

SHRI G. S. INSTITUTE OF TECHNOLOGY & SCIENCE, INDORE  
Department of Humanities and Social Sciences

**COURSE ARTICULATION MATRIX & CO-PO ATTAINMENT**

**[CO-PO/PSO MAPPING]**

**Academic Year: 2023-2024**

**SEM A: JULY 2023 - DEC 2023**

**B.TECH. II Year**

**Subject: Values, Humanities and Professional Ethics**

**COURSE OUTCOMES:** after completion of course, the students will be able to:

CO1. Explain and elaborate the social institutions through which the society and nation is governed.

CO2. Make self-exploration through understanding self, body and their needs & activities.

CO3. Apply ethical decision making and describe ethical dilemma.

CO4. Contextualize the ethics with engineering profession, attitude and approaches as per needs of society and values.

CO5. Explain and illustrate the process of Social, Political and Technological changes in-context to global changes.

## HU21481: Civil Engineering

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1		1				2	1	2		1		1			
CO2	1	1				2		3	1	2		2			
CO3	1			1		2		3	1	1		1			
CO4	1	1	2	1		3	2	3	1	1		3			
CO5	1	1	2		1	2	3	2	2	1		2			
Average	1	1	2	1	1	2.2	2	2.6	1.25	1.2		1.8			
Final PO Attainment	0.8	0.8	1.6	0.8	0.8	1.8	1.6	2.1	1.0	1.0	0.0	1.4	0.0	0.0	0.0

Over all Course Attainment =	2.4
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## PROGRAM SPECIFIC OUTCOMES:

PSO 1	To develop knowledge and skills in various subjects of civil engineering and allied fields such as software and AI applications and project management to handle large construction projects.
PSO 2	To develop the capabilities to apply the knowledge and skills to the practical problems in the field for development of economical, strong and durable infrastructure. Enhance capacity of individuals in entrepreneurship and leadership.
PSO 3	Inculcate the research skills for enhancement of problem solving capability pertaining to complex problems applying research-based knowledge.
PSO 4	To impart skills to apply knowledge of civil engineering for social economic growth preserving human values and protecting the ecosystem and environment.

## HU26481: Mechanical Engineering

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1		1				2	1	2		1		1	1	1
CO2	1	1				2		3	1	2		2	1	
CO3	1			1		2		3	1	1		1	1	1
CO4	1	1	2	1		3	2	3	1	1		3	2	1
CO5	1	1	2		1	2	3	2	2	1		2	1	1
Average	1	1	2	1	1	2.2	2	2.6	1.25	1.2		1.8	1.2	1
Final PO Attainment	0.9	0.9	1.8	0.9	0.9	2.0	1.8	2.3	1.1	1.1	0.0	1.6	1.1	0.9

Over all Course Attainment =	2.7
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## PROGRAM SPECIFIC OUTCOMES:

PSO 1	Apply mechanical design engineering, thermal engineering, and interdisciplinary knowledge for analyzing, designing, and manufacturing products to address the needs of society.
PSO 2	Implement state-of-the-art knowledge and technology in order to fulfil current industrial requirements.

## HU28481: Information Technology Engineering

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1		1				2	1	2		1		1	2		
CO2	1	1				2		3	1	2		2		2	
CO3	1			1		2		3	1	1		1	1		1
CO4	1	1	2	1		3	2	3	1	1		3	1	2	1
CO5	1	1	2		1	2	3	2	2	1		2	1	1	2
Average	1	1	2	1	1	2.2	2	2.6	1.25	1.2		1.8	1.25	1.6667	1.3333
Final PO Attainment	1.0	1.0	1.9	1.0	1.0	2.1	1.9	2.5	1.2	1.2	0.0	1.7	1.2	1.6	1.3

Over all Course  
Attainment = 2.9

### PROGRAM SPECIFIC OUTCOMES:

#### **PSO 1: Application of Engineering and Scientific Knowledge**

Graduates will be able to apply the fundamentals of mathematics, science, and core engineering principles to analyze and solve complex problems in their specific engineering domain.

#### **PSO 2: Design and Development of Engineering Solutions**

Graduates will be capable of designing and developing innovative engineering solutions, systems, or processes that address real-world challenges, taking into consideration public safety, societal and environmental factors.

#### **PSO 3: Use of Modern Tools and Ethical Practices**

Graduates will demonstrate proficiency in using modern engineering tools and technologies for problem-solving and project execution, while upholding professional ethics, effective communication, teamwork, and readiness to adapt technological advancement for lifelong learning.

## HU29481: Bio-Medical Engineering

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1		1				2	1	2		1		1	2	1	1
CO2	1	1				2		3	1	2		2	1	1	
CO3	1			1		2		3	1	1		1	1		2
CO4	1	1	2	1		3	2	3	1	1		3		1	1
CO5	1	1	2		1	2	3	2	2	1		2	1		2
Average	1	1	2	1	1	2.2	2	2.6	1.25	1.2		1.8	1.25	1	1.5
Final PO Attainment	0.8	0.8	1.6	0.8	0.8	1.8	1.6	2.1	1.0	1.0	0.0	1.5	1.0	0.8	1.2

Over all Course Attainment =	2.4
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### PROGRAM SPECIFIC OUTCOMES:

PSO 1	To grasp concepts of engineering mathematics and apply them in correlated engineering domains to evaluate real world problems in health care.
PSO 2	Ability to understand and interpret concepts of medical electronics required in healthcare sector, and to communicate, analyze, develop the same to provide services to society.
PSO 3	The ability to grasp the research advancements and evolve with innovative ideas to contribute towards cost effective product development for providing access of health care services to masses.