	21	27	

THIRD YEAR						
Second Semester						
COURSE CODE	COURSE TITLE	CREDIT		UNITS	NO. OF HRS.	PRE-REQUISITE
		LEC	LB/SW			
GEEd 108	Art Appreciation	3	0	3	3	
PM 107	Technology Research II	3	0	3	3	MT 311, MT 313
PM 108	Manufacturing Technology	3	0	3	3	MT 311, MT 313
PM 109	Total Quality Management	3	0	3	3	MT 311, MT 313
PM 110	Environmental Technology	3	0	3	3	MT 311, MT 313
ENGG 405	Technopreneurship	3	0	3	3	
MT 321	Advanced CNC	1	3	2	4	
MT 322	Inspection and Quality Control	2	0	2	2	MT 311, MT 313
TOTAL		21	3	22	24	

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	MT 321, MT 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: 164