



MANAV RACHNA UNIVERSITY
DEPARTMENT OF MECHANICAL ENGINEERING
B.TECH (MEU02)

SEMESTER - 1

SUBJECT CODES	SUBJECT NAME	**OFFERING DEPARTMENT	*COURSE NATURE (Hard/Soft/ Workshop/ NTCC)	COURSE TYPE (Core/Elective / University Compulsory)	L	T	P	O	NO. OF CONTACT HOURS PER WEEK	NO. OF CREDITS
MEH101-T	ELEMENTS OF MECHANICAL ENGINEERING	ME	HARD	CORE	3	1	0	0	4	4
MEH101-P	ELEMENTS OF MECHANICAL ENGINEERING LAB	ME	HARD	CORE	0	0	2	0	2	1
PHH101-T	THERMODYNAMICS	PH	HARD	CORE	3	1	0	0	4	4
PHH101-P	THERMODYNAMICS LAB	PH	HARD	CORE	0	0	2	0	2	1
CHH101-T	GREEN CHEMISTRY	CH	HARD	CORE	3	1	0	0	4	4
CHH101-P	GREEN CHEMISTRY LAB	CH	HARD	CORE	0	0	2	0	2	1
MAH103-T	ENGINEERING MATHEMATICS-I	MA	HARD	CORE	3	1	0	0	4	4
MAH103-P	ENGINEERING MATHEMATICS-I LAB	MA	HARD	CORE	0	0	2	0	2	1
HLS101	BUSINESS ENGLISH	HL	SOFT	CORE	1	0	2	0	3	2
MEW102	WORKSHOP	ME	HARD	CORE	0	0	3	0	3	2
TOTAL (L-T-P-O/CONTACT HOURS/CREDITS)					13	4	13	0	30	24

SEMESTER-2										
SUBJECT CODES	SUBJECT NAME	**OFFERING DEPARTMENT	*COURSE NATURE (Hard/Soft/Workshop/NTCC)	COURSE TYPE (Core/Elective / University Compulsory)	L	T	P	O	NO. OF CONTACT HOURS PER WEEK	NO. OF CREDITS
ECH103-T	FUNDAMENTALS OF ELECTRICAL & ELECTRONICS ENGINEERING	EC	HARD	CORE	3	1	0	0	4	4
ECH103-P	FUNDAMENTALS OF ELECTRICAL & ELECTRONICS ENGINEERING LAB	EC	HARD	CORE	0	0	2	0	2	1
PHH104-T	MECHANICS	PH	HARD	CORE	3	1	0	0	4	4
PHH104-P	MECHANICS LAB	PH	HARD	CORE	0	0	2	0	2	1
CSH101-T	STRUCTURED PROGRAMMING	CS	HARD	CORE	3	1	0	0	4	4
CSH101-P	STRUCTURED PROGRAMMING LAB	CS	HARD	CORE	0	0	2	0	2	1
MAH105-T	ENGINEERING MATHEMATICS-II	MA	HARD	CORE	3	1	0	0	4	4
MAH105-P	ENGINEERING MATHEMATICS-II LAB	MA	HARD	CORE	0	0	2	0	2	1
HLS102	COMMUNICATIVE ENGLISH	HL	SOFT	CORE	1	0	2	0	3	2
MEW103	ENGINEERING DRAWING	ME	WORKSHOP	ELECTIVE	0	0	3	0	3	2
CHS135	ENVIRONMENTAL SCIENCE	CH	NTCC	UNIVERSITY COMPULSORY	3	0	0	1	3	4
TOTAL (L-T-P-O/CONTACT HOURS/CREDITS)					16	4	13	1	33	28
MEO104	SUMMER TRAINING POST 2nd SEMESTER									3

SEMESTER-3										
SUBJECT CODES	SUBJECT NAME	**OFFERING DEPARTMENT	*COURSE NATURE (Hard/Soft/Workshop/NTCC)	COURSE TYPE (Core/Elective / University Compulsory)	L	T	P	O	NO. OF CONTACT HOURS PER WEEK	NO. OF CREDITS
IEMH212-T	OPERATION RESEARCH-I	ME	HARD	CORE	3	1	0	0	4	4
IEMH213-T	ENGINEERING METROLOGY	ME	HARD	CORE	3	1	0	0	4	4
IEMH213-P	ENGINEERING METROLOGY LAB	ME	HARD	CORE	0	0	2	0	2	1
MEH207-T	MECHANICS OF MATERIALS	ME	HARD	CORE	3	1	0	0	4	4
MEH207-P	MECHANICS OF MATERIALS LAB	ME	HARD	CORE	0	0	2	0	2	1
MEH208-T	MANUFACTURING TECHNOLOGY-I	ME	HARD	CORE	3	1	0	0	4	4
MEH208-P	MANUFACTURING TECHNOLOGY-I LAB	ME	HARD	CORE	0	0	2	0	2	1
CDO201	PROFESSIONAL COMPETANCY ENHANCMENT-I	CDC	OUTCOME	CORE	0	0	0	1	1	0.5
RDO201	INTRODUCTION TO RESEARCH	RESEARCH	OUTCOME	CORE	0	0	0	1	1	1
EDS288	APPLIED PHILOSOPHY	ALL	SOFT	ELECTIVE (HUMANITIES BASKET)	1	0	2	0	3	2
EDS289	APPLIED PSYCHOLOGY									
EDS290	APPLIED SOCIOLOGY									
MEW209	MACHINE DRAWING	ME	WORKSHOP	CORE	0	0	3	0	3	2
FLS103	FRENCH-I	MRCFL	NTCC	UNIVERSITY COMPULSOR Y	1	1	0	0	2	0
FLS101	SPANISH-I									
FLS102	GERMAN-I									
TOTAL (L-T-P-O/CONTACT HOURS/CREDITS)					14	5	11	2	32	24.5

SEMESTER-4										
SUBJECT CODES	SUBJECT NAME	**OFFERING DEPARTMENT	*COURSE NATURE (Hard/Soft/Workshop/NTCC)	COURSE TYPE (Core/Elective / University Compulsory)	L	T	P	O	NO. OF CONTACT HOURS PER WEEK	NO. OF CREDITS
IEMH214-T	WORK, STUDY & ERGONOMICS	IEM	HARD	CORE	3	1	0	0	4	4
MEH210-T	THEORY OF MACHINES	ME	HARD	CORE	3	1	0	0	4	4
MEH210-P	THEORY OF MACHINES LAB	ME	HARD	CORE	0	0	2	0	2	1
MEH211-T	MANUFACTURING TECHNOLOGY-II	ME	HARD	CORE	3	1	0	0	4	4
MEH211-P	MANUFACTURING TECHNOLOGY-II LAB	ME	HARD	CORE	0	0	2	0	2	1
MAH309-T	APPLIED NUMERICAL TECHNOLOGY & COMPUTING	MA	ALLIED	CORE	3	1	0	0	4	4
MAH309-P	APPLIED NUMERICAL TECHNOLOGY & COMPUTING LAB	MA	ALLIED	CORE	0	0	2	0	2	1
CHS234	ENVIRONMENT SUSTAINABLE DEVELOPMENT	CH	SOFT	ELECTIVE	1	0	2	0	3	2
ECS249	E-WASTE MANAGEMENT	EC								
CDO202	PROFESSIONAL COMPETANCY ENHANCMENT-II	CDC	OUTCOME	CORE	0	0	0	1	1	0.5
RDO202	TECHNICAL SEMINAR-I	RESEARCH	OUTCOME	CORE	0	0	0	1	1	1
IEMW215	Design Software-I	IEM	WORKSHOP	ELECTIVE	0	0	3	0	3	2
IEMW216	Design Software-II									
FLS107	FRENCH-II	MRCFL	NTCC	UNIVERSITY COMPULSORY	1	1	0	0	2	0
FLS105	SPANISH-II									
FLS106	GERMAN-II									
TOTAL (L-T-P-O/CONTACT HOURS/CREDITS)					11	4	11	2	28	24.5
MEW215	SUMMER TRAINING POST 4TH SEMESTER									3

SEMESTER-5										
SUBJECT CODES	SUBJECT NAME	**OFFERING DEPARTMENT	*COURSE NATURE (Hard/Soft/Workshop/NTCC)	COURSE TYPE (Core/Elective / University Compulsory)	L	T	P	O	NO. OF CONTACT HOURS PER WEEK	NO. OF CREDITS
IEMH317-T	QUALITY ENGINEERING & MANAGEMENT	IEM	HARD	CORE	3	1	0	0	4	4
IEM318-T	OPERATION RESEARCH-II	IEM	HARD	CORE	3	1	0	0	4	4
IEMH319-T	HUMAN RESOURCE MANAGEMENT & ORGANIZATIONAL BEHAVIOUR	IEM	HARD	CORE	3	1	0	0	4	4
IEMH320/ IEMH321	ELECTIVES OFFERED BY PARENT DEPARTMENT	IEM	HARD	ELECTIVE	3	1	2	0	6	5
LWS321/ LWS322/ LWS323	ELECTIVE OF LAW DEPARTMENT	LW	SOFT	ELECTIVE	1	0	2	0	3	2
CDO301	PROFESSIONAL COMPETANCY ENHANCMENT-III	CDC	OUTCOME	CORE	0	0	0	1	1	0.5
RDO303	TECHNICAL SEMINAR-II	RESEARCH	OUTCOME	CORE	0	0	0	1	1	1
IEMW322	SOFTWARE-I	IEM	WORKSHOP	ELECTIVE	0	0	3	0	3	2
IEMW323	SOFTWARE-II									
TOTAL (L-T-P-O/CONTACT HOURS/CREDITS)					7	2	7	2	26	22.5

SEMESTER-6										
SUBJECT CODES	SUBJECT NAME	**OFFERING DEPARTMENT	*COURSE NATURE (Hard/Soft/Workshop/NTCC)	COURSE TYPE (Core/Elective / University Compulsory)	L	T	P	O	NO. OF CONTACT HOURS PER WEEK	NO. OF CREDITS
IEMH324-T	MATERIAL MANAGEMENT & INVENTORY CONTROL	IEM	HARD	CORE	3	1	0	0	4	4
IEMH324-P	MATERIAL MANAGEMENT & INVENTORY CONTROL LAB	IEM	HARD	CORE	0	0	2	0	2	1
IEMH325-T	PRODUCTION, PLANNING & CONTROL	IEM	HARD	CORE	3	1	0	0	4	4
IEMH326-T	RELIABILITY AND MAINTAINABILITY ENGINEERING	IEM	HARD	CORE	3	1	0	0	4	4
IEMH326-P	RELIABILITY AND MAINTAINABILITY ENGINEERING LAB	IEM	HARD	CORE	0	0	2	0	2	1
IEMH327/ IEMH328	ELECTIVE OFFERED BY PARENT DEPARTMENT	IEM	HARD	ELECTIVE	3	1	2	0	6	5
IEMW329	SOFTWARE-III	IEM	WORKSHOP	ELECTIVE	0	0	3	0	3	2
IEMW330	SOFTWARE-IV									
RDO304	PROJECT PHASE-I	RESEARCH	OUTCOME	CORE	0	0	0	1	1	1
CDO302	PROFESSIONAL COMPETENCY ENHANCEMENT-IV	CDC	OUTCOME	CORE	0	0	0	1	1	0.5
TOTAL (L-T-P-O/CONTACT HOURS/CREDITS)					12	4	9	2	27	22.5
MEO332	SUMMER TRAINING POST 6TH SEMESTER									3

SEMESTER-8										
SUBJECT CODES	SUBJECT NAME	**OFFERING DEPARTMENT	*COURSE NATURE (Hard/Soft/ Workshop/ NTCC)	COURSE TYPE (Core/Elective / University Compulsory)	L	T	P	O	NO. OF CONTACT HOURS PER WEEK	NO. OF CREDITS
IEMH434-T	PROJECT MANAGEMENT	IEM	HARD	CORE	3	1	0	0	4	4
IEMH435/ IEMH436/ IEMH437	ELECTIVES OFFERED BY PARENT DEPARTMENT	IEM	HARD	ELECTIVE-I	3	1	2	0	6	5
MEN443	MAJOR PROJECT	ME	NTCC	CORE	0	0	0	8	8	8
TOTAL (L-T-P-O/CONTACT HOURS/CREDITS)					6	2	2	8	18	17
*COURSE NATURE		Hard course (H): A course having L-T-P and/or O component ; L(Lecture), T(Tutorial), P(Practical) and O(Outcome) Soft Course (S): A course aimed at development of a person's emotional, social, ethical, professional and creative potentials. The Workshop course(W): A completely 'hands on' course conducted in laboratory, aimed at developing application/ implementation/ Non Teaching Credit Course(N): The course involves no teaching and has P and O component. Shall include projects, seminars.								
**OFFERING DEPARTMENT NAMES							A course shall be assigned credits as under:			
EC	DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING						One credit for each lecture hour; One credit for each tutorial hour ; One credit for each Outcome hour; Two credits for each workshop/ laboratory/practical/project session of 3 hours; One credit for each laboratory or practical or project session of 2 hours			
PH	DEPARTMENT OF PHYSICS									
CS	DEPARTMENT OF COMPUTER SCIENCE & TECHNOLOGY									
HL	DEPARTMENT OF HUMANITIES & LANGUAGES									
CH	DEPARTMENT OF CHEMISTRY									
MA	DEPARTMENT OF MATHEMATICS									
ME	DEPARTMENT OF MECHANICAL ENGINEERING									
MC	DEPARTMENT OF MANAGEMENT & COMMERCE									
MRCFL	MANAV RACHNA CENTRE OF FOREIGN LANGUAGES									
*** Electives are subject to change according to expertise available/ required.										

LIST OF ELECTIVES SUBJECTS

THIRD SEMESTER ELECTIVES		
SUBJECT CODE	EDS288-T/P	EDS289-T/P
ENVIRONMENTAL & ETHICS DEPARTMENT ELECTIVE	APPLIED PHILOSOPHY	APPLIED PSYCHOLOGY
FORTH SEMESTER ELECTIVES		
SUBJECT CODE	MAH309-T/P	CHH219-T/P
ALLIED ELECTIVE	APPLIED NUMERICAL TECHNOLOGY & COMPUTING	POLYMER CHEMISTRY
SUBJECT CODE	CHS234	ECS249
HUMANITY DEPARTMENT ELECTIVE	SUSTAINABLE DEVELOPMENT & ENVIRONMENTAL ETHICS	E-WASTE MANAGEMENT
FIFTH SEMESTER ELECTIVES		
SUBJECT CODE	IEMH320-T/P	IEMH321-T/P
IEM DEPARTMENT ELECTIVES	COMPUTER INTEGRATED MANUFACTURING	SYSTEM DESIGN
SUBJECT CODE	LWS321-T/P	LWS322-T/P
ELECTIVES OF LAW DEPARTMENT	LAW OF PATIENTS & TRADITIONAL KNOWLEDGE	CYBER LAWS
SIXTH SEMESTER ELECTIVES		
SUBJECT CODE	IEMH327-T/P	IEMH328-T/P
IEM DEPARTMENT ELECTIVES	INTERNATIONAL BUSINESS & CAPITAL GOVERNANCE	ENTREPRENEURSHIP DEVELOPMENT
SEVENTH SEMESTER ELECTIVES		
SUBJECT CODE	IEMH432-T/P	IEMH433-T/P
IEM DEPARTMENT ELECTIVES	OPTIMIZATION TECHNIQUES	SIMULATION, MODELLING & ANALYSIS
SUBJECT CODE	ECH435	ECH326
OTHER ENGINEERING DEPARTMENT ELECTIVE	MICRO ELECTRIC MECHANICAL SYSTEMS (ECH435)	MECHATRONICS (ECH326)
EIGHTH SEMESTER ELECTIVES		
SUBJECT CODE	IEMH435-T/P	IEMH436-T/P
IEM DEPARTMENT ELECTIVES	MANAGEMENT INFORMATION SYSTEM	PRODUCTION & OPERATION MANAGEMENT

EDS290-T/P		
APPLIED SOCIOLOGY		
PHH221-T/P		
LASER TECHNOLOGY		
LWS323-T/P		
LAW OF COPYRIGHTS		
CSH316		
ARTIFICIAL INTELLIGENCE & INTELLIGENCE SYSTEMS (CSH316)		
IEMH437-T/P		
PRODUCT DESIGN & VALUE ENGINEERING		