Course Category: PCC

Course Name: Mathematics for Mechanical Engineers

Course Code: MED201

CO's	Statements
MED201.1	Find Laplace transform of functions
MED201.2	Discuss analyticity of complex functions
MED201.3	Solve linear differential equations with constant coefficients
MED201.4	Make use of the concept of divergence, curl and gradient
MED201.5	Use Probability distributions to find probability
MED201.6	Execute Inverse of Laplace transform

CO-PO-PSO Mapping

COs	POs												PSOs		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
MED201.1	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-
MED201.2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-
MED201.3	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-
MED201.4	2	1	-	-	-	-	-	-	-	-	-	-	-	1	-
MED201.5	2	1	-	-	-	-	-	-	-	-	-	-	-	-	1
MED201.6	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-

Course Category: PCC

Course Name: Strength of Materials

Course Code: MED202

CO's	Statements
MED202.1	Define the terms related to solid mechanics.
MED202.2	State the conditions and relations used in strength of materials.
MED202.3	Explain the concept of stresses and strain in direct loading, bending and shear.
MED202.4	Explain the theory of bars, beams, columns, pressure vessels and elastic failures.
MED202.5	Solve the problems on principal stress-strain and theories of elastic failure.
MED202.6	Solve the problems on bars, beams, columns and pressure vessels for direct, bending, shear loading.

CO-PO-PSO Mapping

COs	POs												PSOs		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
MED202.1	2	1	-	-	-	-	-	-	-	-	-	2	-	-	-
MED202.2	2	1	-	-	-	-	-	-	-	-	-	2	-	-	-
MED202.3	2	2	-	1	-	-	-	-	-	-	-	3	3	-	-
MED202.4	2	2	-	-	-	-	-	-	-	-	-	3	-	-	-
MED202.5	3	2	1	-	-	-	-	-	-	-	-	3	3	1	-
MED202.6	3	2	1	-	-	-	-	-	-	-	-	3	3	-	-

Maharashtra Institute of Technology (An Autonomous Institute)

Chhatrapati Sambhajinagar (Aurangabad)

Department of Mechanical Engineering

Articulation Matrix for SY Part – I for A. Y. 2024-25

Course Category: PCC

Course Name: Metrology and quality Control

Course Code: MED203

CO's	Statements
MED203.1	Acquire the basic knowledge of metrology.
MED203.2	Identify and differentiate linear and angular measuring instruments and apply the acquired knowledge for the measurement.
MED203.3	Apply knowledge of various tools and techniques used to determine geometry and dimensions of components to produce quality products.
MED203.4	Analyze the given data to demonstrate the Statistical Quality Control knowledge.
MED203.5	Prepare appropriate control chart for the given data.
MED203.6	Recommend and use suitable gauge for given application.

CO-PO-PSO Mapping

COs	POs												PSOs		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
MED203.1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MED203.2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	1
MED203.3	-	2	2	-	-	-	-	-	-	-	-	-	-	-	2
MED203.4	-	2	-	2	-	-	-	-	-	-	-	-	-	-	2
MED203.5	-	2	2	2	-	-	-	-	-	-	-	-	-	-	1
MED203.6	1	2	-	-	-	-	-	-	-	-	-	-	-	-	2

Course Category: MDM

Course Name: Nano Technology

Course Code: MED211

CO's	Statements
MED211.1	Understand the basic concepts and applications of Nanotechnology, nano material and nano structures.
MED211.2	Describe different classes of nano materials.
MED211.3	Illustrate the processes for synthesizing and characterizing nano materials.
MED211.4	Choose nano materials for different applications.
MED211.5	Apply Nanotechnology in Food Processing industries.
MED211.6	Design safety parameters for Nanotechnology Applications.

CO-PO-PSO Mapping

COs	POs												PSOs		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
MED211.1	3	1	2	2	1	-	-	-	1	-	-	-	-	2	-
MED211.2	3	1	2	2	2	-	-	-	1	-	-	-	-	2	-
MED211.3	3	2	1	2	3	-	-	-	1	-	-	-	-	2	-
MED211.4	3	1	1	2	1	2	2	-	1	3	-	-	1	2	-
MED211.5	2	1	1	2	1	-	-	-	1	-	-	-	-	2	-
MED211.6	2	1	1	2	1	-	-	-	1	-	-	-	-	2	-

Maharashtra Institute of Technology (An Autonomous Institute)

Chhatrapati Sambhajinagar (Aurangabad)

Department of Mechanical Engineering

Articulation Matrix for SY Part – I for A. Y. 2024-25

Course Category: OEC

Course Name: Emotional Intelligence

Course Code: OEC241F

CO's	Statements
OEC241F.1	Recognize the principles of emotional intelligence.
OEC241F.2	Demonstrate effective communication and interpersonal skills.
OEC241F.3	Evaluate and manage emotions in oneself and others.
OEC241F.4	Apply emotional intelligence in leadership and teamwork.
OEC241F.5	Utilize emotional intelligence for career advancement.
OEC241F.6	Integrate EI principles in engineering projects and workplace scenarios.

CO-PO-PSO Mapping

COs	POs												PSOs		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
OEC241F.1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OEC241F.2	2	-	-	-	-	-	-	-	-	3	-	-	-	-	-
OEC241F.3	2	-	-	-	-	2	-	-	-	-	-	-	-	-	-
OEC241F.4	1	-	-	-	-	-	-	-	2	-	-	-	-	-	-
OEC241F.5	2	-	-	-	-	1	-	-	-	-	-	-	-	-	-
OEC241F.6	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-

Maharashtra Institute of Technology (An Autonomous Institute)

Chhatrapati Sambhajinagar (Aurangabad)

Department of Mechanical Engineering

Articulation Matrix for SY Part – I for A. Y. 2024-25

Course Category: HSSM

Course Name: Engineering Economics and Management

Course Code: HSM201

CO's	Statements
HSM201.1	Explain the concept of economics.
HSM201.2	Calculate present value, future value of single cash flow and annuities using appropriate formulas.
HSM201.3	Understand cost and cost control.
HSM201.4	Recognize the functions and objectives of Human Resource Management in a business context.
HSM201.5	Identify and describe the key elements and types of business organizations.
HSM201.6	Explain the principles of management and the various levels within an organizations.

CO-PO-PSO Mapping

COs	POs												PSOs		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
HSM201.1	3	-	-	-	-	-	-	-	-	-	-	-	3	-	-
HSM201.2	3	-	-	-	-	-	-	-	-	-	-	-	3	-	-
HSM201.3	3	2	-	-	-	-	-	-	-	-	-	-	3	2	-
HSM201.4	3	-	-	-	-	-	-	-	-	-	-	-	3	-	-
HSM201.5	3	1	-	-	-	-	-	-	-	-	-	-	3	1	-
HSM201.6	3	-	-	-	-	-	-	-	-	-	-	-	3	-	-

Course Category: VEC

Course Name: Universal Human Values

Course Code: VEC201

CO's	Statements
VEC201.1	To understand complementarity between value and skill in education.
VEC201.2	To understand the Process of self-exploration.
VEC201.3	To distinguish between Self and the Body.
VEC201.4	To Ensure self-regulation and Health.
VEC201.5	To understand "Trust' and Respect - the Foundational Value in Relationship.
VEC201.6	To understand naturally acceptable feeling for human being.

CO-PO-PSO Mapping

COs	POs												PSOs		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
VEC201.1	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-
VEC201.2	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
VEC201.3	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-
VEC201.4	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-
VEC201.5	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-
VEC201.6	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-

Course Category: VEC
Course Name: Environmental Studies
Course Code: VEC202

CO's	Statements
VEC202.1	Memorize different natural resources and need to conserve them.
VEC202.2	Illustrate growing food and energy needs by maintaining land resources.
VEC202.3	Interpret different types of ecosystems and their functions.
VEC202.4	Relate Biogeographical classification to conservation of biodiversity in India.
VEC202.5	Identify Cause, effects and control measures of Environmental Pollution.
VEC202.6	Evaluate the role of public awareness in sustainable development.

CO-PO-PSO Mapping

COs	POs												PSOs		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
VEC202.1	-	-	-	-	-	1	-	-	-	-	-	1	-	-	1
VEC202.2	1	-	-	-	2	1	-	-	-	-	-	-	-	1	-
VEC202.3	-	-	1	-	-	1	2	-	-	-	-	-	2	1	-
VEC202.4	1	2	-	-	1	1	-	-	-	-	-	-	1	-	-
VEC202.5	-	-	-	-	2	1	-	-	-	-	-	-	-	2	-
VEC202.6	-	-	-	-	-	2	-	-	1	-	-	1	-	-	2