

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 B: JAN 2024 - JUNE 2024

B.TECH. II Year

Subject: Economics for Engineers

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

CO1. Explain economic cyclic flow and estimate the demand and demand elasticity for a product.

CO2. Plan the production and analyze the production-cost-profit relation and select the suitable project for investment.

CO3. Estimate price and the equilibrium for a firm/organization in different competitive market situations.

CO4. Identify the problems, see the opportunity, and ideate the solution to the problems

CO5. Prepare and review the financial statements of an accounting entity.

HU21507: Civil Engineering

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1		2				2		1							
CO2	2	2			2		1	1			2				
CO3		1	2			2	2				3	1			
CO4		1				2	2				3				
CO5	2		3		2	2	1		2	2	3	1			
Average	2	1.5	2.5		2	2	1.5	1	2	2	2.75	1			
Final PO Attainment	0.8	0.6	1.0	0.0	0.8	0.8	0.6	0.4	0.8	0.8	1.1	0.4	0.0	0.0	0.0

Over all Course
Attainment = 1.2

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.

HU26507: Mechanical Engineering

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1		2				2		1					1	2
CO2	2	2			2		1	1			2		2	2
CO3		1	2			2	2				3	1	1	
CO4		1				2	2				3		1	
CO5	2		3		2	2	1		2	2	3	1	2	2
Average	2	1.5	2.5		2	2	1.5	1	2	2	2.75	1	1.4	2
Final PO Attainment	1.0	0.7	1.2	0.0	1.0	1.0	0.7	0.5	1.0	1.0	1.3	0.5	0.7	1.0

Over all Course

Attainment = 1.4

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.

HU27506: Electronics and Instrumentation Engineering

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1		2				2		1					1	1	2
CO2	2	2			2		1	1			2		2		2
CO3		1	2			2	2				3	1			2
CO4		1				2	2				3				2
CO5	2		3		2	2	1		2	2	3	1	3	2	3
Average	2	1.5	2.5		2	2	1.5	1	2	2	2.75	1	2	1.5	2.2
Final PO Attainment	0.9	0.7	1.2	0.0	0.9	0.9	0.7	0.5	0.9	0.9	1.3	0.5	0.9	0.7	1.0

Over all Course

Attainment = 1.4

PROGRAM SPECIFIC OUTCOMES:

PSO 1	Capable of solving complex problems in the field of Instrumentation with hands on different compatible platform.
PSO 2	Should be able to associate the learning from the course related to Process control and PLC/SCADA system to arrive at solution to real world problems.
PSO 3	Capability to comprehend with the technological advancements in VLSI Design & semiconductor technology with modern EDA tools

HU28507: Information Technology Engineering

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1		2				2		1					3	1	2
CO2	2	2			2		1	1			2		2	3	2
CO3		1	2			2	2				3	1		1	2
CO4		1				2	2				3				2
CO5	2		3		2	2	1		2	2	3	1	2	3	3
Average	2	1.5	2.5		2	2	1.5	1	2	2	2.75	1	2.3333	2	2.2
Final PO Attainment	1.1	0.9	1.4	0.0	1.1	1.1	0.9	0.6	1.1	1.1	1.6	0.6	1.3	1.1	1.2

**Over all Course
Attainment = 1.7**

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.

HU29507: Bio-Medical Engineering

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1		2				2		1					2	3	
CO2	2	2			2		1	1			2		1		3
CO3		1	2			2	2				3	1	1	1	
CO4		1				2	2				3		1		
CO5	2		3		2	2	1		2	2	3	1	2	2	3
Average	2	1.5	2.5		2	2	1.5	1	2	2	2.75	1	1.4	2	3
Final PO Attainment	1.0	0.7	1.2	0.0	1.0	1.0	0.7	0.5	1.0	1.0	1.3	0.5	0.7	1.0	1.4

Over all Course
Attainment = 1.4

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.