



CURRICULUM
Bachelor of Industrial Technology
AUTOMOTIVE 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 Automotive Technology program is designed to prepare students with the basic knowledge and skills necessary for a modern state of the art automotive workers. The increasing sophistication of Automotive Technology now requires workers who can use computerized shop equipment and work with electronic components while maintaining their skills with traditional hand tools. Automotive service technicians as vehicle components and Systems become increasingly sophisticated. Motorcycle Mechanics repair and overhaul motorcycle. Besides, repairing engines, they may work on clutches transmissions, brakes, drivelines, differential cycles, tires, power Steering system, auto electricity and electronics, ignition system and make minor body repairs.

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		28 units
AST 111	Math for Technology	3	
AST 102	Applied Chemistry	3	

AST 105	Applied Physics	3	
AST 133	Production Drawing	2	
AST 123	Sheet Metal	3	
AST 135	Computer Aided Design	2	
AST 134	Computer Programming	3	
AST 125	Basic Arc and Gas Welding	3	
AST 110	Data Analytics	3	
AST 108	Automotive Thermodynamics	3	
	D. Major Specialization Courses		35 units
AT 111	Automotive Handtools, Fasteners and Machine Binders	2	
AT 112	Automotive Electrical System Fundamentals	3	
AT 121	Automotive Electrical System Servicing	2	
AT 122	Gas Engine Overhauling	3	
AT 211	Automobile Underchassis Servicing, Repair and Maintenance	2	
AT 212	Automotive Electronics and Computers	2	
AT 213	Power Trains	2	
AT 221	Engine Performance Test	2	
AT 222	Basic Driving	2	
AT 223	Automobile Body Repair and Painting	2	
AT 311	Diesel Engine Overhauling and Fuel Injection System	2	
AT 312	Electronic Injection and LPG System	2	
AT 313	Motorcycle Engine	2	
AT 321	Basic Machining	2	
AT 322	Applied Hydraulic and Pneumatics	2	
AT 323	Basic Car Airconditioning System	2	
AT 324	Automotive Shop Service Management	1	
	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	28
Professional and Management Courses	32
Specialization/Major Courses	35
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 123	Sheet Metal	2	3	3	5	
PM 101	Occupational Health and Safety Management	2	0	2	2	
AT 111	Automotive Handtools, Fasteners and Machine Binders	1	3	2	4	
AT 112	Automotive Electrical System Fundamentals	1	6	3	7	
NSTP 111	National Service Training Program 1	3	0	3	3	
PE 101	Physical Fitness, Gymnastics and Aerobics	2	0	2	2	
TOTAL		17	21	26	35	

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
AT 121	Automotive Electrical System Servicing	1	3	2	4	AT 112
AT 122	Gas Engine Overhauling	1	6	3	7	AT 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		18	12	24	27	

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	
AST 125	Basic Arc and Gas Welding	2	3	3	5	AST 123
AT 211	Automobile Underchassis Servicing, Repair and Maintenance	1	3	2	4	AT 111
AT 212	Automotive Electronics and Computers	1	3	2	4	AT 112
AT 213	Power Trains	1	3	2	4	AT 111
PE 103	Individual and Dual Sports	2	0	2	2	PE 101
TOTAL		21	15	26	36	

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	AST 111, GEEd 102
AST 108	Automotive Thermodynamics	3	0	3	3	AST 105
AT 221	Engine Performance Test	1	3	2	4	AT 122
AT 222	Basic Driving	1	3	2	4	AT 122, AT 211
AT 223	Automobile Body Repair and Painting	1	3	2	4	AT 211
PE 104	Team Sports	2	0	2	2	PE 101
TOTAL		20	9	23	29	

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	AT 221, AT 222, AT 223
PM 105	Materials Technology Management	3	0	3	3	AT 221, AT 222, AT 223
PM 106	Professional Ethics	3	0	3	3	
AT 311	Diesel Engine Overhauling and Fuel Injection System	1	3	2	4	AT 122
AT 312	Electronic Injection and LPG System	1	3	2	4	AT 112, AT 121, AT 212
AT 313	Motorcycle Engine	1	3	2	4	AT 222
TOTAL		18	9	21	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
AT 321	Basic Machining	1	3	2	4	AT 122, AT 213, AT 311
AT 322	Applied Hydraulic and Pneumatics	1	3	2	4	AT 211
AT 323	Basic Car Airconditioning System	1	3	2	4	AT 212
AT 324	Automotive Shop Service Management	1	0	1	1	AT 311, AT 312
TOTAL		22	9	25	31	

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	AT 321, AT 322, AT 323, AT 324
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