TECHNOLOGICAL INSTITUTE OF THE PHILIPPINES
Manila

2023 CURRICULUM FOR BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING (BSME)

IMPORTANT : REGISTRATION IN ANY COURSES WITHOUT ALL THE PREREQUISITES, CORRECT SEQUENCE AND AUTHORIZED LOAD SHALL NOT BE GIVEN ANY CREDIT REGARDLESS OF THE GI
EVALUATION IS TENTATIVE AND MAY BE REVISED FOR SOME VALID CAUSES OR REASONS OR IF OMISSIONS AND/OR LACK OF UNITS CREDITED BE DISCOVERED LATER.

Student's Name and Signature

COURSE CODE		DESCRIPTIVE TITLE	Lecture Hours	Laboratory Hours	Credit Units	PREREQUISITE(S)
FIRST YEAR, FIRST SEMESTER (21 UNITS)						
GEC	001	Understanding the Self	3	0	3	
GEC	002	Readings in Philippine HIstory	3	0	3	
CHM	001	Chemistry for Engineers	3	3	4	
AR	001	Engineering Drawing	0	3	1	
MATH	131	Engineeering Mathematics	3	0	3	
MATH	141	Calculus 1	4	0	4	
ME	101	Mechanical Engineering Orientation	1	0	1	
PE	001	Physical Activities Toward Health & Fitness 1 (PATHFit 1)	2	0	2	
NSTP	001	National Service Training Program 1	(3)	0	(3)	
FIRST YEAR, SECOND SEMESTER (23 UNITS)						
GEC	003	The Contemporary World	3	0	3	
GEC	004	Mathematics in the Modern World	3	0	3	
GEM	001	Life and Works of Rizal	3	0	3	
MATH	022A	Linear Algebra with MATLAB	2	3	3	MATH 141 (P)
MATH	242	Calculus 2	4	0	4	MATH 141 (P), MATH 131 (P)
PHYS	111	Calculus-Based Physics	3	3	4	MATH 141 (P)
ME	102	Computer-Aided Drafting for ME	0	3	1	AR 001 (P)
PE	002	Physical Activities Toward Health & Fitness 2 (PATHFit 2)	2	0	2	PE 001 (P)
NSTP	002	National Service Training Program 2	(3)	0	(3)	NSTP 001 (P)
SECOND YEAR, FIRST SEMESTER (24 UNITS)						
GEC	005	Purposive Communication	3	0	3	
GEC	006	Art Appreciation	3	0	3	
CE	201A	Statics of Rigid Bodies	3	0	3	MATH 141 (P), PHYS 111 (P)
EE	200C	Basic Electrical Engineering	2	3	3	PHYS 111 (P)
MATH	025	Discrete Mathematics	3	0	3	
MATH	021	Differential Equations	3	0	3	MATH 242 (P)
ME	201	Thermodynamics 1	3	0	3	MATH 242 (P), PHYS 111 (P)
ME	202	Workshop Theory and Practice	0	3	1	ME 102 (P)
PE	003	Physical Activities Toward Health & Fitness 3 (PATHFit 3)	2	0	2	PE 002 (P)
SECOND YEAR, SECOND SEMESTER (28 UNITS)						
GEC	007	Science, Technology and Society	3	0	3	
GEC	008	Ethics	3	0	3	
CPE	102A	Computer Programming	0	3	1	
CE	204A	Dynamics of Rigid Bodies	2	0	2	CE 201A (P)
MATH	027D	Engineering Data Analysis	3	0	3	MATH 141 (P)
MATH	024F	Advanced Mathematic for ME	3	0	3	MATH 021 (P)
MATH	030	Mutlivariable Calculus	3	0	3	MATH 141 (P)
ME	203	Thermodynamics 2	3	0	3	ME 201 (P)
ME	204	Machine Shop Theory	0	6	2	ME 202 (P)
ME	206	Engineering Economics	3	0	3	MATH 027D (C)
PE	004	Physical Activities Toward Health & Fitness 4 (PATHFit 4)	2	0	2	PE 003 (P)
THIRD YEAR, FIRST SEMESTER (27 UNITS)						
GEE	001B	GE Elective 1 - Gender and Society	3	0	3	
GEE	002B	GE Elective 2 - Living in IT Era	3	0	3	
BOSH	101	Basic Occupational Safety and Health	3	0	3	
CE	205B	Mechanics of Deformable Bodies	3	0	3	CE 204A (P)
EE	313	DC and AC Machinery	2	3	3	EE 200C (P)
ECE	300A	Basic Electronics	2	3	3	EE 200C (P)
ME	331	Heat Transfer	2	0	2	ME 201 (P)
ME	332	Fluid Mechanics	3	0	3	ME 201 (P)
ME	333	Computer Applications for ME	0	3	1	CPE 102A (P)
ME	334	Machine Elements	2	3	3	CE 204A (P)

COURSE CODE		DESCRIPTIVE TITLE	Lecture Hours	Laboratory Hours	Credit Units	PREREQUISITE(S)
THIRD YEAR, SECOND SEMESTER (24 UNITS)
GEE	003B	GE Elective 3 - People and the Earth's Ecosystem	3	0	3	
IE	101	Engineering Management	2	0	2	
ME	341	Methods of Research for ME	1	0	1	MATH 027D (P)
ME	342	Mechanical Engineering Lab 1	0	3	1	ME 203 (P)
ME	343	Refrigeration Systems	3	0	3	ME 331 (P)
ME	344	Combustion Engineering	2	0	2	ME 203 (P)
ME	345	Fluid Machineries	3	0	3	ME 332 (P)
ME	346	Control Engineering	2	3	3	ECE 300A (P)
ME	347	Materials Science and Engineering for ME	2	3	3	CE 205B (P)
ME	348	Machine Design 1	2	3	3	ME 334 (P)
THIRD YEAR SUMMER (4 UNITS)
ME	349	Manufacturing and Industrial Processes with Plant Visits	1	3	2	ME 347 (P)
ME	350	Mechanical Engineering Lab 2	0	6	2	ME 342 (P)

NO STUDENT SHALL BE ALLOWED TO TAKE FOURTH YEAR PROFESSIONAL COURSES UNLESS HE HAS COMPLETED THE BASIC AND THE THIRD YEAR COURSES INCLUDING PE AND NSTP.

COURSE CODE		DESCRIPTIVE TITLE	Lecture Hours	Laboratory Hours	Credit Units	PREREQUISITE(S)
FOURTH YEAR, FIRST SEMESTER (25 UNITS)
ME	431	Air Conditioning and Ventilation Systems	3	0	3	ME 343 (P)
ME	432	Power Plant Design with Renewable Energy	3	3	4	ME 344 (P)
ME	434	ME Project Study 1	0	3	1	ME 341 (P)
ME	435	ME Design Project 1	2	3	3	ME 341 (P)
ME	436	ME Laws, Ethics, Codes and Standards	2	0	2	GEC 008 (P)
ME	437	Machine Design 2	2	3	3	ME 348 (P)
ME	438	Integration Course in Mathematics	2	0	2	MATH 021 (P)
ME	439	VIbration Engineering	2	0	2	MATH 021 (P)
TECH	101A	Technology Entrepreurship	3	0	3	4th year level (P)
ME ELEC	1	Mechanical Engineering Elective 1	2	0	2	See track for pre-requisites
FOURTH YEAR, SECOND SEMESTER (18 UNITS)
ME	441	Mechanical Engineering Lab 3	0	6	2	ME 432 (P)
ME	442	Industrial Plant Engineering	3	3	4	ME 431 (P), ME 349 (P)
ME	444	ME Project Study 2	0	3	1	ME 434 (P)
ME	445	ME Design Project 2	1	6	3	Graduating (P)
ME	446	Integration Course in Engineering and Science	2	0	2	ME 438 (P)
ME	447	Integration Course in Power Plant and Industrial Plant	2	0	2	Graduating (P)
ME	448	On-the-Job Traininng for ME	0	240	2	Graduating (P)
ME ELEC	2	Mechanical Engineering Elective 2	2	0	2	See track for pre-requisites

ELECTIVE COURSES

NOTE: A STUDENT MAY CHOOSE ANY OF THE TRACK ELECTIVES BELOW AND ONCE A TRACK ELECTIVE IS CHOSEN, ALL COURSES IN THE TRACK MUST BE TAKEN.

COURSE CODE		DESCRIPTIVE TITLE	Lecture Hours	Laboratory Hours	Credit Units	PREREQUISITE(S)
Track Elective 1: Energy Engineering and Management
MEE	101	Energy Management and Buildings	2	0	2	
MEE	102	Energy Management in Industry	2	0	2	MEE 101 (P)
Track Elective 2: Heating, Ventilating, Air-Conditioning and Refrigeration
MEE	101A	Design of Thermal Systems	2	0	2	
MEE	102A	Design of Building Piping System and Air Condtioning Duct Works	2	0	2	MEE 101A (P)
Track Elective 3: Mechatronics Engineering
MEE	101C	Introduction to Robotics	2	0	2	
MEE	102C	Industrial Robots	2	0	2	MEE 101C (P)
Track Elective 4: Railway Engineering
RWE	001	Introduction to Railway System and Engineering	3	0	3	
RWE	002	Railway Management and Governance	3	0	3	RWE 001 (P)

TOTAL NO. OF UNITS **200**