

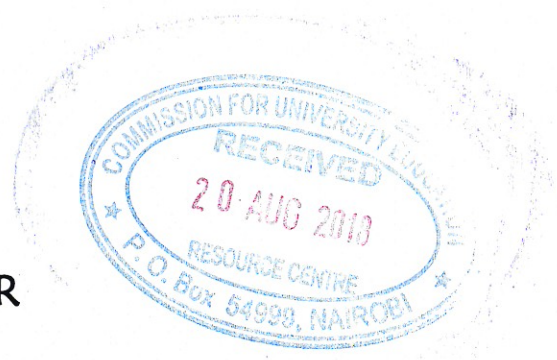
MUST/MP/PROG 2018



2021-0015

MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY

MUST
MP
PROG
2018



CURRICULUM FOR

BACHELOR OF TECHNOLOGY IN MECHANICAL ENGINEERING

This Degree Programme Was approved by the Commission for University Education on
18 OCT 2017

Authorized Signature

OCTOBER 2018

19/6028

Contents

-1.0 GENERAL INFORMATION.....	1
1.1 Vision and Mission of the Institution.....	1
1.1.1 Vision.....	1
1.1.2 Mission	1
1.2 Philosophy and core values	1
1.3 University Admission Requirements	2
1.3.1 Minimum University Entrance Requirements	2
1.4 Academic Resources	3
1.4.1 Facilities and Equipment.....	3
1.5 Programmes Offered by the University	4
2.0 THE CURRICULUM	9
2.1 Title of the Programme	9
2.2 Philosophy of the Programme.....	9
2.3 Rationale of the Programme.....	10
2.4 Goal of the Programme	11
2.5 Expected learning outcomes of the Programme.....	11
2.6 Mode of Delivery of the Programme	12
2.7.1 Admission Requirements for the Programme.....	12
2.7.2 Regulations on Credit Transfer	13
2.7.4 Student Assessment Policy	14
2.7.5 Grading System.....	15
2.7.5 Examination Regulations	16
2.7.7 Moderation of Examinations.....	20
2.7.8 Graduation Requirements	21
2.7.9 Classification of Degrees	21
2.8 Course Evaluation	21
2.9 Management and Administration of the Programme	22
2.9.1 Role of Academic Leader	22
2.9.2 Internal Quality Assurance Mechanism.....	22
2.10 Courses/ Units Offered in the Programme	22

2.10.1	Distribution Table	23
	Quality Control and Reliability Engineering	26
2.11	Duration and Structure of the Programme	36
2.11.1	Duration of the Programme.....	36
SME 3100	Engineering Mathematics I	36
SPS 3100	Physics I	37
UCU 3103	HIV/ AIDS	40
CCC 3111	Introduction to Computer Systems.....	41
EMT 3100	Introduction to Mechanical Engineering Technology.....	43
EMT 3101	Engineering Drawing I.....	44
UCU 3102	Communication Skills	46
SME 3150	Engineering Mathematics II	47
SPS 3151	Physics II	48
SCH 3151	Organic Chemistry for Engineers.....	50
ECT 3150	Earth and Environmental Science.....	51
CCC3102	Computer Programming.....	53
EMT 3150	Engineering Drawing II.....	54
UCU 3101	Development Studies.....	56
EMT 3151	Mechanical Technology and Practice I.....	57
YEAR II	58
SEMESTER I	58
SME 3200	Engineering Mathematics III	58
EMT 3200	Fluid Mechanics I.....	60
EMT 3201	Material Science I.....	61
EMT 3202	Engineering Mechanics	63
EMT 3203	Computer Aided Drawing	64
EMT 3204	Principles of Electrical Technology	65
EMT 3205	Mechanical Technology and Practice II.....	67
SME 3250	Engineering Mathematics IV	68
EMT 3250	Applied Thermodynamics I.....	69
EMT 3251	Mechanics of Machines I	71
EMT 3252	Material Science II	72
EMT 3253	Solid and Structural Mechanics I	73
EMT 3254	Fluid Mechanics II	75

EMT 3255	Electronics.....	76
EMT 3257	Internal Attachment.....	78
YEAR III.....		79
SEMESTER I.....		79
SME 3320	Probability and Statistics.....	79
EMT 3300	Introduction to Microprocessors	80
EMT 3301	Electrical Machines	82
EMT 3302	Engineering Design I.....	83
EMT 3303	Safety and Risk Engineering.....	85
EMT 3304	Solid and Structural Mechanics II.....	86
EMT 3305	Mechanics of Machines II.....	87
EMT 3306	Applied Thermodynamics II	89
SEMESTER II		90
EMT 3350	Mechatronics and Actuator Systems.....	92
EMT3352	Control and Instrumentation Engineering.....	95
EMT 3353	Engineering Design II	97
EMT3354	Metrology	98
EMT3355	Computer Aided Design and Manufacturing	100
EMT 3356	Internal Combustion Engines.....	101
EMT 3357	Mechanical Technology and Practice III	102
EMT 3358	External Attachment	103
SEMESTER I		104
EMT 3400	Environmental Pollution and Control	104
EMT 3401	Building Services Engineering.....	106
EMT3402	Industrial Hydraulics and Pneumatics.....	107
EMT 3403	Research Project I.....	108
EMT 3404	Automation Technology.....	109
EMT 3405	Quality Control and Reliability Engineering	111
EMT 3407	Manufacturing Technology	114
EMT 3409	Industrial Plant Technology	117
EMT 3411	Power Train and Vehicle Dynamics.....	120
EMT 3412	Non-Destructive Testing of Materials.....	121
EMT 3413	Alloying and Heat Treatment Technology.....	123
YEAR IV		124

SEMESTER II.....	124
EMT 3451 Management and Entrepreneurship.....	125
EMT 3452 Industrial Robotics	127
EMT 3453 Research Project II	128
EMT 3454 Plant Reliability and Maintenance	129
EMT 3456 Materials Forming Technology.....	131
EMT 3457 Alternative Energy Engineering.....	133
EMT 3458 Refrigeration and Air Conditioning	134
EMT 3459 Motor Vehicle Chassis	135
EMT 3460 Autotronic and Auto-Electric System	137
EMT 3456 Materials Forming Technology.....	138
EMT 3461 Corrosion and Wear Engineering.....	140