



CURRICULUM
Bachelor of Industrial Technology
WELDING AND FABRICATION 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 Welding and Fabrication Technology deals with fundamental principles of welding process in metal working industry. It provides knowledge skills and attitudes in various welding processes that can be used in their on-the-job training and on their future careers. It also includes technical knowledge and techniques of joining various types of metal.

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 130	Mechanical Measurements	2	
AST 135	Computer Aided Design	2	
AST 124	Jigs and Fixtures	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	
WFT 121	Shielded Metal Arc Welding (SMAW)	3	
WFT 122	Welding Codes, Symbols and Standards	2	
WFT 211	Gas Welding (OAW)	3	
MT 121	Machining : Turning and Shaping	4	
MT 212	Metallurgy and Heat Treatment	2	
WFT 221	Advanced Gas Metal Arc Welding (GMAW)	3	
WFT 222	Basic Gas Tungsten Arc Welding (GTAW)	3	
WFT 311	Flux Corded Arc Welding (FCAW)	3	
WFT 312	Welding Science and Mechanics	2	
WFT 313	Destructive and Non Destructive Testing	2	
MT 322	Inspection and Quality Control	2	
MT 222	Advanced Pipefitting and Pattern Development	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 124	Jigs and Fixtures	3	0	3	3	
WFT 121	Shielded Metal Arc Welding (SMAW)	1	6	3	7	MT 111
WFT 122	Welding Codes, Symbols and Standards	2	0	2	2	
NSTP 121	National Service Training Program 2	3	0	3	3	NSTP 111
PE 102	Rhythmic Activities	2	0	2	2	PE 101
TOTAL		22	9	27	28	

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	
WFT 211	Gas Welding (OAW)	1	6	3	7	WFT 121
MT 121	Machining : Turning and Shaping	1	9	4	10	MT 111
MT 212	Metallurgy and Heat Treatment	2	0	2	2	AST 102, AST 105
PE 103	Individual and Dual Sports	2	0	2	2	PE 101
TOTAL		20	18	26	38	

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
WFT 221	Advanced Gas Metal Arc Welding (GMAW)	1	6	3	7	WFT 211
WFT 222	Basic Gas Tungsten Arc Welding (GTAW)	1	6	3	7	WFT 211
PE 104	Team Sports	2	0	2	2	PE 101
TOTAL		18	15	23	33	

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	WFT 211, MT 121, MT 212, WFT 221, WFT 222
PM 105	Materials Technology Management	3	0	3	3	WFT 211, MT 121, MT 212, WFT 221, WFT 222
PM 106	Professional Ethics	3	0	3	3	
WFT 311	Flux Corded Arc Welding (FCAW)	2	3	3	5	WFT 221
WFT 312	Welding Science and Mechanics	2	0	2	2	WFT 211, MT 121, MT 212, WFT 221, WFT 222
WFT 313	Destructive and Non Destructive Testing	1	3	2	4	WFT 211, MT 121, MT 212, WFT 221, WFT 222
TOTAL		20	6	22	26	

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	*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
MT 322	Inspection and Quality Control	2	0	2	2	WFT 313
MT 222	Advanced Pipefitting and Pattern Development	1	3	2	4	WFT 311, WFT 312, WFT 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 322, MT 222
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