



SWARNIM STARTUP & INNOVATION UNIVERSITY
SWARNIM INSTITUTE OF TECHNOLOGY
B.TECH FIRST YEAR (ALL BRANCH)
ACADEMIC YEAR 2023-24

CO-PO matrix for all subjects B.Tech sem-1

Subject Name :		Maths-I (23000001)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	1	2	2	2	-	-	-	-	-	-	-	2
CO-2	2	2	2	2	1	-	-	-	-	-	-	-	1.8
CO-3	2	2	2	2	3	-	-	-	-	-	-	-	2.2
CO-4	3	1	3	3	2	-	-	-	-	-	-	-	2.4
CO-5	2	2	3	3	1	-	-	-	-	-	-	-	2.2
CO-6	2	2	2	2	2	-	-	-	-	-	-	-	2
Average	2.1	1	1	1	1	1	1	1	1	1	1	1	1
Subject Name :		Fundamentals of Computer Programming (23000004)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	2	2	3	-	-	-	-	-	-	-	2.4
CO-2	3	2	2	3	2	-	-	-	-	-	-	-	2.4
CO-3	3	3	3	2	-	-	-	-	-	-	-	-	2.8
CO-4	2	3	2	3	-	-	-	-	-	-	-	-	2.5
CO-5	2	3	2	3	-	-	-	-	-	-	-	-	2.5
CO-6	2	2	2	2	-	-	2	2	3	-	-	-	2.1
Average	2.5	2.5	2.2	2.5	2.5	-	-	2	2	3	-	-	2.4
Subject Name :		Elements of Electrical Engineering (23000012)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	1	1	1	1	1	1	1	1	1	1	2	1.3
CO-2	3	1	1	1	1	1	1	1	1	1	1	2	1.3
CO-3	3	1	1	1	1	1	1	1	1	1	1	2	1.3
CO-4	1	1	1	1	1	1	1	1	1	1	1	2	1.1
CO-5	2	1	1	1	1	1	1	1	1	1	1	1	1.1
CO-6	2	1	1	1	1	1	1	1	1	1	1	2	1.2
Average	2.3	1	1	1	1	1	1	1	1	-	-	-	1.1





Subject Name :		Elements of Mechanical Engineering (23000003)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	-	-	-	-	-	-	3	2	2	3	-	-	2.5
CO-2	-	-	-	-	-	-	2	3	3	3	-	-	2.8
CO-3	-	-	-	-	-	-	3	3	2	2	-	-	2.5
CO-4	-	-	-	-	-	-	2	2	3	2	-	-	2.3
CO-5	-	-	-	-	-	-	3	2	2	2	-	-	2.3
Average	-	-	-	-	-	-	2.6	2.4	2.4	2.4	-	-	2.5
Subject Name :		Orientation Program in Startup and Entrepreneurship (12300001)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	1	1	1	1	1	1	1	1	1	1	1
CO-2	1	1	1	1	1	1	1	1	1	1	1	1	1
CO-3	1	1	1	1	1	1	1	1	1	1	1	1	1
CO-4	1	1	1	1	1	1	1	1	1	1	1	1	1
Average	1	1	1	1	1	1	1	1	1	1	1	1	1
Subject Name :		Environmental Studies (23000006)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	1	1	1.5
CO-4	-	-	1	-	-	-	-	-	-	-	-	-	1
CO-5	2	1	1	1	-	-	-	-	-	-	-	-	1.3
Average	1.3	1.3	1.3	1.5	1	-	-	-	-	-	1	1	1.2
Subject Name :		Workshop (23000029)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	-	-	-	-	-	-	-	-	-	-	1	1
CO-2	1	-	-	-	1	-	1	-	-	-	-	-	1
CO-3	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-4	1	-	-	-	-	1	-	-	-	-	-	1	1
CO-5	1	-	-	-	-	-	-	-	1	1	1	-	1
Average	1	1	-	-	1	1	-	-	-	-	1	1	1





CO-PO matrix for all subjects B.Tech sem-2

Subject Name : ENGINEERING PHYSICS(23000005)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	2	3	3	3	-	-	-	-	-	-	-	2.6
CO-2	2	3	3	2	2	-	-	-	-	-	-	-	2.4
CO-3	2	2	2	1	2	-	-	-	-	-	-	-	1.8
CO-4	2	2	3	2	3	-	-	-	-	-	-	-	2.4
CO-5	3	1	2	2	3	-	-	-	-	-	-	-	2.2
CO-6	3	2	3	3	2	-	-	-	-	-	-	-	2.6
CO-7	2	1	3	2	2	-	-	-	-	-	-	-	2
Average	2.5	1.5	2.8	2.3	2.5	-	-	-	-	-	-	-	2.3
Subject Name : COMMUNICATION SKILLS(23000008)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	-	-	-	-	-	-	3	2	2	3	-	-	2.5
CO-2	-	-	-	-	-	-	2	3	3	3	-	-	2.8
CO-3	-	-	-	-	-	-	3	3	2	2	-	-	2.5
CO-4	-	-	-	-	-	-	2	2	3	2	-	-	2.3
CO-5	-	-	-	-	-	-	3	2	2	2	-	-	2.3
Average	-	-	-	-	-	-	2.6	2.4	2.4	2.4	-	-	2.5
Subject Name : BASIC ELECTRONICS(23000009)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	1	1	1	1	1	1	1	1	1	3	1.4
CO-2	2	3	2	1	1	1	2	1	2	1	3	1	1.7
CO-3	2	2	1	2	1	1	3	1	1	1	3	2	1.7
CO-4	1	2	3	1	3	2	3	2	3	1	2	3	2.2
Average	2	2.3	1.8	1.3	1.5	1.3	2.3	1.3	1.8	1	2.3	2.3	1.8
Subject Name : MATHS-II(23000010)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	2	3	3	1	-	-	-	-	-	-	-	2.2
CO-2	3	3	1	2	3	-	-	-	-	-	-	-	2.4
CO-3	2	3	2	1	2	-	-	-	-	-	-	-	2
CO-4	3	2	2	2	1	-	-	-	-	-	-	-	2
CO-5	2	3	1	1	2	-	-	-	-	-	-	-	1.8
CO-6	1	2	2	3	1	-	-	-	-	-	-	-	1.8
Average	2.2	2.6	1.6	1.8	1.8	-	-	-	-	-	-	-	2





Subject Name :		ENGINEERING GRAPHICS(23000011)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	-	-	-	-	-	-	-	3	3	2	1	2	2.2
CO-2	-	-	-	-	-	-	-	1	2	2	2	2	1.8
CO-3	-	-	-	-	-	-	-	2	1	3	2	2	2
CO-4	-	-	-	-	-	-	-	2	2	2	3	2	2.2
CO-5	-	-	-	-	-	-	-	3	2	1	2	2	2
CO-6	-	-	-	-	-	-	-	2	3	2	2	1	2
Average	-	-	-	-	-	-	-	2.2	2.2	2	2	1.8	2
Subject Name :		BASIC PROGRAM IN ENTREPRENEURSHIP(12300002)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	3	3	3	-	-	-	-	-	-	-	-	3
CO-2	2	2	1	2	-	-	-	-	-	-	-	-	1.8
CO-3	1	2	2	1	-	-	-	-	-	-	-	-	1.5
CO-4	2	1	2	2	-	-	-	-	-	-	-	-	1.8
Average	2	2	2	2	-	-	-	-	-	-	-	-	2
Subject Name :		ELEMENTS OF CIVIL ENGINEERING(23000015)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	-	-	-	-	-	-	-	3	2	2	2	2	2.2
CO-2	-	-	-	-	-	-	-	2	1	2	1	2	1.6
CO-3	-	-	-	-	-	-	-	3	3	3	2	2	2.6
CO-4	-	-	-	-	-	-	-	2	2	3	2	2	2.2
CO-5	-	-	-	-	-	-	-	2	1	3	1	1	1.6
CO-6	-	-	-	-	-	-	-	3	1	2	2	1	1.8
Average	-	-	-	-	-	-	-	2.5	1.7	2.5	1.7	1.7	2
Subject Name :		CHEMISTRY(23020216)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	2	1	1.7
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	2	-	-	-	-	-	2	1.7
Average	1	1.5	2	2	1	2	-	-	-	-	2	1.5	1.6





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Subject Name :		Personality Development(24190203)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	-	-	-	-	-	-	3	2	2	3	-	-	2.5
CO-2	-	-	-	-	-	-	2	3	3	3	-	-	2.8
CO-3	-	-	-	-	-	-	3	3	2	2	-	-	2.5
CO-4	-	-	-	-	-	-	2	2	3	2	-	-	2.3
CO-5	-	-	-	-	-	-	3	2	2	2	-	-	2.3
Average	-	-	-	-	-	-	2.6	2.4	2.4	2.4	-	-	2.5
Subject Name :		Web Technology(24190204)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	-	-	-	-	-	-	2	2	2	1	2	-	1.8
CO-2	-	-	-	-	-	-	3	2	3	2	2	-	2.4
CO-3	-	-	-	-	-	-	2	3	2	2	3	-	2.4
Average	-	-	-	-	-	-	2.4	2.4	2.4	1.9	2.3	-	2.3
Subject Name :		Introduction to Cloud Technology(24190205)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	-	-	-	-	-	-	-	1	2	2	1	3	1.8
CO-2	-	-	-	-	-	-	-	2	2	1	3	2	2
CO-3	-	-	-	-	-	-	-	3	1	2	2	1	1.8
CO-4	-	-	-	-	-	-	-	2	1	2	2	3	2
CO-5	-	-	-	-	-	-	-	1	2	2	3	1	1.8
Average	-	-	-	-	-	-	-	1.8	1.6	1.8	2.2	2	1.9
Subject Name :		Engineering Graphics & Design(24190206)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	-	-	-	-	-	-	-	1	2	2	1	3	1.9
CO-2	-	-	-	-	-	-	-	2	2	1	3	2.3	1.9
CO-3	-	-	-	-	-	-	-	3	2	3	2	1	1.9
CO-4	-	-	-	-	-	-	-	3	1	2	3	3	1.9
CO-5	-	-	-	-	-	-	-	1	3	3	3	2	1.9
CO-6	-	-	-	-	-	-	-	2	3	3	2	1	1.9
Average	-	-	-	-	-	-	-	2	2.2	2.3	2.3	2.1	1.9

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Subject Name :		Mentoring and Counselling(24190207)												
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average	
CO-1	-	-	-	-	-	-	-	2	2	2	2	-	2	
CO-2	-	-	-	-	-	-	-	3	3	2	3	-	2.8	
CO-3	-	-	-	-	-	-	-	2	2	1	2	-	1.8	
CO-4	-	-	-	-	-	-	-	3	3	3	2	-	2.8	
Average	-	-	-	-	-	-	-	2.5	2.5	2	2.3	-	2.3	
Subject Name :		Open Project / MOOC(24190208)												
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average	
CO-1	-	-	-	-	-	-	-	2	3	2	2	-	2.4	
CO-2	-	-	-	-	-	-	-	3	3	2	3	-	2.3	
CO-3	-	-	-	-	-	-	-	2	1	1	2	-	2.5	
CO-4	-	-	-	-	-	-	-	3	2	2	1	-	2.4	
Average	-	-	-	-	-	-	-	2.5	2.3	1.8	2	-	2.4	



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Swarnim institute of Technology
Program: Computer Engineering
Academic Year: 2023-24

CO-PO Mapping for all subjects of Computer Engineering

CE Semester I

Maths-I (23000001)

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23000001.1	3	1	2	2	2	-	-	-	-	-	-	-	2
23000001.2	2	2	2	2	1	-	-	-	-	-	-	-	1.8
23000001.3	2	2	2	2	3	-	-	-	-	-	-	-	2.2
23000001.4	3	1	3	3	2	-	-	-	-	-	-	-	2.4
23000001.5	2	2	3	3	1	-	-	-	-	-	-	-	2.2
23000001.6	2	2	2	2	2	-	-	-	-	-	-	-	2
Average	2.1	1	1	1	1	1	1	1	1	1	1	1	1

Fundamentals of Computer Programming (23000004)

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23000004.1	3	2	2	2	3	-	-	-	-	-	-	-	2.4
23000004.2	3	2	2	3	2	-	-	-	-	-	-	-	2.4
23000004.3	3	3	3	2	-	-	-	-	-	-	-	-	2.8
23000004.4	2	3	2	3	-	-	-	-	-	-	-	-	2.5
23000004.5	2	3	2	3	-	-	-	-	-	-	-	-	2.5
23000004.6	2	2	2	2	-	-	-	2	2	3	-	-	2.1
Average	2.5	2.5	2.2	2.5	2.5	-	-	2	2	3	-	-	2.4

Elements of Electrical Engineering (23000012)

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23000012.1	3	1	1	1	1	1	1	1	1	1	1	2	1.3
23000012.2	3	1	1	1	1	1	1	1	1	1	1	2	1.3





23000012.3	3	1	1	1	1	1	1	1	1	1	1	2	1.3
23000012.4	1	1	1	1	1	1	1	1	1	1	1	2	1.1
23000012.5	2	1	1	1	1	1	1	1	1	1	1	1	1.1
23000012.6	2	1	1	1	1	1	1	1	1	1	1	2	1.2
Average	2.3	1	1	1	1	1	1	1	1	-	-	-	1.1
Elements of Mechanical Engineering (23000003)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23000003.1	-	-	-	-	-	-	3	2	2	3	-	-	2.5
23000003.2	-	-	-	-	-	-	2	3	3	3	-	-	2.8
23000003.3	-	-	-	-	-	-	3	3	2	2	-	-	2.5
23000003.4	-	-	-	-	-	-	2	2	3	2	-	-	2.3
23000003.5	-	-	-	-	-	-	3	2	2	2	-	-	2.3
Average	-	-	-	-	-	-	2.6	2.4	2.4	2.4	-	-	2.5
Orientation Program in Startuo and Entreprenuirship (12300001)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
12300001.1	1	1	1	1	1	1	1	1	1	1	1	1	1
12300001.2	1	1	1	1	1	1	1	1	1	1	1	1	1
12300001.3	1	1	1	1	1	1	1	1	1	1	1	1	1
12300001.4	1	1	1	1	1	1	1	1	1	1	1	1	1
Average	1	1	1	1	1	1	1	1	1	1	1	1	1
Environmental Studies (23000006)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23000006.1	1	1	-	-	-	-	-	-	-	-	-	-	1
23000006.2	-	-	-	-	1	-	-	-	-	-	-	-	1
23000006.3	1	2	2	2	-	-	-	-	-	-	1	1	1.5
23000006.4	-	-	1	-	-	-	-	-	-	-	-	-	1
23000006.5	2	1	1	1	-	-	-	-	-	-	-	-	1.3
Average	1.3	1.3	1.3	1.5	1	-	-	-	-	-	1	1	1.2





Workshop (23000029)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23000029.1	1	-	-	-	-	-	-	-	-	-	-	1	1
23000029.2	1	-	-	-	1	-	1	-	-	-	-	-	1
23000029.3	1	1	-	-	-	-	-	-	-	-	-	-	1
23000029.4	1	-	-	-	-	1	-	-	-	-	-	1	1
23000029.5	1	-	-	-	-	-	-	-	1	1	1	-	1
Average	1	1	-	-	1	1	-	-	-	-	1	1	1
CE Semester II													
ENGINEERING PHYSICS(23000005)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23000005.1	2	2	3	3	3	-	-	-	-	-	-	-	2.6
23000005.2	2	3	3	2	2	-	-	-	-	-	-	-	2.4
23000005.3	2	2	2	1	2	-	-	-	-	-	-	-	1.8
23000005.4	2	2	3	2	3	-	-	-	-	-	-	-	2.4
23000005.5	3	1	2	2	3	-	-	-	-	-	-	-	2.2
23000005.6	3	2	3	3	2	-	-	-	-	-	-	-	2.6
23000005.7	2	1	3	2	2	-	-	-	-	-	-	-	2
Average	2.5	1.5	2.8	2.3	2.5	-	-	-	-	-	-	-	2.3
COMMUNICATION SKILLS(23000008)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23000008.1	-	-	-	-	-	-	3	2	2	3	-	-	2.5
23000008.2	-	-	-	-	-	-	2	3	3	3	-	-	2.8
23000008.3	-	-	-	-	-	-	3	3	2	2	-	-	2.5
23000008.4	-	-	-	-	-	-	2	2	3	2	-	-	2.3
23000008.5	-	-	-	-	-	-	3	2	2	2	-	-	2.3





Average	-	-	-	-	-	-	2.6	2.4	2.4	2.4	-	-	2.5
BASIC ELECTRONICS(23000009)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23000009.1	3	2	1	1	1	1	1	1	1	1	1	3	1.4
23000009.2	2	3	2	1	1	1	2	1	2	1	3	1	1.7
23000009.3	2	2	1	2	1	1	3	1	1	1	3	2	1.7
23000009.4	1	2	3	1	3	2	3	2	3	1	2	3	2.2
Average	2	2.3	1.8	1.3	1.5	1.3	2.3	1.3	1.8	1	2.3	2.3	1.8
MATHS-II(23000010)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23000010.1	2	2	3	3	1	-	-	-	-	-			2.2
23000010.2	3	3	1	2	3	-	-	-	-	-			2.4
23000010.3	2	3	2	1	2	-	-	-	-	-			2
23000010.4	3	2	2	2	1	-	-	-	-	-			2
23000010.5	2	3	1	1	2	-	-	-	-	-			1.8
23000010.6	1	2	2	3	1	-	-	-	-	-			1.8
Average	2.2	2.6	1.6	1.8	1.8	-	-	-	-	-	-	-	2
ENGINEERING GRAPHICS(23000011)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23000011.1	-	-	-	-	-	-	-	3	3	2	1	2	2.2
23000011.2	-	-	-	-	-	-	-	1	2	2	2	2	1.8
23000011.3	-	-	-	-	-	-	-	2	1	3	2	2	2
23000011.4	-	-	-	-	-	-	-	2	2	2	3	2	2.2
23000011.5	-	-	-	-	-	-	-	3	2	1	2	2	2
23000011.6	-	-	-	-	-	-	-	2	3	2	2	1	2
Average	-	-	-	-	-	-	-	2.2	2.2	2	2	1.8	2
BASIC PROGRAM IN ENTREPRENURESHIP(12300002)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
12300002.1	3	3	3	3	-	-	-	-	-	-	-	-	3





12300002.2	2	2	1	2	-	-	-	-	-	-	-	-	1.8
12300002.3	1	2	2	1	-	-	-	-	-	-	-	-	1.5
12300002.4	2	1	2	2	-	-	-	-	-	-	-	-	1.8
Average	2	2	2	2	-	-	-	-	-	-	-	-	2
ELEMENTS OF CIVIL ENGINEERING(23000030)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23000030.1	-	-	-	-	-	-	-	3	2	2	2	2	2.2
23000030.2	-	-	-	-	-	-	-	2	1	2	1	2	1.6
23000030.3	-	-	-	-	-	-	-	3	3	3	2	2	2.6
23000030.4	-	-	-	-	-	-	-	2	2	3	2	2	2.2
23000030.5	-	-	-	-	-	-	-	2	1	3	1	1	1.6
23000030.6	-	-	-	-	-	-	-	3	1	2	2	1	1.8
Average	-	-	-	-	-	-	-	2.5	1.7	2.5	1.7	1.7	2
CHEMISTRY(23020216)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23020216.1	1	1	-	-	-	-	-	-	-	-	-	-	1
23020216.2	-	-	-	-	1	-	-	-	-	-	-	-	1
23020216.3	1	2	2	2	-	-	-	-	-	-	2	1	1.7
23020216.4	-	-	2	-	-	-	-	-	-	-	-	-	2
23020216.5	1	-	-	-	-	2	-	-	-	-	-	2	1.7
Average	1	1.5	2	2	1	2	-	-	-	-	2	1.5	1.6
Personality Development(24190203)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24190203.1	-	-	-	-	-	-	3	2	2	3	-	-	2.5
24190203.2	-	-	-	-	-	-	2	3	3	3	-	-	2.8
24190203.3	-	-	-	-	-	-	3	3	2	2	-	-	2.5
24190203.4	-	-	-	-	-	-	2	2	3	2	-	-	2.3
24190203.5	-	-	-	-	-	-	3	2	2	2	-	-	2.3
Average	-	-	-	-	-	-	2.6	2.4	2.4	2.4	-	-	2.5
Web Technology(24190204)													





CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24190204.1	-	-	-	-	-	-	2	2	2	1	2	-	1.8
24190204.2	-	-	-	-	-	-	3	2	3	2	2	-	2.4
24190204.3	-	-	-	-	-	-	2	3	2	2	3	-	2.4
Average	-	-	-	-	-	-	2.4	2.4	2.4	1.9	2.3	-	2.3

Introduction to Cloud Technology(24190205)

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24190205.1	-	-	-	-	-	-	-	1	2	2	1	3	1.8
24190205.2	-	-	-	-	-	-	-	2	2	1	3	2	2
24190205.3	-	-	-	-	-	-	-	3	1	2	2	1	1.8
24190205.4	-	-	-	-	-	-	-	2	1	2	2	3	2
24190205.5	-	-	-	-	-	-	-	1	2	2	3	1	1.8
Average	-	-	-	-	-	-	-	1.8	1.6	1.8	2.2	2	1.9

Engineering Graphics & Design(24190206)

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24190206.1	-	-	-	-	-	-	-	1	2	2	1	3	1.9
24190206.2	-	-	-	-	-	-	-	2	2	1	3	2.3	1.9
24190206.3	-	-	-	-	-	-	-	3	2	3	2	1	1.9
24190206.4	-	-	-	-	-	-	-	3	1	2	3	3	1.9
24190206.5	-	-	-	-	-	-	-	1	3	3	3	2	1.9
24190206.6	-	-	-	-	-	-	-	2	3	3	2	1	1.9
Average	-	-	-	-	-	-	-	2	2.2	2.3	2.3	2.1	1.9

Mentoring and Counselling(24190207)

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24190207.1	-	-	-	-	-	-	-	2	2	2	2	-	2
24190207.2	-	-	-	-	-	-	-	3	3	2	3	-	2.8
24190207.3	-	-	-	-	-	-	-	2	2	1	2	-	1.8





24190207.4	-	-	-	-	-	-	-	3	3	3	2	-	2.8
Average	-	-	-	-	-	-	-	2.5	2.5	2	2.3	-	2.3
Open Project / MOOC(24190208)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24190208.1	-	-	-	-	-	-	-	2	3	2	2	-	2.4
24190208.2	-	-	-	-	-	-	-	3	3	2	3	-	2.3
24190208.3	-	-	-	-	-	-	-	2	1	1	2	-	2.5
24190208.4	-	-	-	-	-	-	-	3	2	2	1	-	2.4
Average	-	-	-	-	-	-	-	2.5	2.3	1.8	2	-	2.4
CE Semester III													
Maths-III(2300015)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
2300015.1	2	2	3	3	2	-	-	-	-	2	2	3	2.33
2300015.2	2	2	1	2	3	-	-	2	1	3	1	3	2
2300015.3	2	2	2	2	2	1	-	-	1	3	-	2	1.88
2300015.4	3	2	2	2	1	-	-	-	2	3	1	3	2.14
2300015.5	3	2	2	3	3	-	3	-	1	3	1	3	2.5
Average	2.4	2	2	2.4	2.2	1	3	2	1.25	2.8	1.25	2.8	2.11
Digital Electronics(23070301)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23070301.1	2	2	3	3	2	1	-	-	-	2	-	2	2.14
23070301.2	2	2	1	2	3	-	-	1	-	3	1	3	2
23070301.3	2	1	2	2	2	-	-	1	-	3	1	3	1.86
23070301.4	3	2	1	2	1	-	1	-	2	3	2	3	1.88
23070301.5	3	2	2	3	3	-	-	1	1	3	1	3	2.25
Average	2.4	1.8	1.8	2.4	2.2	1	1	1	1.5	2.8	1.25	2.8	1.79
Data Structure And Algorithm(23040302)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23040302.1	2	2	3	2	2	-	-	3	-	2	1	-	2.29
23040302.2	2	2	1	2	3	-	-	-	1	3	-	2	2





23040302.3	2	2	2	2	2	2	-	-	1	3	2	1	2
23040302.4	3	2	2	2	1	-	1	-	2	3	1	-	2
23040302.5	3	2	2	3	2	-	-	-	1	3	2	2	2.29
Average	2.4	2	2	2.2	2	2	1	3	1.25	2.8	1.5	1.67	2.07

Database Management System(23040301)

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23040301.1	2	2	3	3	2	-	-	-	-	2	2	1	2.33
23040301.2	2	2	1	2	3	-	-	-	1	3	1	-	2
23040301.3	2	2	3	2	2	-	1	-	1	3	2	1	2
23040301.4	3	2	3	2	1	-	-	-	2	3	1	-	2.29
23040301.5	3	2	2	3	3	2	-	1	1	3	2	2	2.22
Average	2.4	2	2.4	2.4	2.2	2	1	1	1.25	2.8	1.6	1.33	1.95

Computer Network(23040303)

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23040303.1	2	2	3	3	2	1	-	-	-	2	2	1	2.14
23040303.2	2	3	1	2	3	-	-	-	1	3	1	-	2.14
23040303.3	2	2	3	2	2	-	2	-	1	3	1	-	2.13
23040303.4	3	3	2	2	1	-	-	-	2	3	2	1	2.29
23040303.5	3	2	2	2	3	-	-	2	1	3	1	-	2.25
Average	2.4	2.4	2.2	2.2	2.2	1	2	2	1.25	2.8	1.4	1	2.05

CE Semester IV

MATHS-4(23000018)

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23040401.1	2	2	3	3	2	-	-	-	2	2	2	1	2.29
23040401.2	2	3	1	2	3	-	2	-	-	-	1	-	2.17
23040401.3	2	2	2	2	2	-	2	1	-	-	1	-	1.86
23040401.4	3	2	3	2	1	2	-	-	2	2	2	1	2.13
23040401.5	3	2	2	3	3	-	3	-	-	-	1	-	2.67
Average	2.4	2.2	2.2	2.4	2.2	2	2.33	1	2	2	1.4	1	2.07

Operating System(23040401)





CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23040401.1	2	2	3	3	2	-	-	-	2	2	2	1	2.29
23040401.2	2	3	1	2	3	-	2	-	-	-	1	-	2.17
23040401.3	2	2	2	2	2	-	2	1	-	-	1	-	1.86
23040401.4	3	2	3	2	1	2	-	-	2	2	2	1	2.13
23040401.5	3	2	2	3	3	-	3	-	-	-	1	-	2.67
Average	2.4	2.2	2.2	2.4	2.2	2	2.33	1	2	2	1.4	1	2.07
Object Oriented Programming with C++(23040402)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23040402.1	2	2	3	3	2	-	-	-	2	2	2	2	2.29
23040402.2	2	2	1	2	3	-	2	-	-	-	3	1	2
23040402.3	2	3	2	2	2	-	2	1	-	-	3	1	2
23040402.4	3	2	2	2	1	2	-	-	2	2	3	2	2
23040402.5	3	2	3	3	3	-	3	-	-	-	3	1	2.83
Average	2.4	2.2	2.2	2.4	2.2	2	2.33	1	2	2	2.8	1.4	2.07
System Software(23040403)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23040403.1	2	2	3	3	2	-	-	-	2	2	2	1	2.29
23040403.2	2	2	1	2	3	-	2	-	-	-	1	-	2
23040403.3	3	2	2	2	2	-	2	1	-	-	1	-	2
23040403.4	3	2	2	2	1	2	-	-	2	2	2	1	2
23040403.5	3	2	3	3	3	-	3	-	-	-	1	-	2.83
Average	2.6	2	2.2	2.4	2.2	2	2.33	1	2	2	1.4	1	2.07
Computer Organization and MicroProcessor(23070401)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23070401.1	2	2	3	3	2	-	-	-	2	2	2	2	2.29
23070401.2	3	2	1	2	3	-	2	-	-	-	1	1	2.17
23070401.3	2	2	2	2	2	-	2	1	-	-	1	1	1.86





23070401.4	3	2	3	2	1	2	-	-	2	2	2	2	2.13
23070401.5	3	2	3	3	3	-	3	-	-	-	1	1	2.83
Average	2.6	2	2.4	2.4	2.2	2	2.33	1	2	2	1.4	1.4	2.09

CE Semester V

Object Oriented Programming with JAVA(23040501)

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23040501.1	2	2	3	3	2	-	-	-	2	2	2	2	2.29
23040501.2	2	2	1	3	3	-	2	-	-	-	1	1	2.17
23040501.3	3	2	2	2	2	-	2	1	-	-	1	2	2
23040501.4	3	2	3	2	1	2	-	-	2	2	2	2	2.13
23040501.5	3	2	2	3	3	-	3	-	-	-	1	1	2.67
Average	2.6	2	2.2	2.6	2.2	2	2.33	1	2	2	1.4	1.6	2.09

Theory of Computation(23040502)

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23040502.1	3	2	3	3	2	-	-	-	2	2	2	1	2.43
23040502.2	2	2	1	2	3	-	2	-	-	-	1	-	2
23040502.3	3	2	2	2	2	-	2	1	-	-	1	-	2
23040502.4	3	2	3	2	1	2	-	-	2	2	2	1	2.13
23040502.5	3	2	2	3	3	-	3	-	-	-	1	-	2.67
Average	2.8	2	2.2	2.4	2.2	2	2.33	1	2	2	1.4	1	2.09

Information Network & Cyber Security(23040503)

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23040503.1	2	2	3	3	2	-	-	-	2	2	2	2	2.29
23040503.2	3	2	1	2	3	-	2	-	-	-	1	1	2.17
23040503.3	2	2	3	2	2	-	2	1	-	-	2	1	2
23040503.4	3	2	2	2	1	2	-	-	2	2	2	2	2
23040503.5	3	2	2	3	3	-	3	-	-	-	1	1	2.67
Average	2.6	2	2.2	2.4	2.2	2	2.33	1	2	2	1.6	1.4	2.07

Web Technology(23040504)





CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23040503.1	2	2	3	3	2	-	-	-	2	2	2	1	2.29
23040503.2	3	2	1	2	3	-	2	-	-	-	1	-	2.17
23040503.3	2	2	3	2	2	-	2	1	-	-	1	-	2
23040503.4	3	2	2	2	1	2	-	-	2	2	2	1	2
23040503.5	3	2	2	3	3	-	3	-	-	-	1	-	2.67
Average	2.6	2	2.2	2.4	2.2	2	2.33	1	2	2	1.4	1	2.07

Computer Graphics and Visualization(23040506)

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23040506.1	2	2	3	3	2	-	-	-	2	2	1	2	2.29
23040506.2	3	2	1	2	3	-	2	-	-	-	-	1	2.17
23040506.3	2	2	2	2	2	-	2	1	-	-	-	1	1.86
23040506.4	3	2	3	2	1	2	-	-	2	2	1	2	2.13
23040506.5	3	2	2	3	3	-	3	-	-	-	-	1	2.67
Average	2.6	2	2.2	2.4	2.2	2	2.33	1	2	2	1	1.4	2.07

CE Semester VI

Wireless Network(23040601)

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23040601.1	2	2	3	3	2	-	-	-	2	2	2	1	2.29
23040601.2	2	2	1	2	3	-	2	-	-	-	1	-	2
23040601.3	2	2	2	2	2	-	2	1	-	-	1	-	1.86
23040601.4	3	2	2	2	1	2	-	-	2	2	2	1	2
23040601.5	3	2	2	3	3	-	3	-	-	-	1	-	2.67
Average	2.4	2	2	2.4	2.2	2	2.33	1	2	2	1.4	1	2.03

Compiler Design(23040602)

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23040602.1	2	2	3	3	2	-	-	-	2	2	1	2	2.29
23040602.2	3	2	1	3	3	-	2	-	-	-	-	1	2.33
23040602.3	2	2	2	2	2	-	2	1	-	-	-	1	1.86
23040602.4	3	2	2	2	1	2	-	-	2	2	1	2	2
23040602.5	3	2	2	3	3	-	3	-	-	-	-	1	2.67





Average	2.6	2	2	2.6	2.2	2	2.33	1	2	2	1	1.4	2.07
Cloud Computing(23040603)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23040603.1	2	2	3	3	2	-	-	-	2	2	1	2	2.29
23040603.2	3	2	1	2	3	-	2	-	-	-	-	1	2.17
23040603.3	2	2	2	3	2	-	2	1	-	-	-	1	2
23040603.4	3	2	2	2	1	2	-	-	2	2	1	2	2
23040603.5	3	2	2	3	3	-	3	-	-	-	-	1	2.67
Average	2.6	2	2	2.6	2.2	2	2.33	1	2	2	1	1.4	2.07
Data Mining and Warehousing(23040604)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23040604.1	2	2	3	3	2	-	-	-	2	2	2	1	2.29
23040604.2	2	2	1	2	3	-	2	-	-	-	1	-	2
23040604.3	3	2	2	3	2	-	2	1	-	-	1	-	2.14
23040604.4	3	2	2	2	1	2	-	-	2	2	2	1	2
23040604.5	3	2	2	3	3	-	3	-	-	-	1	-	2.67
Average	2.6	2	2	2.6	2.2	2	2.33	1	2	2	1.4	1	2.07
Advance JAVA(23040606)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23040606.1	2	2	3	3	2	-	-	-	2	2	2	1	2.29
23040606.2	2	2	1	2	3	-	2	-	-	-	1	-	2
23040606.3	2	2	2	2	2	-	2	1	-	-	1	-	1.86
23040606.4	3	2	2	2	1	2	-	-	2	2	2	1	2
23040606.5	3	2	2	3	3	-	3	-	-	-	1	-	2.67
Average	2.4	2	2	2.4	2.2	2	2.33	1	2	2	1.4	1	2.03
CE Semester VII													
Artificial Intelligence(23040701)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23040701.1	2	2	3	3	2	-	-	-	2	2	2	2	2.29
23040701.2	3	2	1	2	3	-	2	-	-	-	1	1	2.17





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23040701.3	2	3	2	2	2	-	2	1	-	-	1	1	2
23040701.4	3	3	3	2	1	2	-	-	2	2	2	2	2.25
23040701.5	3	2	2	3	3	-	3	-	-	-	1	1	2.67
Average	2.6	2.4	2.2	2.4	2.2	2	2.33	1	2	2	1.4	1.4	2.11
Python Programming(23040702)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23040702.1	2	2	3	3	2	-	-	-	2	2	1	2	2.29
23040702.2	2	2	1	2	3	-	2	-	-	-	-	1	2
23040702.3	3	2	3	2	2	-	2	1	-	-	-	1	2.14
23040702.4	3	2	2	2	1	2	-	-	2	2	1	2	2
23040702.5	3	2	2	3	3	-	3	-	-	-	-	1	2.67
Average	2.6	2	2.2	2.4	2.2	2	2.33	1	2	2	1	1.4	2.07
CE Semester VIII													
Programming with XML & JSON(23040802)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23040802.1	2	2	3	3	2	-	-	-	2	2	1	2	2.29
23040802.2	2	2	1	2	3	-	2	-	-	-	-	1	2
23040802.3	2	2	2	2	2	-	2	1	-	-	-	1	1.86
23040802.4	3	2	2	2	1	2	-	-	2	2	1	2	2
23040802.5	3	2	2	3	3	-	3	-	-	-	-	1	2.67
Average	2.4	2	2	2.4	2.2	2	2.33	1	2	2	1	1.4	2.03

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SWARNIM INSTITUTE OF TECHNOLOGY

PROGRAM NAME :- B.TECH IN ELECTRICAL ENGINEERING

ACADEMIC YEAR 2023 -2024

SEMESTER I - VIII

CO-PO MAPPING FOR ALL SUBJECTS B.TECH ELECTRICAL ENGINEERING SEM -I

Course Name :		Maths-1 (23000001)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	1	2	2	2	-	-	-	-	-	-	-	2.00
CO-2	2	2	2	2	1	-	-	-	-	-	-	-	1.80
CO-3	2	2	2	2	3	-	-	-	-	-	-	-	2.20
CO-4	3	1	3	3	2	-	-	-	-	-	-	-	2.40
CO-5	2	2	3	3	1	-	-	-	-	-	-	-	2.20
CO-6	2	2	2	2	2	-	-	-	-	-	-	-	2.00
Average	2.3333	1.6666	2.3333	2.3333	1.8333	-	-	-	-	-	-	-	2.10

Course Name :		Fundamentals of Computer Programming (23000004)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	2	2	3	-	-	-	-	-	-	-	2.40
CO-2	3	2	2	3	2	-	-	-	-	-	-	-	2.40
CO-3	3	3	3	2	-	-	-	-	-	-	-	-	2.75
CO-4	2	3	2	3	-	-	-	-	-	-	-	-	2.50
CO-5	2	3	2	3	-	-	-	-	-	-	-	-	2.50
CO-6	2	2	2	2	-	-	-	2	2	3	-	-	2.14
Average	2.5	2.5	2.1666	2.5	2.5	-	-	2	2	3	-	-	2.40



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Course Name :		Elements of Electrical Engineering (23000012)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	1	1	1	1	1	1	1	1	1	1	2	1.25
CO-2	3	1	1	1	1	1	1	1	1	1	1	2	1.25
CO-3	3	1	1	1	1	1	1	1	1	1	1	2	1.25
CO-4	1	1	1	1	1	1	1	1	1	1	1	2	1.08
CO-5	2	1	1	1	1	1	1	1	1	1	1	1	1.08
CO-6	2	1	1	1	1	1	1	1	1	1	1	2	1.17
Average	2.3333	1	1	1	1	1	1	1	1	1	1	1.83333	1.18

Course Name :		Elements of Mechanical Engineering (23000003)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	-	-	-	-	-	-	3	2	2	3	-	-	2.50
CO-2	-	-	-	-	-	-	2	3	3	3	-	-	2.75
CO-3	-	-	-	-	-	-	3	3	2	2	-	-	2.50
CO-4	-	-	-	-	-	-	2	2	3	2	-	-	2.25
CO-5	-	-	-	-	-	-	3	2	2	2	-	-	2.25
Average	-	-	-	-	-	-	2.6	2.4	2.4	2.4	-	-	2.45

Course Name :		Orientation Program in Startup and Entrepreneurship (12300001)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
CO-2	1	1	1	1	1	1	1	1	1	1	1	1	1.00
CO-3	1	1	1	1	1	1	1	1	1	1	1	1	1.00
CO-4	1	1	1	1	1	1	1	1	1	1	1	1	1.00
Average	1	1	1	1	1	1	1	1	1	1	1	1	1.00





Course Name :		Environmental Studies (23000006)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1.00
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1.00
CO-3	1	2	2	2	-	-	-	-	-	-	1	1	1.50
CO-4	-	-	1	-	-	-	-	-	-	-	-	-	1.00
CO-5	2	1	1	1	-	-	-	-	-	-	-	-	1.25
Average	1.3333	1.3333	1.3333	1.5	1	-	-	-	-	-	1	1	1.21

Course Name :		Electronic Workshop (23000002)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	2	1	3	2	1	2	1	1	2	1	1.75
CO-2	3	1	1	1	-	3	1	3	1	1	2	1	1.64
CO-3	3	2	2	1	3	2	1	2	1	1	3	1	1.83
CO-4	3	1	1	1	3	2	1	2	1	1	3	1	1.67
Average	3	1.5	1.5	1	3	2.25	1	2.25	1	1	2.5	1	1.75





CO-PO MAPPING FOR ALL SUBJECTS B.TECH ELECTRICAL ENGINEERING SEM -II

Course Name :		ENGINEERING PHYSICS (23000005)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	2	3	3	3	-	-	-	-	-	-	-	2.60
CO-2	2	3	3	2	2	-	-	-	-	-	-	-	2.40
CO-3	2	2	2	1	2	-	-	-	-	-	-	-	1.80
CO-4	2	2	3	2	3	-	-	-	-	-	-	-	2.40
CO-5	3	1	2	2	3	-	-	-	-	-	-	-	2.20
CO-6	3	2	3	3	2	-	-	-	-	-	-	-	2.60
CO-7	2	1	3	2	2	-	-	-	-	-	-	-	2.00
Average	2.285 71	1.8571 4	2.7142 9	2.1428 6	2.4285 7	-	-	-	-	-	-	-	2.29

Course Name :		COMMUNICATION SKILLS (23000008)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	-	-	-	-	-	-	3	2	2	3	-	-	2.50
CO-2	-	-	-	-	-	-	2	3	3	3	-	-	2.75
CO-3	-	-	-	-	-	-	3	3	2	2	-	-	2.50
CO-4	-	-	-	-	-	-	2	2	3	2	-	-	2.25
CO-5	-	-	-	-	-	-	3	2	2	2	-	-	2.25
Average	-	-	-	-	-	-	2.6	2.4	2.4	2.4	-	-	2.45





Course Name :		BASIC ELECTRONICS (23000009)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	1	1	1	1	1	1	1	1	1	3	1.42
CO-2	2	3	2	1	1	1	2	1	2	1	3	1	1.67
CO-3	2	2	1	2	1	1	3	1	1	1	3	2	1.67
CO-4	1	2	3	1	3	2	3	2	3	1	2	3	2.17
Average	2	2.25	1.75	1.25	1.5	1.25	2.25	1.25	1.75	1	2.25	2.25	1.73

Course Name :		MATHS-II (23000010)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	2	3	3	1	-	-	-	-	-	-	-	2.20
CO-2	3	3	1	2	3	-	-	-	-	-	-	-	2.40
CO-3	2	3	2	1	2	-	-	-	-	-	-	-	2.00
CO-4	3	2	2	2	1	-	-	-	-	-	-	-	2.00
CO-5	2	3	1	1	2	-	-	-	-	-	-	-	1.80
CO-6	1	2	2	3	1	-	-	-	-	-	-	-	1.80
Average	2.166 67	2.5	1.8333 3	2	1.6666 7	-	-	-	-	-	-	-	2.03

Course Name :		ENGINEERING GRAPHICS (23000011)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	-	-	-	-	-	-	-	3	3	2	1	2	2.20
CO-2	-	-	-	-	-	-	-	1	2	2	2	2	1.80
CO-3	-	-	-	-	-	-	-	2	1	3	2	2	2.00
CO-4	-	-	-	-	-	-	-	2	2	2	3	2	2.20
CO-5	-	-	-	-	-	-	-	3	2	1	2	2	2.00
CO-6	-	-	-	-	-	-	-	2	3	2	2	1	2.00
Average	-	-	-	-	-	-	-	2.17	2.17	2.00	2.00	1.83	2.03





Course Name :		BASIC PROGRAM IN ENTREPRENURESHIP (12300002)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	3	3	3	-	-	-	-	-	-	-	-	3.00
CO-2	2	2	1	2	-	-	-	-	-	-	-	-	1.75
CO-3	1	2	2	1	-	-	-	-	-	-	-	-	1.50
CO-4	2	1	2	2	-	-	-	-	-	-	-	-	1.75
Average	2	2	2	2	-	-	-	-	-	-	-	-	2.00

CO-PO MAPPING FOR ALL SUBJECTS B.TECH ELECTRICAL ENGINEERING SEM -III

Course Name :		Maths-3 (23000015)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1.00
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1.00
CO-3	1	2	2	2	-	-	-	-	-	-	1	1	1.50
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2.00
CO-5	1	-	-	-	-	2	-	-	-	-	-	1	1.33
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.50
Average	1	-	-	-	-	2	-	-	-	-	1	1	1.25

Course Name :		Circuits and Networks (23050302)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	2	3	3	1	2	2	3	1	3	3	3	2.33
CO-2	3	3	1	2	3	3	3	2	3	1	1	1	2.17
CO-3	2	3	2	1	2	2	3	1	2	2	2	2	2.00
CO-4	3	2	2	2	1	3	2	2	1	2	2	2	2.00
CO-5	2	3	2	1	2	2	3	1	2	2	2	2	2.00
CO-6	3	3	1	2	3	3	3	2	3	1	1	1	2.17
CO-7	2	3	2	1	2	2	3	1	2	2	2	2	2.00
CO-8	3	2	2	2	1	3	2	2	1	2	2	2	2.00
CO-9	2	3	2	1	2	2	3	1	2	2	2	2	2.00
Average	2.44	2.67	1.89	1.67	1.89	2.44	2.67	1.67	1.89	1.89	1.89	1.89	2.07





Course Name :		Digital Electronics (23070301)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	2	3	3	1	2	2	3	1	3	3	3	2.33
CO-2	3	3	1	2	3	3	3	2	3	1	1	1	2.17
CO-3	2	3	2	1	2	2	3	1	2	2	2	2	2.00
CO-4	3	2	2	2	1	3	2	2	1	2	2	2	2.00
CO-5	2	3	2	1	2	2	3	1	2	2	2	2	2.00
CO-6	3	2	2	2	1	3	2	2	1	2	2	2	2.00
Average	2.50	2.50	2.00	1.83	1.67	2.50	2.50	1.83	1.67	2.00	2.00	2.00	2.08

Course Name :		DC Machines and Transformer (23050303)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	2	3	3	1	2	2	3	1	3	3	3	2.33
CO-2	3	3	1	2	3	3	3	2	3	1	1	1	2.17
CO-3	2	3	2	1	2	2	3	1	2	2	2	2	2.00
CO-4	3	2	2	2	1	3	2	2	1	2	2	2	2.00
Average	2.50	2.50	2.00	2.00	1.75	2.50	2.50	2.00	1.75	2.00	2.00	2.00	2.13





Course Name :		Electrical Measurement and Measuring Instruments (23050301)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	2	3	3	1	2	2	3	1	3	3	3	2.33
CO-2	3	3	1	2	3	3	3	2	3	1	1	1	2.17
CO-3	2	3	2	1	2	2	3	1	2	2	2	2	2.00
CO-4	3	2	2	2	1	3	2	2	1	2	2	2	2.00
Average	2.50	2.50	2.00	2.00	1.75	2.50	2.50	2.00	1.75	2.00	2.00	2.00	2.13

Course Name :		Foundation Program in Enterprenurship (12300003)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	3	2	3	2	-	-	-	-	-	-	-	2.6
CO-2	1	2	3	2	3	-	-	-	-	-	-	-	2.2
CO-3	2	2	2	2	2	-	-	-	-	-	-	-	2
CO-4	2	2	1	2	1	-	-	-	-	-	-	-	1.6
CO-5	2	3	3	3	3	-	-	-	-	-	-	-	2.8
Average	2	2.4	2.2	2.4	2.2	-	-	-	-	-	-	-	2.24

CO-PO MAPPING FOR ALL SUBJECTS B.TECH ELECTRICAL ENGINEERING SEM -IV

Course Name :		ANALOG ELECTRONICS (23050401)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	2	3	3	1	2	2	3	1	3	3	3	2.33
CO-2	3	3	1	2	3	3	3	2	3	1	1	1	2.17
CO-3	2	3	2	1	2	2	3	1	2	2	2	2	2.00
CO-4	3	2	2	2	1	3	2	2	1	2	2	2	2.00
Average	2.50	2.50	2.00	2.00	1.75	2.50	2.50	2.0	1.7	2.00	2.00	2.00	2.13





Course Name :		AC MACHINES (23050402)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	2	3	3	1	2	2	3	1	3	3	3	2.33
CO-2	3	3	1	2	3	3	3	2	3	1	1	1	2.17
CO-3	2	3	2	1	2	2	3	1	2	2	2	2	2.00
CO-4	3	2	2	2	1	3	2	2	1	2	2	2	2.00
CO-5	2	3	1	1	2	2	3	1	2	1	1	1	1.67
Average	2.4	2.6	1.8	1.8	1.8	2.4	2.6	1.8	1.8	1.8	1.8	1.8	2.03
Course Name :		ELECTRICAL POWER GENERATION (23050403)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	2	3	3	1	2	2	3	1	3	3	3	2.33
CO-2	3	3	1	2	3	3	3	2	3	1	1	1	2.17
CO-3	2	3	2	1	2	2	3	1	2	2	2	2	2.00
CO-4	3	2	2	2	1	3	2	2	1	2	2	2	2.00
CO-5	2	3	1	1	2	2	3	1	2	1	1	1	1.67
CO-6	1	2	2	3	1	1	2	3	1	2	2	2	1.83
Average	2.16	2.50	1.83	2.00	1.67	2.17	2.50	2.00	1.67	1.83	1.83	1.83	2.00
Course Name :		ELECTROMAGNETICS (23050404)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	2	3	3	1	2	2	3	1	2	3	3	2.25
CO-2	3	3	1	2	3	3	3	2	3	1	1	1	2.17
CO-3	2	3	2	1	2	2	3	1	2	1	2	2	1.92
CO-4	3	2	2	2	1	3	2	2	1	1	2	2	1.92
CO-5	2	3	1	1	2	2	3	1	2	1	1	1	1.67
CO-6	1	2	2	3	1	1	2	3	1	1	2	2	1.75
Average	2.17	2.50	1.83	2.00	1.67	2.17	2.50	2.0	1.6	1.17	1.83	1.83	1.94





Course Name :		SIGNAL AND SYSTEM (23070402)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	2	3	3	1	2	2	3	1	3	3	3	2.33
CO-2	3	3	1	2	3	3	3	2	3	1	1	1	2.17
CO-3	2	3	2	1	2	2	3	1	2	2	2	2	2.00
CO-4	3	2	2	2	1	3	2	2	1	2	2	2	2.00
CO-5	2	3	1	1	2	2	3	1	2	1	1	1	1.67
CO-6	1	2	2	3	1	1	2	3	1	2	2	2	1.83
Average	2.17	2.50	1.83	2.00	1.67	2.17	2.50	2.00	1.67	1.83	1.83	1.83	2.00

Course Name :		Intermediate Program in Enterprenurship (12300004)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	3	2	-	-	-	-	-	-	-	-	2.50
CO-2	2	2	1	1	-	-	-	-	-	-	-	-	1.50
CO-3	2	1	3	3	-	-	-	-	-	-	-	-	2.25
CO-4	3	2	3	2	-	-	-	-	-	-	-	-	2.50
Average	2.50	1.75	2.50	2	-	-	-	-	-	-	-	-	2.19

CO-PO MAPPING FOR ALL SUBJECTS B.TECH ELECTRICAL ENGINEERING SEM -V

Course Name :		Power Electronics (23050501)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	2	3	3	1	2	2	3	1	3	3	3	2.33
CO-2	3	3	1	2	3	3	3	2	3	1	1	1	2.17
CO-3	2	3	2	1	2	2	3	1	2	2	2	2	2.00
CO-4	3	2	2	2	1	3	2	2	1	2	2	2	2.00
CO-5	2	3	1	1	2	2	3	1	2	1	1	1	1.67
Average	2.40	2.60	1.80	1.80	1.80	2.40	2.60	1.8	1.8	1.80	1.80	1.80	2.03





Course Name :		Electrical Power System - I (23050502)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	2	3	3	1	2	2	3	1	3	3	3	2.33
CO-2	3	3	1	2	3	3	3	2	3	1	1	1	2.17
CO-3	2	3	2	1	2	2	3	1	2	2	2	2	2.00
CO-4	3	2	2	2	1	3	2	2	1	2	2	2	2.00
CO-5	2	3	1	1	2	2	3	1	2	1	1	1	1.67
Average	2.4	2.6	1.8	1.8	1.8	2.4	2.6	1.8	1.8	1.8	1.8	1.8	2.03

Course Name :		Control System Engineering (23050503)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	2	3	3	1	2	2	3	1	3	3	3	2.33
CO-2	3	3	1	2	3	3	3	2	3	1	1	1	2.17
CO-3	2	3	2	1	2	2	3	1	2	2	2	2	2.00
CO-4	3	2	2	2	1	3	2	2	1	2	2	2	2.00
CO-5	2	3	1	1	2	2	3	1	2	1	1	1	1.67
CO-6	3	2	2	2	1	3	2	2	1	2	2	2	2.00
Average	2.50	2.50	1.83	1.83	1.67	2.50	2.50	1.83	1.67	1.83	1.83	1.83	2.03

Course Name :		Elements of Electrical Design (23050504)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	2	3	3	1	2	2	3	1	3	3	3	2.33
CO-2	3	3	1	2	3	3	3	2	3	1	1	1	2.17
CO-3	2	3	2	1	2	2	3	1	2	2	2	2	2.00
CO-4	3	2	2	2	1	3	2	2	1	2	2	2	2.00
Average	2.50	2.50	2.00	2.00	1.75	2.50	2.50	2.00	1.75	2.00	2.00	2.00	2.13





Course Name :		Microprocessor and Microcontroller Architecture & Interfacing (23050505)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	2	3	3	1	2	2	3	1	3	3	3	2.33
CO-2	3	3	1	2	3	3	3	2	3	1	1	1	2.17
CO-3	2	3	2	1	2	2	3	1	2	2	2	2	2.00
CO-4	3	2	2	2	1	3	2	2	1	2	2	2	2.00
CO-5	2	3	1	1	2	2	3	1	2	1	1	1	1.67
Average	2.4	2.6	1.8	1.8	1.8	2.4	2.6	1.8	1.8	1.8	1.8	1.8	2.03

Course Name :		Intellectual property rights (12300005)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	2	3	-	-	-	-	-	-	-	-	-	2.33
CO-2	3	3	1	-	-	-	-	-	-	-	-	-	2.33
CO-3	2	2	2	-	-	-	-	-	-	-	-	-	2.00
Average	2.33 33	2.333 3	2	-	-	-	-	-	-	-	-	-	2.22

CO-PO MAPPING FOR ALL SUBJECTS B.TECH ELECTRICAL ENGINEERING SEM -VI

Course Name :		INDUTRIAL AUTOMATION (23050601)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	2	3	3	1	2	2	3	1	3	3	3	2.33
CO-2	3	3	1	2	3	3	3	2	3	1	1	1	2.17
CO-3	2	3	2	1	2	2	3	1	2	2	2	2	2.00
CO-4	3	2	2	2	1	3	2	2	1	2	2	2	2.00
CO-5	2	3	1	1	2	2	3	1	2	1	1	1	1.67
Average	2.4	2.6	1.8	1.8	1.8	2.4	2.6	1.8	1.8	1.8	1.8	1.8	2.03





Course Name :		ELECTRICAL POWER SYSTEM - II (23050602)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	2	3	3	1	2	2	3	1	3	3	3	2.33
CO-2	3	3	1	2	3	3	3	2	3	1	1	1	2.17
CO-3	2	3	2	1	2	2	3	1	2	2	2	2	2.00
CO-4	3	2	2	2	1	3	2	2	1	2	2	2	2.00
CO-5	2	3	1	1	2	2	3	1	2	1	1	1	1.67
Average	2.4	2.6	1.8	1.8	1.8	2.4	2.6	1.8	1.8	1.8	1.8	1.8	2.03

Course Name :		DESIGN OF DC MACHINES AND TRANSFORMER (23050603)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	2	3	3	1	2	2	3	1	3	3	3	2.3333
CO-2	3	3	1	2	3	3	3	2	3	1	1	1	2.1667
CO-3	2	3	2	1	2	2	3	1	2	2	2	2	2
Average	2.33	2.66	2	2	2	2.33	2.66	2	2	2	2	2	2.1667

Course Name :		HIGH VOLTAGE ENGINEERING (23050604)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	2	3	3	1	2	2	3	1	3	3	3	2.33
CO-2	3	3	1	2	3	3	3	2	3	1	1	1	2.17
CO-3	2	3	2	1	2	2	3	1	2	2	2	2	2.00
CO-4	3	2	2	2	1	3	2	2	1	2	2	2	2.00
Average	2.5	2.5	2	2	1.75	2.5	2.5	2	1.75	2	2	2	2.13





Course Name :		UTILIZATION OF ELECTRICAL ENERGY AND TRACTION (23050605)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	2	3	3	1	2	2	3	1	3	3	3	2.3333
CO-2	3	3	1	2	3	3	3	2	3	1	1	1	2.1667
CO-3	2	3	2	1	2	2	3	1	2	2	2	2	2
CO-4	3	2	2	2	1	3	2	2	1	2	2	2	2
CO-5	2	3	1	1	2	2	3	1	2	1	1	1	1.6667
Average	2.4	2.6	1.8	1.8	1.8	2.4	2.6	1.8	1.8	1.8	1.8	1.8	2.0333

Course Name :		CONTROL OF ELECTRICAL DRIVES (23050607)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	2	3	3	1	2	2	3	1	3	3	3	2.33
CO-2	3	3	1	2	3	3	3	2	3	1	1	1	2.17
CO-3	2	3	2	1	2	2	3	1	2	2	2	2	2.00
CO-4	3	2	2	2	1	3	2	2	1	2	2	2	2.00
Average	2.5	2.5	2	2	1.75	2.5	2.5	2	1.75	2	2	2	2.13

Course Name :		EXPERT PROGRAM IN ENTREPRENEURSHIP (12300006)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	3	3	3	-	-	-	-	-	-	-	-	3.00
CO-2	2	2	1	2	-	-	-	-	-	-	-	-	1.75
CO-3	1	2	2	1	-	-	-	-	-	-	-	-	1.50
Average	2	2.3333	2	2	-	-	-	-	-	-	-	-	2.08





CO-PO MAPPING FOR ALL SUBJECTS B.TECH ELECTRICAL ENGINEERING SEM -VII

Course Name :		Inter Connected Power System (23050701)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	2	3	3	1	2	2	3	1	3	3	3	2.33
CO-2	3	3	1	2	3	3	3	2	3	1	1	1	2.17
CO-3	2	3	2	1	2	2	3	1	2	2	2	2	2.00
CO-4	3	2	2	2	1	3	2	2	1	2	2	2	2.00
CO-5	2	3	1	1	2	2	3	1	2	1	1	1	1.67
Average	2.4	2.6	1.8	1.8	1.8	2.4	2.6	1.8	1.8	1.8	1.8	1.8	2.03

Course Name :		Switch Gear and Protection (23050702)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	2	3	3	1	2	2	3	1	3	3	3	2.33
CO-2	3	3	1	2	3	3	3	2	3	1	1	1	2.17
CO-3	2	3	2	1	2	2	3	1	2	2	2	2	2.00
CO-4	3	2	2	2	1	3	2	2	1	2	2	2	2.00
CO-5	2	3	1	1	2	2	3	1	2	1	1	1	1.67
Average	2.4	2.6	1.8	1.8	1.8	2.4	2.6	1.8	1.8	1.8	1.8	1.8	2.03

Course Name :		Design of AC Machines (23050703)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	2	3	3	1	2	2	3	1	3	3	3	2.33
CO-2	3	3	1	2	3	3	3	2	3	1	1	1	2.17
CO-3	2	3	2	1	2	2	3	1	2	2	2	2	2.00
CO-4	3	2	2	2	1	3	2	2	1	2	2	2	2.00
Average	2.5	2.5	2	2	1.75	2.5	2.5	2	1.75	2	2	2	2.13





Course Name :		Advance Power Electronics (23050704)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	2	3	3	1	2	2	3	1	3	3	3	2.33
CO-2	3	3	1	2	3	3	3	2	3	1	1	1	2.17
CO-3	2	3	2	1	2	2	3	1	2	2	2	2	2.00
CO-4	3	2	2	2	1	3	2	2	1	2	2	2	2.00
Average	2.5	2.5	2	2	1.75	2.5	2.5	2	1.75	2	2	2	2.13

Course Name :		Project-I (23000023)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	3	1	3	1	3	1	1	1	3	1	3	2.00
CO-2	3	3	1	3	1	3	1	1	1	3	1	3	2.00
CO-3	3	1	3	1	1	3	3	1	1	1	1	3	1.83
CO-4	3	1	3	1	1	3	3	1	1	1	1	3	1.83
CO-5	3	1	3	3	3	3	1	1	1	1	1	3	2.00
CO-6	3	3	1	1	3	1	1	1	3	3	1	1	1.83
Average	3	2.00	2.00	2.00	3	1	1	1	3	3	1	1	1.92

Course Name :		Startup Project-1 (12300007)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	3	3	3	-	-	-	-	-	-	-	-	3.00
CO-2	2	2	1	2	-	-	-	-	-	-	-	-	1.75
CO-3	1	2	2	1	-	-	-	-	-	-	-	-	1.50
CO-4	2	-	2	-	-	-	-	-	-	-	-	-	2.00
Average	2	2.33	2.00	2.00	-	-	-	-	-	-	-	-	2.06





CO-PO MAPPING FOR ALL SUBJECTS B.TECH ELECTRICAL ENGINEERING SEM -VIII

Course Name :		POWER SYSTEM PLANNING AND DESIGN (23050801)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	2	3	3	1	2	2	3	1	3	3	3	2.33
CO-2	3	3	1	2	3	3	3	2	3	1	1	1	2.17
CO-3	2	3	2	1	2	2	3	1	2	2	2	2	2.00
CO-4	3	2	2	2	1	3	2	2	1	2	2	2	2.00
CO-5	2	3	1	1	2	2	3	1	2	1	1	1	1.67
CO-6	3	3	1	2	3	3	3	2	3	1	1	1	2.17
Average	2.50	2.67	1.67	1.83	2.00	2.50	2.67	1.83	2.00	1.67	1.67	1.67	2.06

Course Name :		TESTING AND COMMISSIONING OF ELECTRICAL EQUIPMENTS (23050802)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	2	3	3	1	2	2	3	1	3	3	3	2.33
CO-2	3	3	1	2	3	3	3	2	3	1	1	1	2.17
CO-3	2	3	2	1	2	2	3	1	2	2	2	2	2.00
CO-4	3	2	2	2	1	3	2	2	1	2	2	2	2.00
Average	2.5	2.5	2	2	1.75	2.5	2.5	2	1.75	2	2	2	2.13





Course Name :		POWER SYSTEM OPERATION AND CONTROL (23050803)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	2	3	3	1	2	2	3	1	3	3	3	2.33
CO-2	3	3	1	2	3	3	3	2	3	1	1	1	2.17
CO-3	2	3	2	1	2	2	3	1	2	2	2	2	2.00
CO-4	3	2	2	2	1	3	2	2	1	2	2	2	2.00
CO-5	2	3	1	1	2	2	3	1	2	1	1	1	1.67
Average	2.4	2.6	1.8	1.8	1.8	2.4	2.6	1.8	1.8	1.8	1.8	1.8	2.03
Course Name :		ENERGY CONSERVATION AND AUDIT (23050804)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	2	3	3	1	2	2	3	1	3	3	3	2.33
CO-2	3	3	1	2	3	3	3	2	3	1	1	1	2.17
CO-3	2	3	2	1	2	2	3	1	2	2	2	2	2.00
CO-4	3	2	2	2	1	3	2	2	1	2	2	2	2.00
CO-5	2	3	1	1	2	2	3	1	2	1	1	1	1.67
Average	2.4	2.6	1.8	1.8	1.8	2.4	2.6	1.8	1.8	1.8	1.8	1.8	2.0333
Course Name :		Project Part-II (23000025)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	3	1	3	1	3	1	1	1	3	1	3	2.00
CO-2	3	3	1	3	1	3	1	1	1	3	1	3	2.00
CO-3	3	1	3	1	1	3	3	1	1	1	1	3	1.83
CO-4	3	1	3	1	1	3	3	1	1	1	1	3	1.83
CO-5	3	1	3	3	3	3	1	1	1	1	1	3	2.00
Average	3	1.8	2.2	2.2	3	3	1	1	1	1	1	3	1.93





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Course Name :		Start-Up Project Part-II (12300008)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	3	2	-	-	-	-	-	-	-	-	2.50
CO-2	2	2	1	1	-	-	-	-	-	-	-	-	1.50
CO-3	2	1	3	3	-	-	-	-	-	-	-	-	2.25
CO-4	2	2	3	2	-	-	-	-	-	-	-	-	2.25
Average	2.25	1.75	2.5	2	-	-	-	-	-	-	-	-	2.13



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PROGRAM NAME :- M.TECH IN ELECTRICAL POWER SYSTEM ENGINEERING

ACADEMIC YEAR 2023 -2024

SEMESTER III - IV

CO-PO MAPPING FOR ALL SUBJECTS M.TECH IN ELECTRICAL POWER SYSTEM ENGINEERING SEM -III

Course Name :		Power Quality issues and their Mitigation Techniques in Power Systems (24010301)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	2	3	3	1	2	2	3	1	3	3	3	2.33
CO-2	3	3	1	2	3	3	3	2	3	1	1	1	2.17
CO-3	2	3	2	1	2	2	3	1	2	2	2	2	2.00
Average	2.33	2.67	2.00	2.00	2.00	2.33	2.67	2.00	2.00	2.00	2.00	2.00	2.17
Course Name :		Seminar - I (24000001)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	2	3	3	1	2	2	1	1	3	1	1	1.83
CO-2	3	3	1	2	3	3	3	2	1	1	1	1	2.00
CO-3	2	3	2	1	2	2	3	1	1	2	1	1	1.75
CO-4	3	3	1	2	3	3	3	2	3	1	1	1	2.17
CO-5	3	3	1	2	3	3	3	2	1	1	1	1	2.00
Average	2.60	2.80	1.60	2.00	2.40	2.60	2.80	1.60	1.40	1.60	1.00	1.00	1.95



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Course Name :		Internal Review (24000002)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	3	3	1	2	2	1	1	3	1	1	1.92
CO-2	3	3	1	2	1	3	3	2	1	1	1	1	1.83
CO-3	2	3	2	1	1	2	3	1	1	2	1	1	1.67
CO-4	3	3	1	2	3	3	3	2	3	1	1	1	2.17
CO-5	3	3	1	2	1	3	3	2	1	1	1	1	1.83
Average	2.80	2.80	1.60	2.00	1.40	2.60	2.80	1.60	1.40	1.60	1.00	1.00	1.88

Course Name :		Dissertation Phase - I (24000003)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	3	3	1	2	2	1	1	3	1	1	1.92
CO-2	3	3	1	2	1	3	3	2	1	1	1	1	1.83
CO-3	2	3	2	1	1	2	3	1	1	2	1	1	1.67
CO-4	3	3	1	2	3	3	3	2	3	1	1	1	2.17
CO-5	3	3	1	2	1	3	3	2	1	1	1	1	1.83
Average	2.75	2.75	1.75	2.00	1.50	2.50	2.75	1.50	1.50	1.75	1.00	1.00	1.90

CO-PO MAPPING FOR ALL SUBJECTS M.TECH ELECTRICAL POWER SYSTEM ENGINEERING SEM-IV

Course Name :		SMART GRID TECHNOLOGY AND APPLICATIONS (24010401)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	2	3	3	1	2	2	3	1	3	3	3	2.33
CO-2	3	3	1	2	3	3	3	2	3	1	1	1	2.17
CO-3	2	3	2	1	2	2	3	1	2	2	2	2	2.00
CO-4	3	3	1	2	3	3	3	2	3	1	1	1	2.17
Average	2.50	2.75	1.75	2.00	2.25	2.50	2.75	2.00	2.25	1.75	1.75	1.75	2.17



Course Name :		SEMINAR - II (24000006)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	2	3	3	1	2	2	1	1	3	1	1	1.83
CO-2	3	3	1	2	3	3	3	2	1	1	1	1	2.00
CO-3	2	3	2	1	2	2	3	1	1	2	1	1	1.75
CO-4	3	3	1	2	3	3	3	2	3	1	1	1	2.17
CO-5	3	3	1	2	3	3	3	2	1	1	1	1	2.00
Average	2.6	2.8	1.6	2	2.4	2.6	2.8	1.6	1.4	1.6	1	1	1.95

Course Name :		EXTERNAL MID SEM REVIEW (24000004)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	3	3	1	2	2	1	1	3	1	1	1.92
CO-2	3	3	1	2	1	3	3	2	1	1	1	1	1.83
CO-3	2	3	2	1	1	2	3	1	1	2	1	1	1.67
CO-4	3	3	1	2	3	3	3	2	3	1	1	1	2.17
Average	2.75	2.75	1.75	2.00	1.50	2.50	2.75	1.50	1.50	1.75	1.00	1.00	1.90

Course Name :		DISSERTATION PHASE - II (24000005)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	3	3	1	2	2	1	1	3	1	1	1.92
CO-2	3	3	1	2	1	3	3	2	1	1	1	1	1.83
CO-3	3	3	2	1	1	2	3	1	1	2	1	1	1.75
Average	3.00	2.67	2.00	2.00	1.00	2.33	2.67	1.33	1.00	2.00	1.00	1.00	1.83





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PROGRAM NAME: INFORMATION TECHNOLOGY													
CO PO MAPPING OF IT BRANCH													
ACADEMIC YEAR -2023-2024													
IT Semester I													
Course Name :		Maths-I (23000001)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23000001.1	3	1	2	2	2	-	-	-	-	-	-	-	2
23000001.2	2	2	2	2	1	-	-	-	-	-	-	-	1.8
23000001.3	2	2	2	2	3	-	-	-	-	-	-	-	2.2
23000001.4	3	1	3	3	2	-	-	-	-	-	-	-	2.4
23000001.5	2	2	3	3	1	-	-	-	-	-	-	-	2.2
23000001.6	2	2	2	2	2	-	-	-	-	-	-	-	2
Average	2.1	1	1	1	1	1	1	1	1	1	1	1	1
Course Name :		Fundamentals of Computer Programming (23000004)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23000004.1	3	2	2	2	3	-	-	-	-	-	-	-	2.4
23000004.2	3	2	2	3	2	-	-	-	-	-	-	-	2.4
23000004.3	3	3	3	2	-	-	-	-	-	-	-	-	2.8
23000004.4	2	3	2	3	-	-	-	-	-	-	-	-	2.5
23000004.5	2	3	2	3	-	-	-	-	-	-	-	-	2.5
23000004.6	2	2	2	2	-	-	-	2	2	3	-	-	2.1
Average	2.5	2.5	2.2	2.5	2.5	-	-	2	2	3	-	-	2.4
Course Name :		Elements of Electrical Engineering (23000012)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23000012.1	3	1	1	1	1	1	1	1	1	1	1	2	1.3
23000012.2	3	1	1	1	1	1	1	1	1	1	1	2	1.3
23000012.3	3	1	1	1	1	1	1	1	1	1	1	2	1.3
23000012.4	1	1	1	1	1	1	1	1	1	1	1	2	1.1
23000012.5	2	1	1	1	1	1	1	1	1	1	1	1	1.1
23000012.6	2	1	1	1	1	1	1	1	1	1	1	2	1.2
Average	2.3	1	1	1	1	1	1	1	1	-	-	-	1.1

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Course Name :		Elements of Mechanical Engineering (23000003)												
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average	
23000003.1	-	-	-	-	-	-	3	2	2	3	-	-	2.5	
23000003.2	-	-	-	-	-	-	2	3	3	3	-	-	2.8	
23000003.3	-	-	-	-	-	-	3	3	2	2	-	-	2.5	
23000003.4	-	-	-	-	-	-	2	2	3	2	-	-	2.3	
23000003.5	-	-	-	-	-	-	3	2	2	2	-	-	2.3	
23000003.6	-	-	-	-	-	-	2.6	2.4	2.4	2.4	-	-	2.5	
Course Name :		Orientation Program in Startup and Entrepreneurship (12300001)												
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average	
12300001.1	1	1	1	1	1	1	1	1	1	1	1	1	1	
12300001.2	1	1	1	1	1	1	1	1	1	1	1	1	1	
12300001.3	1	1	1	1	1	1	1	1	1	1	1	1	1	
12300001.4	1	1	1	1	1	1	1	1	1	1	1	1	1	
Average	1	1	1	1	1	1	1	1	1	1	1	1	1	
Course Name :		Environmental Studies (23000006)												
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average	
23000006.1	1	1	-	-	-	-	-	-	-	-	-	-	1	
23000006.2	-	-	-	-	1	-	-	-	-	-	-	-	1	
23000006.3	1	2	2	2	-	-	-	-	-	-	1	1	1.5	
23000006.4	-	-	1	-	-	-	-	-	-	-	-	-	1	
23000006.5	2	1	1	1	-	-	-	-	-	-	-	-	1.3	
Average	1.3	1.3	1.3	1.5	1	-	-	-	-	-	1	1	1.2	
Course Name :		Workshop (23000029)												
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average	
23000029.1	1	-	-	-	-	-	-	-	-	-	-	1	1	
23000029.2	1	-	-	-	1	-	1	-	-	-	-	-	1	
23000029.3	1	1	-	-	-	-	-	-	-	-	-	-	1	
23000029.4	1	-	-	-	-	1	-	-	-	-	-	1	1	
23000029.5	1	-	-	-	-	-	-	-	1	1	1		1	
Average	1	1	-	-	1	1	-	-	-	-	1	1	1	





IT Semester II													
Course Name :		ENGINEERING PHYSICS(23000005)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23000005.1	2	2	3	3	3	-	-	-	-	-	-	-	2.6
23000005.2	2	3	3	2	2	-	-	-	-	-	-	-	2.4
23000005.3	2	2	2	1	2	-	-	-	-	-	-	-	1.8
23000005.4	2	2	3	2	3	-	-	-	-	-	-	-	2.4
23000005.5	3	1	2	2	3	-	-	-	-	-	-	-	2.2
23000005.6	3	2	3	3	2	-	-	-	-	-	-	-	2.6
23000005.7	2	1	3	2	2	-	-	-	-	-	-	-	2
Average	2.5	1.5	2.8	2.3	2.5	-	-	-	-	-	-	-	2.3
Course Name :		COMMUNICATION SKILLS(23000008)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23000008.1	-	-	-	-	-	-	3	2	2	3	-	-	2.5
23000008.2	-	-	-	-	-	-	2	3	3	3	-	-	2.8
23000008.3	-	-	-	-	-	-	3	3	2	2	-	-	2.5
23000008.4	-	-	-	-	-	-	2	2	3	2	-	-	2.3
23000008.5	-	-	-	-	-	-	3	2	2	2	-	-	2.3
Average	-	-	-	-	-	-	2.6	2.4	2.4	2.4	-	-	2.5
Course Name :		BASIC ELECTRONICS(23000009)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23000009.1	3	2	1	1	1	1	1	1	1	1	1	3	1.4
23000009.2	2	3	2	1	1	1	2	1	2	1	3	1	1.7
23000009.3	2	2	1	2	1	1	3	1	1	1	3	2	1.7
23000009.4	1	2	3	1	3	2	3	2	3	1	2	3	2.2
Average	2	2.3	1.8	1.3	1.5	1.3	2.3	1.3	1.8	1	2.3	2.3	1.8
Course Name :		MATHS-II(23000010)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23000010.1	2	2	3	3	1	-	-	-	-	-	-	-	2.2
23000010.2	3	3	1	2	3	-	-	-	-	-	-	-	2.4
23000010.3	2	3	2	1	2	-	-	-	-	-	-	-	2
23000010.4	3	2	2	2	1	-	-	-	-	-	-	-	2
23000010	2	3	1	1	2	-	-	-	-	-	-	-	1.8
23000010	1	2	2	3	1	-	-	-	-	-	-	-	1.8
Average	2.2	2.6	1.6	1.8	1.8	-	-	-	-	-	-	-	2





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Course Name :		ENGINEERING GRAPHICS(23000011)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23000011.1	-	-	-	-	-	-	-	3	3	2	1	2	2.2
23000011.2	-	-	-	-	-	-	-	1	2	2	2	2	1.8
23000011.3	-	-	-	-	-	-	-	2	1	3	2	2	2
23000011.4	-	-	-	-	-	-	-	2	2	2	3	2	2.2
23000011.5	-	-	-	-	-	-	-	3	2	1	2	2	2
23000011.6	-	-	-	-	-	-	-	2	3	2	2	1	2
Average	-	-	-	-	-	-	-	2.2	2.2	2	2	1.8	2
Course Name :		BASIC PROGRAM IN ENTREPRENURESHIP(12300002)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
12300002.1	3	3	3	3	-	-	-	-	-	-	-	-	3
12300002.2	2	2	1	2	-	-	-	-	-	-	-	-	1.8
12300002.3	1	2	2	1	-	-	-	-	-	-	-	-	1.5
12300002.4	2	1	2	2	-	-	-	-	-	-	-	-	1.8
Average	2	2	2	2	-	-	-	-	-	-	-	-	2
Course Name :		ELEMENTS OF CIVIL ENGINEERING(23000030)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23000030.1	-	-	-	-	-	-	-	3	2	2	2	2	2.2
23000030.2	-	-	-	-	-	-	-	2	1	2	1	2	1.6
23000030.3	-	-	-	-	-	-	-	3	3	3	2	2	2.6
23000030.4	-	-	-	-	-	-	-	2	2	3	2	2	2.2
23000030.5	-	-	-	-	-	-	-	2	1	3	1	1	1.6
23000030.6	-	-	-	-	-	-	-	3	1	2	2	1	1.8
Average	-	-	-	-	-	-	-	2.5	1.7	2.5	1.7	1.7	2



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Course Name :		CHEMISTRY(23020216)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23020216.1	1	1	-	-	-	-	-	-	-	-	-	-	1
23020216.2	-	-	-	-	1	-	-	-	-	-	-	-	1
23020216.3	1	2	2	2	-	-	-	-	-	-	2	1	1.7
23020216.4	-	-	2	-	-	-	-	-	-	-	-	-	2
23020216.5	1	-	-	-	-	2	-	-	-	-	-	2	1.7
Average	1	1.5	2	2	1	2	-	-	-	-	2	1.5	1.6
Course Name :		Personality Development(24190203)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24190203.1	-	-	-	-	-	-	3	2	2	3	-	-	2.5
24190203.2	-	-	-	-	-	-	2	3	3	3	-	-	2.8
24190203.3	-	-	-	-	-	-	3	3	2	2	-	-	2.5
24190203.4	-	-	-	-	-	-	2	2	3	2	-	-	2.3
24190203.5	-	-	-	-	-	-	3	2	2	2	-	-	2.3
Average	-	-	-	-	-	-	2.6	2.4	2.4	2.4	-	-	2.5
Course Name :		Web Technology(24190204)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24190204.1	-	-	-	-	-	-	2	2	2	1	2	-	1.8
24190204.2	-	-	-	-	-	-	3	2	3	2	2	-	2.4
24190204.3	-	-	-	-	-	-	2	3	2	2	3	-	2.4
Average	-	-	-	-	-	-	2.4	2.4	2.4	1.9	2.3	-	2.3





Course Name :		Introduction to Cloud Technology(24190205)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24190205.1	-	-	-	-	-	-	-	1	2	2	1	3	1.8
24190205.2	-	-	-	-	-	-	-	2	2	1	3	2	2
24190205.3	-	-	-	-	-	-	-	3	1	2	2	1	1.8
24190205.4	-	-	-	-	-	-	-	2	1	2	2	3	2
24190205.5	-	-	-	-	-	-	-	1	2	2	3	1	1.8
Average	-	-	-	-	-	-	-	1.8	1.6	1.8	2.2	2	1.9
Course Name :		Engineering Graphics & Design(24190206)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24190206.1	-	-	-	-	-	-	-	1	2	2	1	3	1.9
24190206.2	-	-	-	-	-	-	-	2	2	1	3	2.3	1.9
24190206.3	-	-	-	-	-	-	-	3	2	3	2	1	1.9
24190206.4	-	-	-	-	-	-	-	3	1	2	3	3	1.9
24190206.5	-	-	-	-	-	-	-	1	3	3	3	2	1.9
24190206.6	-	-	-	-	-	-	-	2	3	3	2	1	1.9
Average	-	-	-	-	-	-	-	2	2.2	2.3	2.3	2.1	1.9
Course Name :		Mentoring and Counselling(24190207)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24190207.1	-	-	-	-	-	-	-	2	2	2	2	-	2
24190207.2	-	-	-	-	-	-	-	3	3	2	3	-	2.8
24190207.3	-	-	-	-	-	-	-	2	2	1	2	-	1.8
24190207.4	-	-	-	-	-	-	-	3	3	3	2	-	2.8
Average	-	-	-	-	-	-	-	2.5	2.5	2	2.3	-	2.3





Course Name :		Open Project / MOOC(24190208)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24190208.1	-	-	-	-	-	-	-	2	3	2	2	-	2.4
24190208.2	-	1	-	1	-	1	-	3	3	2	3	-	2.3
24190208.3	-	-	1	-	1	-	1	2	1	1	2	-	2.5
24190208.4	1	1	-	1	-	1	-	3	2	2	1	1	2.4
Average	1	1	1	1	1	1	1	2.5	1.5	1.5	1.5	1	2.45
Course Name :		Computer Network(23040303)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23040303.1	2	2	3	3	2	1	-	-	-	2	1	3	2.11
23040303.2	2	3	1	2	3	-	-	-	1	3			2.14
23040303.3	2	2	3	2	2	-	2	-	1	3	1	2	2
23040303.4	3	3	2	2	1	-	-	-	2	3			2.29
23040303.5	3	2	2	2	3	-	-	2	1	3	2	3	2.3
Average	2.4	2.4	2.2	2.2	2.2	1	2	2	1.25	2.8	1.33	2.67	2.05
IT Semester IV													
Course Name :		Maths-IV(23000016)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23000016.1	2	2	3	3	2	-	-	-	2	2	2		2.25
23000016.2	2	2	1	3	3	-	2	-	-	-		3	2.29
23000016.3	3	2	2	2	2	-	2	1	-	-	1		1.88
23000016.4	3	2	3	2	1	2	-	-	2	2	1	2	2
23000016.5	3	2	2	3	3	-	3	-	-	-	2	1	2.38
Average	2.6	2	2.2	2.6	2.2	2	2.33	1	2	2	1.5	2	2.09





Course Name :		Operating System(23040401)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23040401.1	3	3	3	2	2	-	-	-	2	2	1		2.25
23040401.2	3	3	3	2	3	-	2	-	-	-		2	2.57
23040401.3	2	3	3	2	2	-	2	1	-	-	1		2
23040401.4	3	2	3	1	-	2	-	-	2	2		2	2.13
23040401.5	2	2	2	2	3	-	3	-	-	-	2		2.29
Average	2.6	2.6	2.8	1.8	2.5	2	2.33	1	2	2	1.33	2	2.16
Course Name :		Object Oriented Programming with C++(23040402)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23040402.1	3	3	3	2	2	-	-	-	2	2	1	1	2.11
23040402.2	3	3	3	2	3	-	2	-	-	-			2.67
23040402.3	2	3	3	2	2	-	2	1	-	-	2	1	2
23040402.4	3	2	3	1	-	2	-	-	2	2		2	2.13
23040402.5	2	2	2	2	3	-	3	-	-	-	2		2.29
Average	2.6	2.6	2.8	1.8	2.5	2	2.33	1	2	2	1.67	1.33	2.16
Course Name :		Computer Organization and MicroProcessor(23070401)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23070401.1	2	2	3	3	2	-	-	-	2	2	2		2.25
23070401.2	2	2	1	2	3	-	2	-	-	-		1	1.86
23070401.3	3	2	2	2	2	-	2	1	-	-	2		2
23070401.4	3	2	2	2	1	2	-	-	2	2		1	1.89
23070401.5	3	2	3	3	3	-	3	-	-	-	1		2.57
Average	2.6	2	2.2	2.4	2.2	2	2.33	1	2	2	1.67	1	2.07





Course Name :		Web Technology(23080401)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23080401.1	2	2	3	3	2	-	-	-	2	2		1	2.13
23080401.2	3	2	1	2	3	-	2	-	-	-	1		2
23080401.3	2	2	2	2	2	-	2	1	-	-	2	1	1.78
23080401.4	3	2	3	2	1	2	-	-	2	2			2.13
23080401.5	3	2	3	3	3	-	3	-	-	-	2	1	2.5
Average	2.6	2	2.4	2.4	2.2	2	2.33	1	2	2	1.67	1	2.09
		IT Semester V											
Course Name :		Object Oriented Programming with JAVA(23040501)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23040501.1	2	2	3	3	2	-	-	-	2	2	1	2	2.11
23040501.2	2	2	1	3	3	-	2	-	-	-			2.17
23040501.3	3	2	2	2	2	-	2	1	-	-	1	2	1.89
23040501.4	3	2	3	2	1	2	-	-	2	2		2	2.11
23040501.5	3	2	2	3	3	-	3	-	-	-	2		2.57
Average	2.6	2	2.2	2.6	2.2	2	2.33	1	2	2	1.33	2	2.09
Course Name :		Computer Graphics and Visualization(23040506)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23040506.1	3	3	3	2	2	-	-	-	2	2	1		2.25
23040506.2	3	3	3	2	3	-	2	-	-	-		2	2.57
23040506.3	2	3	3	2	2	-	2	1	-	-	1		2
23040506.4	3	2	3	1	-	2	-	-	2	2			2.14
23040506.5	2	2	2	2	3	-	3	-	-	-	1	2	2.13
Average	2.6	2.6	2.8	1.8	2.5	2	2.33	1	2	2	1	2	2.16
Course Name :		Information Network & Cyber Security(23040503)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23040503.1	2	2	3	3	2	-	-	-	2	2	1	1	2
23040503.2	3	2	1	2	3	-	2	-	-	-		2	2.14
23040503.3	2	2	3	2	2	-	2	1	-	-	1		1.88
23040503.4	3	2	2	2	1	2	-	-	2	2		2	2
23040503.5	3	2	2	3	3	-	3	-	-	-	2		2.57
Average	2.6	2	2.2	2.4	2.2	2	2.33	1	2	2	1.33	1.67	2.07





Course Name :		IT Industry Management with ERP(23080501)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23080501.1	2	2	3	3	2	-	-	-	2	2	2	1	2.11
23080501.2	3	2	1	2	3	-	2	-	-	-			2.17
23080501.3	2	2	3	2	2	-	2	1	-	-	2	2	2
23080501.4	3	2	2	2	1	2	-	-	2	2			2
23080501.5	3	2	2	3	3	-	3	-	-	-	2	1	2.38
Average	2.6	2	2.2	2.4	2.2	2	2.33	1	2	2	2	1.33	2.07
Course Name :		Image Processing(23040507)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23040507.1	2	2	3	3	2	-	-	-	2	2	1	2	2.11
23040507.2	3	2	1	2	3	-	2	-	-	-			2.17
23040507.3	2	3	2	2	2	-	2	1	-	-	2	2	2
23040507.4	3	2	2	3	1	2	-	-	2	2			2.13
23040507.5	3	2	2	3	3	-	3	-	-	-	1	2	2.38
Average	2.6	2.2	2	2.6	2.2	2	2.33	1	2	2	1.33	2	2.09
Course Name :		Advance Web Technology(23080601)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23080601.1	3	3	3	2	2	-	-	-	2	2		3	2.5
23080601.2	3	3	3	2	3	-	2	-	-	-	2		2.57
23080601.3	2	3	3	2	2	-	2	1	-	-		3	2.25
23080601.4	3	2	3	1	-	2	-	-	2	2	2		2.13
23080601.5	2	2	2	2	3	-	3	-	-	-		2	2.29
Average	2.6	2.6	2.8	1.8	2.5	2	2.33	1	2	2	2	2.67	2.16
Course Name :		Compiler Design(23040602)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23040602.1	2	2	3	3	2	-	-	-	2	2		1	2.13
23040602.2	3	2	1	3	3	-	2	-	-	-	1		2.14
23040602.3	2	2	2	2	2	-	2	1	-	-		1	1.75
23040602.4	3	2	2	2	1	2	-	-	2	2	2		2
23040602.5	3	2	2	3	3	-	3	-	-	-		2	2.57
Average	2.6	2	2	2.6	2.2	2	2.33	1	2	2	1.5	1.33	2.07





Course Name :		Cloud Computing(23040603)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23040603.1	2	2	3	3	2	-	-	-	2	2	1	1	2
23040603.2	3	2	1	2	3	-	2	-	-	-			2.17
23040603.3	2	2	2	3	2	-	2	1	-	-	2	2	2
23040603.4	3	2	2	2	1	2	-	-	2	2			2
23040603.5	3	2	2	3	3	-	3	-	-	-		3	2.71
Average	2.6	2	2	2.6	2.2	2	2.33	1	2	2	1.5	2	2.07
Course Name :		Data Mining and Warehousing(23040604)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23040604.1	2	2	3	3	2	-	-	-	2	2	1	3	2.22
23040604.2	2	2	1	2	3	-	2	-	-	-		2	2
23040604.3	3	2	2	3	2	-	2	1	-	-	2		2.13
23040604.4	3	2	2	2	1	2	-	-	2	2	3	3	2.2
23040604.5	3	2	2	3	3	-	3	-	-	-			2.67
Average	2.6	2	2	2.6	2.2	2	2.33	1	2	2	2	2.67	2.12
Course Name :		Advance JAVA(23040606)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23040606.1	2	2	3	3	2	-	-	-	2	2			2.29
23040606.2	2	2	1	2	3	-	2	-	-	-	1	1	1.75
23040606.3	2	2	2	2	2	-	2	1	-	-			1.86
23040606.4	3	2	2	2	1	2	-	-	2	2		1	1.89
23040606.5	3	2	2	3	3	-	3	-	-	-	1		2.43
Average	2.4	2	2	2.4	2.2	2	2.33	1	2	2	1	1	1.86
IT Semester VII													
Course Name :		Artificial Intelligence(23040701)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23040701.1	2	2	3	3	2	-	-	-	2	2	1	1	2
23040701.2	3	2	1	2	3	-	2	-	-	-			2.17
23040701.3	2	3	2	2	2	-	2	1	-	-	1	2	1.89
23040701.4	3	3	3	2	1	2	-	-	2	2			2.25
23040701.5	3	2	2	3	3	-	3	-	-	-	2	1	2.38
Average	2.6	2.4	2.2	2.4	2.2	2	2.33	1	2	2	1.33	1.33	1.98





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Course Name :		Python Programming(23040702)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23040702.1	3	3	3	2	2	-	-	-	2	2		1	2.25
23040702.2	3	3	3	2	3	-	2	-	-	-	1	1	2.25
23040702.3	2	3	3	2	2	-	2	1	-	-			2.14
23040702.4	3	2	3	1	-	2	-	-	2	2	1		2
23040702.5	2	2	2	2	3	-	3	-	-	-		1	2.14
Average	2.6	2.6	2.8	1.8	2.5	2	2.33	1	2	2	1	1	2.16
		IT Semester VIII											
Course Name :		Programming with XML & JSON(23040802)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23040802.1	2	2	3	3	2	-	-	-	2	2		2	2.25
23040802.2	2	2	1	2	3	-	2	-	-	-	2		2
23040802.3	2	2	2	2	2	-	2	1	-	-			1.86
23040802.4	3	2	2	2	1	2	-	-	2	2	2		2
23040802.5	3	2	2	3	3	-	3	-	-	-		2	2.57
Average	2.4	2	2	2.4	2.2	2	2.33	1	2	2	2	2	2.03



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SWARNIM INSTITUTE OF TECHNOLOGY
PROGRAM NAME : Mechanical Engineering
Year: 1st to 4th

CO-PO matrix for all subjects B.Tech sem-1

Course Name		Maths-I (23000001)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	1	2	2	2	-	-	-	-	-	-	-	2.00
CO-2	2	2	2	2	1	-	-	-	-	-	-	-	1.80
CO-3	2	2	2	2	3	-	-	-	-	-	-	-	2.20
CO-4	3	1	3	3	2	-	-	-	-	-	-	-	2.40
CO-5	2	2	3	3	1	-	-	-	-	-	-	-	2.20
CO-6	2	2	2	2	2	-	-	-	-	-	-	-	2.00
Average	2.1	1	1	1	1	1	1	1	1	1	1	1	1.09
Course Name		Fundamentals of Computer Programming (23000004)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	2	2	3	-	-	-	-	-	-	-	2.40
CO-2	3	2	2	3	2	-	-	-	-	-	-	-	2.40
CO-3	3	3	3	2	-	-	-	-	-	-	-	-	2.80
CO-4	2	3	2	3	-	-	-	-	-	-	-	-	2.50
CO-5	2	3	2	3	-	-	-	-	-	-	-	-	2.50
CO-6	2	2	2	2	-	-		2	2	3	-	-	2.10
Average	2.5	2.5	2.2	2.5	2.5	-	-	2	2	3	-	-	2.40



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Course Name		Elements of Electrical Engineering (23000012)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	1	1	1	1	1	1	1	1	1	1	2	1.30
CO-2	3	1	1	1	1	1	1	1	1	1	1	2	1.30
CO-3	3	1	1	1	1	1	1	1	1	1	1	2	1.30
CO-4	1	1	1	1	1	1	1	1	1	1	1	2	1.10
CO-5	2	1	1	1	1	1	1	1	1	1	1	1	1.10
CO-6	2	1	1	1	1	1	1	1	1	1	1	2	1.20
Average	2.3	1	1	1	1	1	1	1	1	-	-	-	1.10
Course Name		Elements of Mechanical Engineering (23000003)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	-	-	-	-	-	-	3	2	2	3	-	-	2.50
CO-2	-	-	-	-	-	-	2	3	3	3	-	-	2.80
CO-3	-	-	-	-	-	-	3	3	2	2	-	-	2.50
CO-4	-	-	-	-	-	-	2	2	3	2	-	-	2.30
CO-5	-	-	-	-	-	-	3	2	2	2	-	-	2.30
Average	-	-	-	-	-	-	2.6	2.4	2.4	2.4	-	-	2.50



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Course Name		Orientation Program in Startuo and Entrepreneuirship (12300001)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
CO-2	1	1	1	1	1	1	1	1	1	1	1	1	1.00
CO-3	1	1	1	1	1	1	1	1	1	1	1	1	1.00
CO-4	1	1	1	1	1	1	1	1	1	1	1	1	1.00
Average	1	1	1	1	1	1	1	1	1	1	1	1	1.00
Course Name		Environmental Studies (23000006)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1.00
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1.00
CO-3	1	2	2	2	-	-	-	-	-	-	1	1	1.50
CO-4	-	-	1	-	-	-	-	-	-	-	-	-	1.00
CO-5	2	1	1	1	-	-	-	-	-	-	-	-	1.30
Average	1.3	1.3	1.3	1.5	1	-	-	-	-	-	1	1	1.20
Course Name		Workshop (23000029)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	-	-	-	-	-	-	-	-	-	-	1	1.00
CO-2	1	-	-	-	1	-	1	-	-	-	-	-	1.00
CO-3	1	1	-	-	-	-	-	-	-	-	-	-	1.00
CO-4	1	-	-	-	-	1	-	-	-	-	-	1	1.00
CO-5	1	-	-	-	-	-	-	-	1	1	1		1.00
Average	1	1	-	-	1	1	-	-	-	-	1	1	1.00





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CO-PO matrix for all subjects B.tech sem-2													
Course Name		ENGINEERING PHYSICS(23000005)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	2	3	3	3	-	-	-	-	-	-	-	2.60
CO-2	2	3	3	2	2	-	-	-	-	-	-	-	2.40
CO-3	2	2	2	1	2	-	-	-	-	-	-	-	1.80
CO-4	2	2	3	2	3	-	-	-	-	-	-	-	2.40
CO-5	3	1	2	2	3	-	-	-	-	-	-	-	2.20
CO-6	3	2	3	3	2	-	-	-	-	-	-	-	2.60
CO-7	2	1	3	2	2	-	-	-	-	-	-	-	2.00
Average	2.5	1.5	2.8	2.3	2.5	-	-	-	-	-	-	-	2.30
Course Name		COMMUNICATION SKILLS(23000008)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	-	-	-	-	-	-	3	2	2	3	-	-	2.50
CO-2	-	-	-	-	-	-	2	3	3	3	-	-	2.80
CO-3	-	-	-	-	-	-	3	3	2	2	-	-	2.50
CO-4	-	-	-	-	-	-	2	2	3	2	-	-	2.30
CO-5	-	-	-	-	-	-	3	2	2	2	-	-	2.30
Average	-	-	-	-	-	-	2.6	2.4	2.4	2.4	-	-	2.50



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Course Name		MATHS-II (23000010)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	2	3	3	1	-	-	-	-	-			2.20
CO-2	3	3	1	2	3	-	-	-	-	-			2.40
CO-3	2	3	2	1	2	-	-	-	-	-			2.00
CO-4	3	2	2	2	1	-	-	-	-	-			2.00
CO-5	2	3	1	1	2	-	-	-	-	-			1.80
CO-6	1	2	2	3	1	-	-	-	-	-			1.80
Average	2.2	2.6	1.6	1.8	1.8	-	-	-	-	-	-	-	2.00
Course Name		ENGINEERING GRAPHICS(23000011)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	-	-	-	-	-	-	-	3	3	2	1	2	2.20
CO-2	-	-	-	-	-	-	-	1	2	2	2	2	1.80
CO-3	-	-	-	-	-	-	-	2	1	3	2	2	2.00
CO-4	-	-	-	-	-	-	-	2	2	2	3	2	2.20
CO-5	-	-	-	-	-	-	-	3	2	1	2	2	2.00
CO-6	-	-	-	-	-	-	-	2	3	2	2	1	2.00
Average	-	-	-	-	-	-	-	2.2	2.2	2	2	1.8	2.00



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Course Name		BASIC PROGRAM IN ENTREPRENURESHIP (12300002)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	3	3	3	-	-	-	-	-	-	-	-	3.00
CO-2	2	2	1	2	-	-	-	-	-	-	-	-	1.80
CO-3	1	2	2	1	-	-	-	-	-	-	-	-	1.50
CO-4	2	1	2	2	-	-	-	-	-	-	-	-	1.80
Average	2	2	2	2	-	-	-	-	-	-	-	-	2.00
Course Name		ELEMENTS OF CIVIL ENGINEERING (23000030)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	-	-	-	-	-	-	-	3	2	2	2	2	2.20
CO-2	-	-	-	-	-	-	-	2	1	2	1	2	1.60
CO-3	-	-	-	-	-	-	-	3	3	3	2	2	2.60
CO-4	-	-	-	-	-	-	-	2	2	3	2	2	2.20
CO-5	-	-	-	-	-	-	-	2	1	3	1	1	1.60
CO-6	-	-	-	-	-	-	-	3	1	2	2	1	1.80
Average	-	-	-	-	-	-	-	2.5	1.7	2.5	1.7	1.7	2.00



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Course Name		CHEMISTRY (23020216)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1.00
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1.00
CO-3	1	2	2	2	-	-	-	-	-	-	2	1	1.70
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2.00
CO-5	1	-	-	-	-	2	-	-	-	-	-	2	1.70
Average	1	1.5	2	2	1	2	-	-	-	-	2	1.5	1.60
Course Name		Personality Development (24190203)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	-	-	-	-	-	-	3	2	2	3	-	-	2.50
CO-2	-	-	-	-	-	-	2	3	3	3	-	-	2.80
CO-3	-	-	-	-	-	-	3	3	2	2	-	-	2.50
CO-4	-	-	-	-	-	-	2	2	3	2	-	-	2.30
CO-5	-	-	-	-	-	-	3	2	2	2	-	-	2.30
Average	-	-	-	-	-	-	2.6	2.4	2.4	2.4	-	-	2.50



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Course Name		Maths-3 (23000015)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	1	1	1	-	3	3	2	2	3	3	1.91
CO-2	-	-	-	-	1	-	2	1	1	1	2	2	1.43
CO-3	1	2	2	2	-	1	3	2	3	3	1	1	1.91
CO-4	-	-	3	-	1	-	2	2	2	2	1	2	1.88
CO-5	1	-	1	-	-	2	3	2	1	1	1	1	1.44
Average	1	1.5	1.75	1.5	1	1.5	2.6	2	1.8	1.8	1.6	1.8	1.65
Course Name		Mechanics of solids (23080301)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	
CO-1	1	1	-	-	-	-	2	1	1	3	2	1	1.50
CO-2	-	-	-	-	1	-	1	2	2	2	3	2	1.86
CO-3	1	2	2	2	-	1	2	2	2	1	1	1	1.55
CO-4	-	-	3	-	-	-	3	2	2	2	2	2	2.29
Average	1	1.5	2.5	2	1	1	2	1.75	1.75	2	2	1.5	1.67
Course Name		Manufacturing Process -I (23080303)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	
CO-1	1	1	-	-	-	2	3	3	2	1	2	-	1.88
CO-2	-	1	-	1	1	2	2	1	2	2	1	-	1.44
CO-3	1	2	2	2	2	1	1	1	1	2	1	1	1.42
CO-4	-	-	3	2	-	1	3	2	3	1	2	1	2.00
CO-5	1	-	2	1	-	1	2	3	2	3	1	2	1.80
Average	1	1.33	2.33	1.5	1.5	1.4	2.2	2	2	1.8	1.4	1.3333	1.65





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Course Name		Material Science & Metallurgy (23110304)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	2	3	3	2	1	2	1	1.78
CO-2	-	-	-	-	1	2	2	1	3	2	-	-	1.83
CO-3	1	2	2	2	-	1	2	2	2	1	1	1	1.55
CO-4	-	-	3	-	-	2	1	1	1	2	2	-	1.71
CO-5	-	-	-	-	-	1	2	1	2	2	1	2	1.57
Average	1	1.5	2.5	2	1	1.6	2	1.6	2	1.6	1.5	1.3333	1.64
Course Name		Kinematics Of Machine (23080304)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO- 1	2	2	3	3	2	-	2	3	2	3	2	1	2.27
CO- 2	-	2	1	2	3	2	1	2	2	2	2	1	1.82
CO- 3	-	-	-	2	2	-	3	2	2	3	2	1	2.13
CO- 4	3	-	-	2	1	1	2	1	1	2	3	1	1.70
CO- 5	3	-	2	3	3	2	1	2	2	3	2	2	2.27
Average	2.67	2	2	2.4	2.2	1.67	1.8	2	1.8	2.6	2.2	1.2	2.04



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Course Name		Electrical Technology (23080305)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO- 1	-	3	2	3	2	2	3	2	1	2	1	2	2.22
CO- 2	-	-	3	2	3	2	3	1	2	2	2	1	2.25
CO- 3	2	2	-	2	2	-	2	1	2	1	2	2	1.75
CO- 4	-	-	-	2	1	-	2	2	1	2	1	3	1.67
Average	2	2.5	2.5	2.25	2	2	2.5	1.5	1.5	1.75	1.5	2	2.05
Course Name		Entrepreneurship (23000014)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO- 1	-	3	2	3	2	2	3	2	1	3	1	2	2.33
CO- 2	-	-	3	2	3	2	3	1	1	2	2	1	2.13
CO- 3	2	2	-	2	2	-	2	1	1	2	2	2	1.75
CO- 4	-	-	-	2	1	-	1	2	3	2	2	3	1.83
Average	2	2.5	2.5	2.25	2	2	2.25	1.5	1.5	2.25	1.75	2	2.08



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CO-PO matrix for all subjects of Mechanical engineering semester-IV

Course Name		Maths-4 23000018											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO- 1	3	3	3	2	2	-	-	-	-	-	-	-	2.60
CO- 2	2	2	2	2	3	-	-	-	-	-	-	-	2.20
CO- 3	2	2	3	2	3	-	-	-	-	-	-	-	2.40
CO- 4	3	2	3	2	3	-	-	-	-	-	-	-	2.60
CO- 5	2	1	3	2	2	-	-	-	-	-	-	-	2.00
CO- 6	2	2	3	3	2	-	-	-	-	-	-	-	2.40
CO- 7	2	3	2	3	2	-	-	-	-	-	-	-	2.40
Average	2.29	2.14	2.71	2.29	2.43	-	-	-	-	-	-	-	2.37
Course Name		Machine Design & Industrial Drafting (23110401)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO- 1	1	1	-	-	-	-	2	2	1	2	1	1	1.38
CO- 2	-	-	-	-	1	-	3	2	3	2	1	1	1.86
CO- 3	1	2	2	2	-	1	2	3	2	3	1	3	2.00
CO- 4	-	-	2	-	-	-	2	2	2	1	1	1	1.57
Average	1	1.5	2	2	1	1	2.25	2.25	2	2	1	1.5	1.63





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Course Name		Engineering Thermodynamics (23090401)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO- 1	1	1	-	-	-	-	2	2	2	1	2	1	1.50
CO- 2	-	-	-	-	1	-	-	-	-	-	-	-	1.00
CO- 3	1	2	2	2	-	1	2	3	2	3	1	3	2.00
CO- 4	-	-	2	-	-	-	2	2	1	2	2	1	1.71
Average	1	1.5	2	2	1	1	2	2.33	1.67	2	1.6667	1.6667	1.65
Course Name		Project Feasibility & Marketing Skill (23000017)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO- 1	1	1	-	-	-	-	2	2	1	2	1	2	1.50
CO- 2	-	-	-	-	1	-	2	-	1	2	1	-	1.40
CO- 3	1	2	2	2	-	-	3	2	2	-	2	1	1.89
CO- 4	-	-	2	-	-	-	2	-	1	1	2	-	1.60
CO-5	-	-	-	-	-	1	2	1	2	1	3	-	1.67
Average	1	1.5	2	2	1	1	2.2	1.67	1.4	1.5	1.8	1.5	1.55



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Course Name		MECHANICAL MEASUREMENT & METROLOGY (23090402)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO- 1	1	1	-	-	-	-	1	2	1	2	1	2	1.38
CO- 2	-	-	-	-	1	-	3	-	1	-	-	-	1.67
CO- 3	1	2	2	2	2	-	1	2	3	2	2	1	1.82
CO- 4	-	-	2	-	-	-	-	2	3	2	1	1	1.83
CO-5	1	1				2	1	2	1	1	2	1	1.33
Average	1	1.5	2	2	1.5	-	-	-	-	-	1.5	1.25	1.54
Course Name		MANUFACTURING PROCESS II (23090404)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO- 1	3	2	3	2	-	-	2	-	1	2	1	-	2.14
CO- 2	2	2	1	1	-	-	-	-	3	-	2	-	1.80
CO- 3	2	1	3	3	-	1	-	2	-	1	-	-	1.86
CO- 4	3	2	3	2	-	2	-	1	-	-	-	1	2.17
CO-5	2	1	-	-	1	-	-	-	-	-	-	-	1.33
Average	2.4	1.6	2.5	2	1	1.5	2	1.5	2	1.5	1.5	1	1.80



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CO-PO matrix for all subjects of Mechanical engineering semester-V

Course Name		Fluid Mechanics (23090501)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO- 1	1	1	2	1	2	1	2	3	2	1	2	1	1.58
CO- 2	3	1	-	-	1	1	2	-	3	-	2	-	1.86
CO- 3	2	1	2	2	2	3	2	-	-	-	2	1	1.89
CO-4	1	2	2	2	2	2	-	1	2	1	2	1	1.64
CO-5	1	1	2	2	3	3	-	-	-	-	-	-	2.00
CO-6	2	3	2	1	2	1	-	-	-	-	-	-	1.83
Average	1.67	1.5	2	1.6	2	1.83	2	2	2.33	1	2	1	1.74
Course Name		Design of Machine Elements (23090502)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO- 1	1	1	-	-	-	-	3	2	3	2	3	2	2.13
CO- 2	-	-	-	-	1	-	2	2	2	1	2	1	1.57
CO- 3	1	2	2	2	-	-	2	3	2	1	2	1	1.80
CO- 4	-	-	2	-	-	1	2	1	2	1	2	1	1.50
CO- 5	-	-	-	1	2	-	3	2	1	2	3	1	1.88
Average	1	1.5	2	1.5	1.5	1	2.4	2	2	1.4	2.4	1.2	1.66





Course Name		Heat Transfer (23090503)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	2	2	1	2	-	-	-	-	-	-	1.50
CO-2	3	2	2	1	1	2	-	-	3	1	-	-	1.88
CO-3	1	2	2	2	2	1	-	2	-	2	2	1	1.70
CO-4	2	1	2	2	1	2	1	-	-	-	-	-	1.57
CO-5	3	2	2	1	2	1	-	1	1	1	-	-	1.56
Average	2	1.6	2	1.6	1.4	1.6	1	1.5	2	1.3333	2	1	1.59
Course Name		Theory of Machines (23090504)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	2	3	2	3	2	3	2.13
CO-2	-	-	-	-	1	-	3	2	3	2	3	-	2.33
CO-3	1	2	2	2	-	-	2	2	2	2	2	1	1.80
CO-4	-	-	2	-	-	2	2	1	2	2	1	2	1.75
CO-5	-	-	-	-	-	-	3	2	1	2	-	-	2.00
Average	1	1.5	2	2	1	2	2.4	2	2	2.2	2	2	1.84





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Course Name		Control Engineering (23090505)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	3	3	3	-	2	3	2	3	2	2	-	2.60
CO-2	2	2	1	2	-	3	2	3	2	3	2	-	2.20
CO-3	1	2	2	1	-	2	1	2	1	2	1	2	1.55
CO-4	-	-	-	-	1	3	2	3	2	3	2	-	2.29
CO-5	-	-	-	-	-	2	3	2	1	3	1	-	2.00
Average	2	2.33	2	2	1	2.4	2.2	2.4	1.8	2.6	1.6	2	2.03
Course Name		Case Study (23000027)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	3	3	3	-	2	1	2	1	2	2	1	2.09
CO-2	2	2	1	2	-	3	2	3	2	3	2	3	2.27
CO-3	1	2	2	1	-	2	1	1	1	2	1	-	1.40
CO-4	1	1	1	-	2	1	2	3	2	1	2	-	1.60
CO-5	-	1	-	2	-	-	-	-	-	-	-	-	1.50
Average	1.75	1.8	1.75	2	2	2	1.5	2.25	1.5	2	1.75	2	1.86



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Course Name		Intellectual Property Rights (12300005)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	3	3	3	-	1	2	1	2	1	1	-	2.00
CO-2	2	2	1	2	2	2	3	2	3	2	3	1	2.08
CO-3	1	2	2	1	1	2	1	2	1	2	1	-	1.45
CO-4	-	-	-	-	-	2	2	-	1	2	1	2	1.67
Average	2	2.33	2	2	1.5	1.75	2	1.67	1.75	1.75	1.5	1.5	1.81

CO-PO matrix for all subjects of Mechanical Engineering semester-VI

Course Name		DYNAMICS OF MACHINERY (23090601)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	2	3	2	3	3	2	-	2.13
CO-2	-	-	-	-	1	2	2	2	3	2	3	-	2.14
CO-3	1	2	2	2	-	1	2	2	2	-	2	1	1.70
CO-4	-	-	-	-	-	1	2	2	2	1	2	1	1.57
CO-5	-	-	-	-	-	2	1	2	2	3	3	2	2.14
Average	1	1.5	2	2	1	1.6	2	2	2.4	2.25	2.4	1.3333	1.79





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Course Name		FLUID POWER ENGINEERING (23090602)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	3	2	3	2	3	2	2.13
CO-2	-	-	-	-	1	-	2	3	2	3	2	3	2.29
CO-3	1	2	2	2	-	-	2	3	2	2	2	1	1.90
CO-4	-	-	2	-	-	1	2	3	2	2	-	2	2.00
CO-5	-	-	-	1	2	-	1	2	-	1	1	-	1.33
Average	1	1.5	2	1.5	1.5	1	2	2.6	2.25	2	2	2	1.78
Course Name		PRODUCTION TECHNOLOGY (23090603)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	2	3	2	2	3	-	2.00
CO-2	-	-	-	-	1	-	2	2	2	-	-	-	1.75
CO-3	1	2	2	2	-	1	2	1	2	2	2	1	1.64
CO-4	-	-	2	-	-	-	1	-	-	-	-	-	1.50
CO-5	2	-	-	1	2	-	2	2	2	1	2	2	1.78
Average	1.33	1.5	2	1.5	1.5	1	1.8	2	2	1.6667	2.3333	1.5	1.68



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Course Name		REFRIGERATION AND AIRCONDITIONING (23090604)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	2	2	2	2	1	-	-	1.57
CO-2	-	-	-	-	1	2	1	2	1	2	1	-	1.43
CO-3	1	2	2	2	-	2	2	3	-	-	2	1	1.89
CO-4	-	-	2	-	-	-	-	3	2	1	-	-	2.00
CO-5	-	-	-	1	2	1	2	-	2	-	3	-	1.83
Average	1	1.5	2	1.5	1.5	1.75	1.75	2.5	1.75	1.3333	2	1	1.63
Course Name		INDUSTRIAL ENGINEERING (23090605)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	2	3	2	3	2	3	2	3	2	3	-	2.36
CO-2	1	2	1	1	-	2	-	3	2	-	-	-	1.71
CO-3	1	1	3	3	-	2	-	3	-	2	-	1	2.00
CO-4	1	2	3	2	-	-	2	-	3	2	-	-	2.14
Average	1	1.75	2.5	2	3	2	2.5	2.67	2.67	2	3	1	2.17



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Course Name		SEMINAR (23000026)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	-	1	2	1	2	1	2	1	2	1	2	-	1.44
CO-2	-	2	1	1	-	-	-	-	-	-	-	-	1.33
CO-3	2	1	3	3	1	-	1	-	1	-	1	2	1.71
CO-4	-	2	3	2	-	-	2	-	-	3	2	-	2.40
CO-5	1	2	1	2	1	2	1	-	-	-	-	-	1.43
Average	1.5	1.6	2	1.8	1.33	1.5	1.5	1	1.5	2	1.6667	2	1.62
Course Name		EXPERT PROGRAM IN ENTREPRENEURSHIP (12300006)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	3	2	-	-	1	-	2	3	-	-	2.29
CO-2	2	2	1	1	1	1	-	2	-	1	-	-	1.38
CO-3	2	1	3	3	-	-	-	-	2	3	2	2	2.25
CO-4	2	2	3	2	-	1	1	-	-	-	-	-	1.83
Average	2.25	1.75	2.5	2	1	1	1	2	2	2.3333	2	2	1.82



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CO-PO matrix for all subjects of Mechanical Engineering semester-VII

Course Name		Computer Aided Design & Manufacturing (23090701)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	3	2	-	-	1	-	2	3	-	-	2.29
CO-2	2	2	1	1	1	1	-	2	-	-	-	-	1.43
CO-3	2	1	3	3	-	-	-	-	2	3	2	2	2.25
CO-4	2	2	3	2	-	1	1	-	-	-	-	-	1.83
CO-5	2	2	1	1	1	2	-	3	3	2	-	-	1.89
Average	2.2	1.8	2.2	1.8	1	1.33	1	2.5	2.33	2.6667	2	2	1.90
Course Name		Power Plant Engineering (23090702)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	3	2	-	-	1	-	2	3	-	-	2.29
CO-2	2	2	1	1	1	1	-	2	-	1	-	-	1.38
CO-3	2	1	3	3	-	-	-	-	2	3	2	2	2.25
CO-4	2	2	3	2	-	1	1	-	-	-	-	-	1.83
CO-5	2	1	2	1	1	1	2	2	1	-	-	1	1.40
Average	2.2	1.6	2.4	1.8	1	1	1.33	2	1.67	2.3333	2	1.5	1.74





Course Name		Operation Research (23090703)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	3	2	-	-	1	-	2	3	-	-	2.29
CO-2	2	2	1	1	1	1	-	2	-	1	-	-	1.38
CO-3	2	1	3	3	-	-	-	-	2	3	2	2	2.25
CO-4	2	2	3	2	-	1	1	-	-	-	-	-	1.83
CO-5	1	2	1	2	1	2	1	1	1	2	1	2	1.42
Average	2	1.8	2.2	2	1	1.33	1	1.5	1.67	2.25	1.5	2	1.69
Course Name		Machine Design (23090704)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	3	2	-	-	1	-	2	3	-	-	2.29
CO-2	2	2	1	1	1	1	-	2	-	1	-	-	1.38
CO-3	2	1	3	3	-	1	-	1	2	3	2	2	2.00
CO-4	2	2	3	2	-	1	1	-	-	-	-	-	1.83
CO-5	1	1	2	1	2	1	2	1	2	3	2		1.64
Average	2	1.6	2.4	1.8	1.5	1	1.33	1.33	2	2.5	2	2	1.79





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Course Name		Metal Forming Analysis (23090712)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	3	2	-	-	1	-	2	1	-	-	2.00
CO-2	2	2	1	1	1	1	-	2	-	1	-	-	1.38
CO-3	2	1	3	3	-	-	-	-	2	3	2	2	2.25
CO-4	2	2	3	2	1	1	1	-	-	-	-	-	1.71
CO-5	1	2	1	2	3	2	2	1	2	3	2		1.91
Average	2	1.8	2.2	2	1.67	1.33	1.33	1.5	2	2	2	2	1.85
Course Name		Start up Project-I (123000007)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	3	2	-	-	1	-	2	3	-	-	2.29
CO-2	2	2	1	1	1	1	-	2	-	1	-	-	1.38
CO-3	2	1	3	3	-	-	-	-	2	3	2	2	2.25
CO-4	2	2	3	2	-	1	1	-	-	-	-	-	1.83
Average	2.25	1.75	2.5	2	1	1	1	2	2	2.3333	2	2	1.82



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Course Name		Project – I (23000023)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	3	2	-	-	1	-	2	3	1	-	2.13
CO-2	2	2	1	1	1	1	-	2	-	1	-	-	1.38
CO-3	2	1	3	3	2	3	2	3	2	3	2	2	2.33
CO-4	2	2	3	2	-	1	1	2	1	2	1	-	1.70
CO-5	1	2	1	1	1	1	1	2	1	2	1	2	1.33
Average	2	1.8	2.2	1.8	1.33	1.5	1.25	2.25	1.5	2.2	1.25	2	1.76

CO-PO matrix for all subjects of Mechanical Engineering semester-VIII

Course Name		PROJECT 2 (23000025)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	3	2	1	2	1	3	2	3	1	-	2.09
CO-2	2	2	-	1	1	1	-	2	-	1	-	-	1.43
CO-3	2	-	3	3	2	1	-	-	2	3	2	2	2.22
CO-4	-	2	3	2	-	1	1	-	-	-	-	-	1.80
CO-5	1	2	1	2	1	2	1	2	1	3	2	1	1.58
Average	2	2	2.5	2	1.25	1.4	1	2.33	1.67	2.5	1.6667	1.5	1.82



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Course Name		INDUSTRIAL TRAINING (23000028)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	3	2	1	2	1	2	2	3	1	-	2.00
CO-2	2	2	1	-	-	1	-	2	-	1	-	-	1.50
CO-3	-	-	-	3	-	-	-	-	2	3	2	2	2.40
CO-4	-	2	3	2	-	1	1	-	-	-	-	-	1.80
CO-5	1	1	1	1	-	-	-	-	-	-	-	-	1.00
Average	2	1.75	2	2	1	1.33	1	2	2	2.3333	1.5	2	1.74
Course Name		ENERGY CONSERVATION AND MANAGEMENT (23090805)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	3	2	-	-	1	-	2	3	-	-	2.29
CO-2	2	2	1	1	1	1	-	2	-	1	-	-	1.38
CO-3	2	1	3	3	1	1	2	3	2	3	2	2	2.08
CO-4	2	2	3	2	1	1	1	2	-	-	-	-	1.75
CO-5	1	2	2	1	2	2	2	3	2	2	3	3	2.08
Average	2	1.8	2.4	1.8	1.25	1.25	1.5	2.5	2	2.25	2.5	2.5	1.98





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Course Name		Start-Up Project Part-II (12300008)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	3	2	-	-	1	-	2	3	-	-	2.29
CO-2	2	2	1	1	1	1	-	2	-	1	-	-	1.38
CO-3	2	1	1	1	-	1	2	1	2	3	2	2	1.64
CO-4	1	1	3	2	-	1	1	-	1	2	2	-	1.56
Average	2	1.5	2	1.5	1	1	1.33	1.5	1.67	2.25	2	2	1.65



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SWARNIM INSTITUTE OF TECHNOLOGY
PROGRAM NAME :- B.TECH.-CIVIL ENGINEERING
ACADEMIC YEAR - 2023-2024

CO-PO MAPPING B.TECH CIVIL ENGINEERING 1ST SEM													
Course Name :		Maths-I (23000001)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Over all CO average
CO-1	3	1	2	2	2	-	-	-	-	-	-	-	2
CO-2	2	2	2	2	1	-	-	-	-	-	-	-	1.8
CO-3	2	2	2	2	3	-	-	-	-	-	-	-	2.2
CO-4	3	1	3	3	2	-	-	-	-	-	-	-	2.4
CO-5	2	2	3	3	1	-	-	-	-	-	-	-	2.2
CO-6	2	2	2	2	2	-	-	-	-	-	-	-	2
Average	2.1	1	1	1	1	1	1	1	1	1	1	1	1
Course Name :		Fundamentals of Computer Programming (23000004)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Over all CO average
CO-1	3	2	2	2	3	-	-	-	-	-	-	-	2.4
CO-2	3	2	2	3	2	-	-	-	-	-	-	-	2.4
CO-3	3	3	3	2	-	-	-	-	-	-	-	-	2.8
CO-4	2	3	2	3	-	-	-	-	-	-	-	-	2.5
CO-5	2	3	2	3	-	-	-	-	-	-	-	-	2.5
CO-6	2	2	2	2	-	-		2	2	3	-	-	2.1
Average	2.5	2.5	2.2	2.5	2.5	-	-	2	2	3	-	-	2.4





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Course Name :		Elements of Electrical Engineering (23000012)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Over all CO average
CO-1	3	1	1	1	1	1	1	1	1	1	1	2	1.3
CO-2	3	1	1	1	1	1	1	1	1	1	1	2	1.3
CO-3	3	1	1	1	1	1	1	1	1	1	1	2	1.3
CO-4	1	1	1	1	1	1	1	1	1	1	1	2	1.1
CO-5	2	1	1	1	1	1	1	1	1	1	1	1	1.1
CO-6	2	1	1	1	1	1	1	1	1	1	1	2	1.2
Average	2.3	1	1	1	1	1	1	1	1	-	-	-	1.1
Course Name :		Elements of Mechanical Engineering (23000003)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Over all CO average
CO-1	-	-	-	-	-	-	3	2	2	3	-	-	2.5
CO-2	-	-	-	-	-	-	2	3	3	3	-	-	2.8
CO-3	-	-	-	-	-	-	3	3	2	2	-	-	2.5
CO-4	-	-	-	-	-	-	2	2	3	2	-	-	2.3
CO-5	-	-	-	-	-	-	3	2	2	2	-	-	2.3
Average	-	-	-	-	-	-	2.6	2.4	2.4	2.4	-	-	2.5

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Course Name :		Orientation Program in Startup and Entrepreneurship (12300001)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Over all CO average
CO-1	1	1	1	1	1	1	1	1	1	1	1	1	1
CO-2	1	1	1	1	1	1	1	1	1	1	1	1	1
CO-3	1	1	1	1	1	1	1	1	1	1	1	1	1
CO-4	1	1	1	1	1	1	1	1	1	1	1	1	1
Average	1	1	1	1	1	1	1	1	1	1	1	1	1
Course Name :		Environmental Studies (23000006)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Over all CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	1	1	1.5
CO-4	-	-	1	-	-	-	-	-	-	-	-	-	1
CO-5	2	1	1	1	-	-	-	-	-	-	-	-	1.3
Average	1.3	1.3	1.3	1.5	1	-	-	-	-	-	1	1	1.2

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CO-PO MAPPING B.TECH CIVIL ENGINEERING 2ND SEM

Course Name :		ENGINEERING PHYSICS(23000005)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Over all CO average
CO-1	2	2	3	3	3	-	-	-	-	-	-	-	2.6
CO-2	2	3	3	2	2	-	-	-	-	-	-	-	2.4
CO-3	2	2	2	1	2	-	-	-	-	-	-	-	1.8
CO-4	2	2	3	2	3	-	-	-	-	-	-	-	2.4
CO-5	3	1	2	2	3	-	-	-	-	-	-	-	2.2
CO-6	3	2	3	3	2	-	-	-	-	-	-	-	2.6
CO-7	2	1	3	2	2	-	-	-	-	-	-	-	2
Average	2.5	1.5	2.8	2.3	2.5	-	-	-	-	-	-	-	2.3
Course Name :		COMMUNICATION SKILLS(23000008)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Over all CO average
CO-1	-	-	-	-	-	-	3	2	2	3	-	-	2.5
CO-2	-	-	-	-	-	-	2	3	3	3	-	-	2.8
CO-3	-	-	-	-	-	-	3	3	2	2	-	-	2.5
CO-4	-	-	-	-	-	-	2	2	3	2	-	-	2.3
CO-5	-	-	-	-	-	-	3	2	2	2	-	-	2.3
Average	-	-	-	-	-	-	2.6	2.4	2.4	2.4	-	-	2.5





Course Name :		MATHS-II(23000010)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Over all CO average
CO-1	2	2	3	3	1	-	-	-	-	-	-	-	2.2
CO-2	3	3	1	2	3	-	-	-	-	-	-	-	2.4
CO-3	2	3	2	1	2	-	-	-	-	-	-	-	2
CO-4	3	2	2	2	1	-	-	-	-	-	-	-	2
CO-5	2	3	1	1	2	-	-	-	-	-	-	-	1.8
CO-6	1	2	2	3	1	-	-	-	-	-	-	-	1.8
Average	2.2	2.6	1.6	1.8	1.8	-	-	-	-	-	-	-	2
Course Name :		ENGINEERING GRAPHICS(23000011)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Over all CO average
CO-1	-	-	-	-	-	-	-	3	3	2	1	2	2.2
CO-2	-	-	-	-	-	-	-	1	2	2	2	2	1.8
CO-3	-	-	-	-	-	-	-	2	1	3	2	2	2
CO-4	-	-	-	-	-	-	-	2	2	2	3	2	2.2
CO-5	-	-	-	-	-	-	-	3	2	1	2	2	2
CO-6	-	-	-	-	-	-	-	2	3	2	2	1	2
Average	-	-	-	-	-	-	-	2.2	2.2	2	2	1.8	2
Course Name :		BASIC PROGRAM IN ENTREPRENURESHIP(12300002)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Over all CO average
CO-1	3	3	3	3	-	-	-	-	-	-	-	-	3
CO-2	2	2	1	2	-	-	-	-	-	-	-	-	1.8
CO-3	1	2	2	1	-	-	-	-	-	-	-	-	1.5
CO-4	2	1	2	2	-	-	-	-	-	-	-	-	1.8
Average	2	2	2	2	-	-	-	-	-	-	-	-	2





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Course Name :		ELEMENTS OF CIVIL ENGINEERING(23000030)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Over all CO average
CO-1	-	-	-	-	-	-	-	3	2	2	2	2	2.2
CO-2	-	-	-	-	-	-	-	2	1	2	1	2	1.6
CO-3	-	-	-	-	-	-	-	3	3	3	2	2	2.6
CO-4	-	-	-	-	-	-	-	2	2	3	2	2	2.2
CO-5	-	-	-	-	-	-	-	2	1	3	1	1	1.6
CO-6	-	-	-	-	-	-	-	3	1	2	2	1	1.8
Average	-	-	-	-	-	-	-	2.5	1.7	2.5	1.7	1.7	2

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CO-PO MAPPING B.TECH CIVIL ENGINEERING 3RD SEM

Course Name :		Strength of Material (23030304)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Over all CO average
CO-1	2	2	3	3	1	2	2	3	3	1	2	1	2.08
CO-2	3	3	1	2	3	3	3	1	2	3	3	3	2.50
CO-3	2	3	2	1	2	2	3	2	1	2	3	2	2.08
CO-4	3	2	2	2	1	3	2	2	2	1	2	1	1.92
CO-5	2	3	1	1	2	2	3	1	1	2	3	2	1.92
CO-6	1	2	2	3	1	1	2	2	3	1	2	1	1.75
Average	2.17	2.50	1.83	2.00	1.67	2.17	2.50	1.83	2.00	1.67	2.50	1.67	2.04
Course Name :		Fluid Mechanics (23030305)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Over all CO average
CO-1	3	2	2	3	1	1	2	2	3	1	2	1	1.92
CO-2	3	3	1	2	3	3	3	1	2	3	3	3	2.50
CO-3	2	2	3	1	3	2	3	3	1	2	2	2	2.17
CO-4	3	2	3	2	1	3	2	3	2	1	3	1	2.17
CO-5	2	3	1	1	3	3	3	1	1	2	3	2	2.08
Average	2.60	2.40	2.00	1.80	2.20	2.40	2.60	2.00	1.80	1.80	2.60	1.80	2.17

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Course Name :		Surveying (23030301)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Over all CO average
CO-1	3	2	2	3	1	1	2	2	3	1	2	1	1.92
CO-2	3	3	1	2	3	3	3	1	2	3	3	3	2.50
CO-3	2	2	3	1	3	2	3	3	1	2	2	2	2.17
CO-4	3	2	3	2	1	3	2	3	2	1	3	1	2.17
CO-5	2	3	1	1	3	3	3	1	1	2	3	2	2.08
CO-6	1	2	3	2	1	1	2	3	2	1	2	1	1.75
CO-7	3	3	1	2	2	2	2	3	1	1	3	3	2.17
Average	2.43	2.43	2.00	1.86	2.00	2.14	2.43	2.29	1.71	1.57	2.57	1.86	2.11
Course Name :		Building Construction (23030302)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Over all CO average
CO-1	1	2	3	2	1	1	2	3	2	1	2	1	1.75
CO-2	2	3	2	1	2	1	1	2	3	2	1	1	1.75
CO-3	2	2	3	1	3	2	3	3	1	2	2	2	2.17
CO-4	3	2	3	2	1	3	2	3	2	1	3	1	2.17
CO-5	2	3	1	1	3	3	3	1	1	2	3	2	2.08
CO-6	1	2	3	2	1	1	2	3	2	1	2	1	1.75
CO-7	3	3	2	3	1	1	3	3	1	1	3	3	2.25
CO-8	3	2	2	3	1	1	2	2	3	1	2	1	1.92
CO-9	3	3	1	2	3	3	3	1	2	3	3	3	2.50
Average	2.22	2.44	2.22	1.89	1.78	1.78	2.33	2.33	1.89	1.56	2.33	1.67	2.04

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Course Name :		Concrete Technology (23030303)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Over all CO average
CO-1	3	2	3	2	3	1	2	3	2	3	2	3	2.42
CO-2	3	2	2	1	2	2	3	2	3	2	1	3	2.17
CO-3	3	2	3	1	3	2	3	3	1	2	2	2	2.25
Average	3.00	2.00	2.67	1.33	2.67	1.67	2.67	2.67	2.00	2.33	1.67	2.67	2.28
Course Name :		Maths 3 (2300015)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Over all CO average
CO-1	2	2	3	3	2	-	-	-	-	-	-	-	2.4
CO-2	2	2	1	2	3	-	-	-	-	-	-	-	2
CO-3	2	2	2	2	2	-	-	-	-	-	-	-	2
CO-4	3	2	2	2	1	-	-	-	-	-	-	-	2
CO-5	3	2	2	3	3	-	-	-	-	-	-	-	2.6
Average	2.4	2	2	2.4	2.2	-	-	-	-	-	-	-	2.2
Course Name :		Foundation Program in Entrepreneurship (12300003)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Over all CO average
CO-1	3	3	2	3	2	-	-	-	-	-	-	-	2.6
CO-2	1	2	3	2	3	-	-	-	-	-	-	-	2.2
CO-3	2	2	2	2	2	-	-	-	-	-	-	-	2
CO-4	2	2	1	2	1	-	-	-	-	-	-	-	1.6
CO-5	2	3	3	3	3	-	-	-	-	-	-	-	2.8
Average	2	2.4	2.2	2.4	2.2	-	-	-	-	-	-	-	2.24





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Course Name :		Theory of Structure-I (23030401)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Over all CO average
CO-1	3	3	1	2	2	2	2	3	1	1	3	3	2.17
CO-2	1	3	1	2	3	1	2	3	1	1	3	3	2.00
CO-3	1	2	3	2	1	2	3	3	1	2	2	2	2.00
CO-4	3	2	3	2	1	3	1	2	3	2	1	2	2.08
CO-5	2	3	1	1	3	3	2	3	1	1	3	3	2.17
CO-6	2	3	1	1	3	3	2	3	2	1	2	1	2.00
Average	2.00	2.67	1.67	1.67	2.17	2.33	2.00	2.83	1.50	1.33	2.33	2.33	2.07
Course Name :		Applied Fluid Mechanics (23030402)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Over all CO average
CO-1	3	2	3	1	3	2	3	3	1	2	2	2	2.25
CO-2	3	3	1	2	2	2	3	2	3	3	3	2	2.42
CO-3	3	2	3	1	3	2	2	2	3	1	3	3	2.33
CO-4	2	2	3	1	3	2	3	3	1	2	2	3	2.25
CO-5	1	3	1	2	2	2	2	3	1	3	2	2	2.00
Average	2.40	2.40	2.20	1.40	2.60	2.00	2.60	2.60	1.80	2.20	2.40	2.40	2.25

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Course Name :		Geotechnics and Applied Geology (23030403)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Over all CO average
CO-1	2	2	1	2	1	1	2	3	2	1	2	1	1.67
CO-2	2	3	2	3	2	1	3	2	3	2	1	1	2.08
CO-3	1	2	3	1	3	2	3	3	3	2	2	2	2.25
CO-4	2	1	3	2	1	3	2	3	2	1	3	1	2.00
CO-5	2	3	1	1	3	3	3	3	1	2	3	2	2.25
CO-6	1	2	3	2	1	1	2	3	2	1	2	1	1.75
CO-7	2	3	3	3	1	1	3	3	1	3	3	3	2.42
CO-8	3	2	2	3	1	1	2	2	3	1	2	1	1.92
CO-9	2	3	1	2	3	2	3	1	2	1	3	1	2.00
Average	1.89	2.33	2.11	2.11	1.78	1.67	2.56	2.56	2.11	1.56	2.33	1.44	2.04
Course Name :		Building and Town Planning (23030404)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Over all CO average
CO-1	3	3	1	2	1	3	1	3	1	1	2	1	1.83
CO-2	2	3	1	2	2	2	3	2	3	3	3	2	2.33
CO-3	2	3	1	2	2	1	2	2	3	1	3	3	2.08
CO-4	2	2	3	1	3	2	3	3	1	2	2	3	2.25
Average	2.25	2.75	1.50	1.75	2.00	2.00	2.25	2.50	2.00	1.75	2.50	2.25	2.13

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Course Name :		Advanced Surveying (23030406)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Over all CO average
CO-1	3	2	1	3	1	1	2	3	3	3	2	1	2.08
CO-2	2	3	2	3	2	1	3	2	3	2	1	1	2.08
CO-3	1	2	3	1	1	2	3	3	3	2	2	2	2.08
CO-4	1	1	3	2	1	3	3	3	3	1	3	1	2.08
CO-5	2	3	1	1	3	3	3	3	1	2	3	2	2.25
CO-6	1	2	3	2	1	1	2	3	2	1	2	1	1.75
CO-7	3	1	3	3	1	1	3	3	1	3	1	3	2.17
Average	1.86	2.00	2.29	2.14	1.43	1.71	2.71	2.86	2.29	2.00	2.00	1.57	2.07
Course Name :		Maths-4 (23000018)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Over all CO average
CO-1	3	3	3	2	2	-	-	-	-	-	-	-	2.60
CO-2	2	2	2	2	3	-	-	-	-	-	-	-	2.20
CO-3	2	2	3	2	3	-	-	-	-	-	-	-	2.40
CO-4	3	2	3	2	3	-	-	-	-	-	-	-	2.60
CO-5	2	1	3	2	2	-	-	-	-	-	-	-	2.00
CO-6	2	2	3	3	2	-	-	-	-	-	-	-	2.40
CO-7	2	3	2	3	2	-	-	-	-	-	-	-	2.40
Average	2.29	2.14	2.71	2.29	2.43	-	-	-	-	-	-	-	2.37

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Course Name :		Intermediate Program in Entrepreneurship (12300004)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Over all CO average
CO-1	3	2	3	2	-	-	-	-	-	-	-	-	2.5
CO-2	2	2	1	1	-	-	-	-	-	-	-	-	1.5
CO-3	2	1	3	3	-	-	-	-	-	-	-	-	2.25
CO-4	3	2	3	2	-	-	-	-	-	-	-	-	2.5
Average	2.5	1.75	2.5	2	-	-	-	-	-	-	-	-	2.1875

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Course Name :		Highway Engineering (23030501)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Over all CO average
CO-1	3	3	1	1	3	3	2	3	1	1	3	3	2.25
CO-2	2	3	2	1	2	1	1	2	3	2	1	1	1.75
CO-3	3	3	1	1	3	2	3	3	1	1	2	2	2.08
CO-4	2	2	3	2	1	3	2	3	2	1	3	1	2.08
CO-5	1	3	1	1	3	3	3	1	1	2	3	2	2
CO-6	3	3	1	2	2	2	3	1	2	3	3	2	2.25
CO-7	2	3	1	3	1	1	3	3	1	1	3	3	2.08
CO-8	3	2	2	3	1	1	2	2	3	1	2	1	1.95
CO-9	2	2	1	2	3	2	3	1	2	3	3	2	2.16
CO-10	3	3	1	1	3	3	3	1	2	3	3	3	2.42
Average	2.4	2.7	1.4	1.7	2.2	2.1	2.5	2	1.8	1.8	2.6	2	2.1
Course Name :		Environmental Engineering (23030502)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Over all CO average
CO-1	2	2	2	3	1	2	2	2	3	1	2	1	1.91667
CO-2	2	3	1	2	3	3	2	1	2	3	3	1	2.16667
CO-3	2	1	2	1	2	2	3	2	1	2	3	2	1.91667
CO-4	3	2	2	2	1	3	2	2	2	1	2	1	1.91667
CO-5	2	3	1	2	2	2	3	1	1	2	3	2	2
CO-6	1	2	2	3	1	1	2	2	3	1	2	2	1.83333
Average	2	2.16667	1.66667	2.16667	1.66667	2.16667	2.33333	1.66667	2	1.66667	2.5	1.5	1.95833





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Course Name :		Theory of Structure-II (23030503)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Over all CO average
CO-1	2	3	2	3	1	3	2	2	2	2	2	2	2.16667
CO-2	1	3	1	1	2	2	1	1	1	2	3	2	1.66667
CO-3	1	3	1	3	2	1	3	1	3	1	1	3	1.91667
Average	1.33333	3	1.33333	2.33333	1.66667	2	2	1.33333	2	1.66667	2	2.33333	1.91667
Course Name :		Geotechnical Engineering (23030504)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Over all CO average
CO-1	2	2	2	1	2	3	2	2	1	2	3	2	2
CO-2	3	2	2	2	1	3	2	2	2	1	2	1	1.91667
CO-3	2	3	1	3	2	2	3	1	3	2	3	2	2.25
CO-4	1	2	3	3	1	1	3	2	3	1	2	2	2
Average	2	2.25	2	2.25	1.5	2.25	2.5	1.75	2.25	1.5	2.5	1.75	2.04167

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Course Name :		Hydrology and Water Resource Engineering (23030505)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Over all CO average
CO-1	2	3	1	2	3	3	2	3	2	1	3	3	2.33333
CO-2	1	2	3	2	1	1	1	2	3	2	1	1	1.66667
CO-3	3	3	2	1	2	2	3	3	1	1	2	3	2.16667
CO-4	2	3	2	1	3	1	2	3	2	1	3	1	2
CO-5	3	1	1	2	3	2	3	1	1	2	3	3	2.08333
CO-6	3	3	2	2	2	2	3	3	1	1	3	3	2.33333
CO-7	2	3	1	3	1	1	2	3	2	1	3	1	1.91667
CO-8	3	2	2	3	3	1	3	3	1	1	3	2	2.25
CO-9	2	2	1	3	3	2	2	2	3	2	1	3	2.16667
CO-10	3	3	1	1	3	3	1	3	1	1	3	3	2.16667
Average	2.4	2.5	1.6	2	2.4	1.8	2.2	2.6	1.7	1.3	2.5	2.3	2.10833
Course Name :		Intellectual property rights (12300005)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Over all CO average
CO-1	2	2	3	-	-	-	-	-	-	-	-	-	2.33333
CO-2	3	3	1	-	-	-	-	-	-	-	-	-	2.33333
CO-3	2	2	2	-	-	-	-	-	-	-	-	-	2
Average	2.33333	2.33333	2	-	-	-	-	-	-	-	-	-	2.22222





CO-PO MAPPING B.TECH CIVIL ENGINEERING 6TH SEM													
Course Name :		Water and Waste water Engineering (23030601)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Over all CO average
CO-1	3	3	2	2	2	2	3	3	1	1	3	3	2.3333
CO-2	3	2	2	3	3	1	3	3	1	1	3	2	2.25
Average	3	2.5	2	2.5	2.5	1.5	3	3	1	1	3	2.5	2.29167
Course Name :		Design of Reinforced Concrete Structure (23030602)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Over all CO average
CO-1	1	2	2	3	1	1	2	2	1	1	2	2	1.66667
CO-2	3	3	1	2	3	3	2	1	2	3	3	1	2.25
CO-3	2	1	2	1	2	3	3	3	1	3	1	2	2
CO-4	3	2	1	2	1	3	1	2	1	1	2	1	1.66667
CO-5	1	3	2	1	2	2	3	1	1	2	3	2	1.91667
CO-6	1	2	3	3	1	1	2	3	3	1	1	2	1.91667
Average	1.83333	2.16667	1.83333	2	1.66667	2.16667	2.16667	2	1.5	1.83333	2	1.66667	1.90278





Course Name :		Railway Bridge and Tunnel Engineering (23030603)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Over all CO average
CO-1	3	2	2	1	1	3	3	2	1	2	2	3	2.08
CO-2	1	3	1	2	3	3	2	1	2	3	3	1	2.08
CO-3	2	1	2	1	3	3	3	3	1	3	1	1	2
CO-4	1	2	1	2	1	3	1	2	1	1	2	1	1.5
CO-5	3	1	2	1	2	2	1	1	1	1	3	3	1.75
CO-6	3	2	3	3	1	1	2	3	3	1	1	2	2.08
Average	2.16	1.83	1.83	1.66	1.83	2.5	2	2	1.5	1.83	2	1.83	1.91
Course Name :		Advanced Construction Equipment (23030604)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Over all CO average
CO-1	3	1	3	2	3	2	2	3	1	3	2	2	2.25
CO-2	3	2	2	2	1	3	2	2	2	1	2	1	1.95
CO-3	3	2	3	1	2	2	1	2	3	3	1	1	2
CO-4	1	2	3	3	1	1	3	2	3	1	2	2	2
CO-5	1	2	3	3	1	1	3	2	3	1	2	2	2
Average	2.2	1.8	2.8	2.2	1.6	1.8	2.2	2.2	2.4	1.8	1.8	1.6	2.03
Course Name :		Professional Practice and Valuation (23030605)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Over all CO average
CO-1	2	3	2	2	2	2	2	3	1	1	2	3	2.08333
CO-2	1	3	2	3	3	1	1	3	1	1	3	3	2.08333
Average	1.5	3	2	2.5	2.5	1.5	1.5	3	1	1	2.5	3	2.08333





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Course Name :		EXPERT PROGRAM IN ENTREPRENEURSHIP (12300006)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Over all CO average
CO-1	3	3	3	3	-	-	-	-	-	-	-	-	3
CO-2	2	2	1	2	-	-	-	-	-	-	-	-	1.75
CO-3	1	2	2	1	-	-	-	-	-	-	-	-	1.5
Average	2	2.33 333	2	2	-	-	-	-	-	-	-	-	2.083 33



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CO-PO MAPPING B.TECH CIVIL ENGINEERING 7TH SEM

Course Name :		Design of Steel Structure (23030701)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Over all CO average
CO-1	1	1	1	1	2	1	1	1	1	2	1	2	1.25
CO-2	1	1	2	2	1	2	2	1	2	1	2	2	1.5833
CO-3	2	1	1	1	1	1	1	1	1	1	1	1	1.0833
CO-4	1	2	1	2	1	2	2	1	1	1	1	1	1.3333
Average	1.25	1.25	1.25	1.5	1.25	1.5	1.5	1	1.25	1.25	1.25	1.5	1.3125
Course Name :		Irrigation Engineering (23030702)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Over all CO average
CO-1	2	1	2	2	1	1	2	2	2	1	2	1	1.5833
CO-2	1	1	1	2	2	1	2	1	2	1	1	1	1.3333
CO-3	2	1	2	1	1	2	1	2	1	2	1	1	1.41667
CO-4	1	1	2	2	1	1	2	1	2	1	2	1	1.41667
CO-5	2	1	1	1	2	2	1	1	1	2	1	2	1.41667
Average	1.6	1	1.6	1.6	1.4	1.4	1.6	1.4	1.6	1.4	1.4	1.2	1.4333





Course Name :		Urban Transportation Engineering (23030703)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Over all CO average
CO-1	1	1	2	1	1	1	1	2	2	1	2	1	1.3333
CO-2	1	1	1	1	2	2	1	1	1	2	1	2	1.3333
CO-3	1	1	1	1	2	1	1	1	1	1	1	1	1.0833
Average	1	1	1.3333	1	1.6667	1.3333	1	1.3333	1.3333	1.3333	1.3333	1.3333	1.25
Course Name :		Ground Improvement Techniques (23030704)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Over all CO average
CO-1	1	2	1	1	2	2	1	2	1	1	1	2	1.4167
CO-2	2	2	2	2	2	1	2	2	2	1	2	1	1.75
CO-3	2	1	2	1	2	2	1	2	1	2	1	2	1.5833
CO-4	1	2	2	1	1	1	2	2	1	1	2	1	1.4167
Average	1.5	1.75	1.75	1.25	1.75	1.5	1.5	2	1.25	1.25	1.5	1.5	1.5417
Course Name :		Startup Project-1 (12300007)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Over all CO average
CO-1	3	3	3	3	-	-	-	-	-	-	-	-	3
CO-2	2	2	1	2	-	-	-	-	-	-	-	-	1.75
CO-3	1	2	2	1	-	-	-	-	-	-	-	-	1.5
CO-4	2	-	2	-	-	-	-	-	-	-	-	-	2
Average	2	2.3333	2	2	-	-	-	-	-	-	-	-	2.0625





CO-PO MAPPING B.TECH CIVIL ENGINEERING 8TH SEM													
Course Name :		Construction Project Management (23030801)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Over all CO average
CO-1	2	1	2	1	2	1	2	1	1	1	1	1	1.3333
CO-2	1	2	2	1	1	2	1	2	1	2	1	2	1.5
Average	1.5	1.5	2	1	1.5	1.5	1.5	1.5	1	1.5	1	1.5	1.41667
Course Name :		Prestressed Concrete (23030802)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Over all CO average
CO-1	1	1	2	1	1	1	1	1	1	1	1	1	1.0833
CO-2	1	1	1	2	1	1	1	2	1	2	2	1	1.3333
CO-3	1	1	1	1	2	2	1	1	2	2	1	2	1.41667
CO-4	2	2	1	2	1	1	2	1	1	1	2	2	1.5
Average	1.25	1.25	1.25	1.5	1.25	1.25	1.25	1.25	1.25	1.5	1.5	1.5	1.3333
Course Name :		Foundation Engineering (23030803)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Over all CO average
CO-1	1	2	2	1	1	1	1	2	1	2	2	1	1.41667
CO-2	1	1	1	2	1	1	2	1	2	1	1	1	1.25
CO-3	2	1	2	1	1	1	1	1	1	1	1	1	1.16667
CO-4	1	2	1	2	1	1	1	2	1	1	2	1	1.3333
Average	1.25	1.5	1.5	1.5	1	1	1.25	1.5	1.25	1.25	1.5	1	1.29167





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Course Name :		Start-Up Project Part-II (12300008)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Over all CO average
CO-1	3	2	3	2	-	-	-	-	-	-	-	-	2.5
CO-2	2	2	1	1	-	-	-	-	-	-	-	-	1.5
CO-3	2	1	3	3	-	-	-	-	-	-	-	-	2.25
CO-4	2	2	3	2	-	-	-	-	-	-	-	-	2.25
Average	2.25	1.75	2.5	2	-	-	-	-	-	-	-	-	2.125



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SWARNIM INSTITUTE OF TECHNOLOGY												
PROGRAM NAME :- M.TECH.												
ACADEMIC YEAR - 2023-2024												
CO-PO MAPPING M.TECH STRUCTURAL ENGINEERING 1ST SEM												
Course Name:		ENGLISH FOR RESEARCH PAPER WRITING (26080101)										
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	Overall CO average
CO-1	2	3	3	1	3	3	3	2	3	2	2	2.45
CO-2	1	3	2	2	2	2	2	1	2	3	2	2.00
CO-3	2	3	1	3	1	1	3	3	1	1	3	2.00
CO-4	3	3	3	2	2	2	3	3	3	3	2	2.64
Average	2.00	3.00	2.25	2.00	2.00	2.00	2.75	2.25	2.25	2.25	2.25	2.27
Course Name:		RESEARCH METHODOLOGY AND IPR (26080102)										
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	Overall CO average
CO-1	2	2	2	2	1	3	2	2	2	3	2	2.09
CO-2	3	2	1	2	2	2	2	1	1	3	3	2.00
CO-3	2	1	2	1	3	1	3	2	1	2	2	1.82
CO-4	3	3	1	2	1	3	2	3	2	3	3	2.36
CO-5	2	2	3	3	2	2	3	1	2	2	2	2.18
CO-6	1	3	1	2	2	2	3	1	1	2	3	1.91
Average	2.17	2.17	1.67	2.00	1.83	2.17	2.50	1.67	1.50	2.50	2.50	2.06



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Course Name:		ADVANCED STRUCTURAL ANALYSIS (26080103)										
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	Overall CO average
CO-1	3	3	2	3	1	3	3	2	2	3	2	2.45
CO-2	1	3	3	1	2	2	3	1	3	2	3	2.18
CO-3	1	3	1	3	2	1	3	1	3	1	2	1.91
CO-4	3	2	2	3	2	3	3	2	3	1	3	2.45
Average	2.00	2.75	2.00	2.50	1.75	2.25	3.00	1.50	2.75	1.75	2.50	2.25
Course Name:		ADVANCED CONCRETE DESIGN OF STRUCTURES (26080104)										
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	Overall CO average
CO-1	3	2	3	1	2	2	3	2	1	3	3	2.27
CO-2	2	2	2	2	2	3	2	2	2	1	2	2.00
CO-3	2	3	2	3	2	2	3	2	3	2	3	2.45
Average	2.33	2.33	2.33	2.00	2.00	2.33	2.67	2.00	2.00	2.00	2.67	2.24
Course Name:		THEORY AND APPLICATIONS OF CEMENT COMPOSITES (26080107)										
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	Overall CO average
CO-1	3	3	1	2	2	3	2	1	2	3	3	2.27
CO-2	2	1	2	1	3	2	3	2	1	2	1	1.82
CO-3	3	3	2	2	1	3	2	3	2	1	2	2.18
CO-4	2	3	1	3	2	2	3	1	1	2	1	1.91
Average	2.50	2.50	1.50	2.00	2.00	2.50	2.50	1.75	1.50	2.00	1.75	2.05





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Course Name:		ADVANCED SOLID MECHANICS (26080110)										
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	Overall CO average
CO-1	3	3	3	1	3	2	3	2	1	2	1	2.18182
CO-2	3	3	3	2	2	3	3	2	2	2	1	2.36364
CO-3	3	3	2	1	2	2	3	1	1	3	1	2
CO-4	2	3	2	2	3	2	3	2	2	2	1	2.18182
Average	2.75	3	2.5	1.5	2.5	2.25	3	1.75	1.5	2.25	1	2.18182



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CO-PO MAPPING M.TECH STRUCTURAL ENGINEERING 2ND SEM												
Course Name:		DISASTER MANAGEMENT (26080105)										
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	Overall CO average
CO-1	3	3	1	1	3	1	3	2	1	2	1	1.91
CO-2	3	3	3	2	3	3	2	3	2	3	3	2.73
CO-3	3	3	2	1	3	2	3	1	3	3	2	2.36
CO-4	2	2	2	3	3	2	3	2	3	2	3	2.45
Average	2.75	2.75	2.00	1.75	3.00	2.00	2.75	2.00	2.25	2.50	2.25	2.36
Course Name:		ADVANCED STEEL DESIGN (26080201)										
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	Overall CO average
CO-1	2	3	2	2	2	2	2	3	1	2	1	2.00
CO-2	3	3	1	3	3	2	2	2	2	1	3	2.27
CO-3	3	2	1	2	3	1	1	3	1	2	2	1.91
CO-4	1	1	1	2	3	2	2	2	1	3	3	1.91
CO-5	2	3	1	3	1	1	2	3	2	1	2	1.91
CO-6	3	1	2	1	2	2	3	2	1	2	1	1.82
Average	2.33	2.17	1.33	2.17	2.33	1.67	2.00	2.50	1.33	1.83	2.00	1.97
Course Name:		STRUCTURAL DYNAMICS (26080202)										
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	Overall CO average
CO-1	2	1	2	2	2	2	2	2	2	2	2	1.91
CO-2	2	3	2	3	3	2	2	2	2	1	2	2.18
CO-3	3	2	1	2	2	1	2	3	1	2	2	1.91
CO-4	1	1	2	2	2	2	2	2	1	3	3	1.91
CO-5	2	2	1	3	1	2	2	3	2	2	2	2.00
Average	2.00	1.80	1.60	2.40	2.00	1.80	2.00	2.40	1.60	2.00	2.20	1.98





Course Name:		STRUCTURAL DESIGN PROJECT (26080203)										
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	Overall CO average
CO-1	2	3	1	1	3	1	3	2	1	2	1	1.82
CO-2	2	3	2	2	2	3	2	2	2	2	2	2.18
CO-3	3	2	2	1	2	2	3	1	2	3	2	2.09
CO-4	2	2	2	2	3	2	3	2	2	2	2	2.18
Average	2.25	2.50	1.75	1.50	2.50	2.00	2.75	1.75	1.75	2.25	1.75	2.07
Course Name:		DESIGN OF HIGH RISE STRUCTURES (23030406)										
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	Overall CO average
CO-1	2	3	2	2	2	2	2	3	1	2	1	2.00
CO-2	3	3	1	3	3	2	2	2	2	1	3	2.27
CO-3	3	2	1	2	3	1	1	3	1	2	2	1.91
CO-4	1	1	1	2	3	2	2	2	1	3	3	1.91
CO-5	2	3	1	3	1	1	2	3	2	1	2	1.91
Average	2.20	2.40	1.20	2.40	2.40	1.60	1.80	2.60	1.40	1.80	2.20	2.00
Course Name:		SOIL STRUCTURE INTERACTION (26080209)										
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	Overall CO average
CO-1	2	1	2	2	2	2	2	2	2	2	2	1.91
CO-2	2	3	2	3	3	2	2	2	2	1	2	2.18
CO-3	3	2	1	2	2	1	2	3	1	2	2	1.91
CO-4	1	1	2	2	2	2	2	2	1	3	3	1.91
CO-5	2	2	1	3	1	2	2	3	2	2	2	2.00
Average	2.00	1.80	1.60	2.40	2.00	1.80	2.00	2.40	1.60	2.00	2.20	1.98





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CO-PO MAPPING M.TECH STRUCTURAL ENGINEERING 3RD SEM												
Course Name:		INDUSTRIAL SAFETY (26080301)										
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	Overall CO average
CO-1	3	3	1	1	3	1	3	2	1	2	1	1.90909
CO-2	3	3	3	2	3	3	2	3	2	3	3	2.72727
CO-3	3	3	2	1	3	2	3	1	3	3	2	2.36364
CO-4	2	2	2	3	3	2	3	2	3	2	3	2.45455
Average	2.75	2.75	2	1.75	3	2	2.75	2	2.25	2.5	2.25	2.36364
Course Name:		EARTHQUAKE RESISTANT DESIGN OF STRUCTURES (26080305)										
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	Overall CO average
CO-1	2	3	3	1	3	3	3	2	3	2	2	2.45455
CO-2	1	3	2	2	2	2	2	1	2	3	2	2
CO-3	2	3	1	3	1	1	3	3	1	1	3	2
CO-4	3	3	3	2	2	2	3	3	3	3	2	2.63636
CO-5	2	3	3	1	3	3	3	2	3	2	2	2.45455
Average	2	3	2.4	1.8	2.2	2.2	2.8	2.2	2.4	2.2	2.2	2.30909



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CO-PO matrix for all subjects of Environmental engineering semester-III

Course Name :		Environmental chemistry - 23110301											
CO	PO1	PO2	PO3	PO4	PO5	P O6	P O7	P O8	P O9	PO 10	PO 11	PO1 2	Overa ll CO avera ge
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	1	1	1.5
CO-4	-	-	3	-	-	-	-	-	-	-	-	-	3
CO-5	1	-	1	-	-	-	-	-	1	1	1	-	1
Aver age	1	1.5	2	2	1	-	-	-	1	1	1	1	1.277 78
Course Name :		Mechanics of solids - 2311032											
CO	PO1	PO2	PO3	PO4	PO5	P O6	P O7	P O8	P O9	PO 10	PO 11	PO1 2	
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	1	1	1.5
CO-4	-	-	3	-	-	-	-	-	-	-	-	-	3
Aver age	1	1.5	2.5	2	1	-	-	-	-	-	1	1	1.428 57
Course Name :		Occupational health & safety - 23110303											
CO	PO1	PO2	PO3	PO4	PO5	P O6	P O7	P O8	P O9	PO 10	PO 11	PO1 2	
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	1	1	1.5
CO-4	-	-	3	-	-	-	-	-	-	-	-	-	3
Aver age	1	1.5	2.5	2	1	-	-	-	-	-	1	1	1.428 57
Course Name :		Unit operations - 23110304											

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CO	PO1	PO2	PO3	PO4	PO5	P O6	P O7	P O8	P O9	PO 10	PO 11	PO1 2	Overa ll CO avera ge
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	1	1	1.5
CO-4	-	-	3	-	-	-	-	-	-	-	-	-	3
Aver age	1	1.5	2.5	2	1	-	-	-	-	-	1	1	1.428 57

Course Name :

Maths-3 23000015

CO	PO1	PO2	PO3	PO4	PO5	P O6	P O7	P O8	P O9	PO 10	PO 11	PO1 2	Overa ll CO avera ge
CO- 1	2	2	3	3	2	-	-	-	-	-	-	-	2.4
CO- 2	2	2	1	2	3	-	-	-	-	-	-	-	2
CO- 3	2	2	2	2	2	-	-	-	-	-	-	-	2
CO- 4	3	2	2	2	1	-	-	-	-	-	-	-	2
CO- 5	3	2	2	3	3	-	-	-	-	-	-	-	2.6
Aver age	2.4	2	2	2.4	2.2	-	-	-	-	-	-	-	2.2

Course Name :

Foundation Program in Entrepreneurship -12300003

CO	PO1	PO2	PO3	PO4	PO5	P O6	P O7	P O8	P O9	PO 10	PO 11	PO1 2	Overa ll CO avera ge
CO- 1	3	3	2	3	2	-	-	-	-	-	-	-	2.6
CO- 2	1	2	3	2	3	-	-	-	-	-	-	-	2.2
CO- 3	2	2	2	2	2	-	-	-	-	-	-	-	2
CO- 4	2	2	1	2	1	-	-	-	-	-	-	-	1.6
CO- 5	2	3	3	3	3	-	-	-	-	-	-	-	2.8
Aver age	2	2.4	2.2	2.4	2.2	-	-	-	-	-	-	-	2.24

Table 3.14: CO-PO matrix for all subjects of Environmental engineering semester-IV

Course Name :

Maths-4 23000018





CO	PO1	PO2	PO3	PO4	PO5	P O6	P O7	P O8	P O9	PO 10	PO 11	PO1 2	Overa ll CO avera ge
CO- 1	3	3	3	2	2	-	-	-	-	-	-	-	2.6
CO- 2	2	2	2	2	3	-	-	-	-	-	-	-	2.2
CO- 3	2	2	3	2	3	-	-	-	-	-	-	-	2.4
CO- 4	3	2	3	2	3	-	-	-	-	-	-	-	2.6
CO- 5	2	1	3	2	2	-	-	-	-	-	-	-	2
CO- 6	2	2	3	3	2	-	-	-	-	-	-	-	2.4
CO- 7	2	3	2	3	2	-	-	-	-	-	-	-	2.4
Aver age	2.285 71	2.142 86	2.714 29	2.285 71	2.428 57	-	-	-	-	-	-	-	2.371 43

Course Name :		Environmental Microbiology & Bioremediation- 23110401											
CO	PO1	PO2	PO3	PO4	PO5	P O6	P O7	P O8	P O9	PO 10	PO 11	PO1 2	Overa ll CO avera ge
CO- 1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO- 2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO- 3	1	2	2	2	-	-	-	-	-	-	1	3	1.833 33
CO- 4	-	-	2	-	-	-	-	-	-	-	-	-	2
Aver age	1	-	-	2	-	-	-	-	-	-	1	3	1.75

Course Name :		Basics of hydraulics- 23110402											
CO	PO1	PO2	PO3	PO4	PO5	P O6	P O7	P O8	P O9	PO 10	PO 11	PO1 2	Overa ll CO avera ge
CO- 1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO- 2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO- 3	1	2	2	2	-	-	-	-	-	-	1	3	1.833 33
CO- 4	-	-	2	-	-	-	-	-	-	-	-	-	2
Aver age	1	1.5	2	2	1	-	-	-	-	-	1	3	1.642 86





Course Name :		Fundamentals of water quality- 23110403											
CO	PO1	PO2	PO3	PO4	PO5	P O6	P O7	P O8	P O9	PO 10	PO 11	PO1 2	Overa ll CO avera ge
CO- 1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO- 2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO- 3	1	2	2	2	-	-	-	-	-	-	2	1	1.666 67
CO- 4	-	-	2	-	-	-	-	-	-	-	-	-	2
Aver age	1	1.5	2	2	1	-	-	-	-	-	2	1	1.5
Course Name :		ELEMENTS OF CHEMICAL ENGINEERING-23110404											
CO	PO1	PO2	PO3	PO4	PO5	P O6	P O7	P O8	P O9	PO 10	PO 11	PO1 2	Overa ll CO avera ge
CO- 1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO- 2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO- 3	1	2	2	2	-	-	-	-	-	-	2	1	1.666 67
CO- 4	-	-	2	-	-	-	-	-	-	-	-	-	2
Aver age	1	1.5	2	2	1	-	-	-	-	-	2	1	1.5
Course Name :		INTERMEDIATE PROGRAM IN ENTREPRENEURSHIP-12300004											
CO	PO1	PO2	PO3	PO4	PO5	P O6	P O7	P O8	P O9	PO 10	PO 11	PO1 2	Overa ll CO avera ge
CO- 1	3	2	3	2	-	-	-	-	-	-	-	-	2.5
CO- 2	2	2	1	1	-	-	-	-	-	-	-	-	1.5
CO- 3	2	1	3	3	-	-	-	-	-	-	-	-	2.25
CO- 4	3	2	3	2	-	-	-	-	-	-	-	-	2.5
Aver age	2.5	1.75	2.5	2	-	-	-	-	-	-	-	-	2.187 5





Table 3.14: CO-PO matrix for all subjects of Environmental engineering semester-VII

Course Name :		Advanced Wastewater Treatment Technologies- 24100701											
CO	PO1	PO2	PO3	PO4	PO5	P O6	P O7	P O8	P O9	PO 10	PO 11	PO1 2	Overa ll CO avera ge
CO- 1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO- 2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO- 3	1	2	2	2	-	-	-	-	-	-	2	1	1.666 67
CO- 4	-	-	2	-	-	-	-	-	-	-	-	-	2
Aver age	1	1.5	2	2	1	-	-	-	-	-	2	1	1.5
Course Name :		Design of air pollution control equipment-24100702											
CO	PO1	PO2	PO3	PO4	PO5	P O6	P O7	P O8	P O9	PO 10	PO 11	PO1 2	Overa ll CO avera ge
CO- 1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO- 2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO- 3	1	2	2	2	-	-	-	-	-	-	2	1	1.666 67
CO- 4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO- 5	-	-	-	1	2	-	-	-	-	-	-	-	1.5
Aver age	1	1.5	2	1.5	1.5	-	-	-	-	-	2	1	1.5

Course Name :		Environmental risk Assessment and Management-24100703											
CO	PO1	PO2	PO3	PO4	PO5	P O6	P O7	P O8	P O9	PO 10	PO 11	PO1 2	Overa ll CO avera ge
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	2	1	1.666 67
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	-	-	-	1	2	-	-	-	-	-	-	-	1.5





CO-6	-	-	-	1	2	-	-	-	-	-	-	1	1.3333
Average	1	-	2	-	-	-	-	-	-	-	-	1	1.3333
Course Name :		Resources and energy recovery from waste -24100704											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	2	1	1.6667
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
Average	1	1.5	2	-	-	-	-	-	-	-	-	1	1.375
Course Name :		Start up Project-I-123000007											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	3	3	3	-	-	-	-	-	-	-	-	3
CO-2	2	2	1	2	-	-	-	-	-	-	-	-	1.75
CO-3	1	2	2	1	-	-	-	-	-	-	-	-	1.5
Average	2	-	2	-	-	-	-	-	-	-	-	-	2

Table 3.14: CO-PO matrix for all subjects of Environmental engineering semester-VIII

Course Name :		ENVIRONMENTAL IMPACT ASSESSMENT-24100801											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	2	1	1.6667





Average	1	1.5	2	2	1	-	-	-	-	-	2	1	1.5
Course Name :	ANAEROBIC BIOLOGICAL TREATMENT TECHNOLOGIES-24100802												
CO	PO1	PO2	PO3	PO4	PO5	P O6	P O7	P O8	P O9	PO 10	PO 11	PO1 2	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	2	1	1.66667
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	-	-	-	1	2	-	-	-	-	-	-	-	1.5
CO-6	-	-	-	1	2	-	-	-	-	-	-	1	1.33333
Average	1	-	2	1.33333	-	-	-	-	-	-	-	1	1.33333

Course Name :	INDUSTRIAL WASTEWATER POLLUTION AND CONTROL-24100803												
CO	PO1	PO2	PO3	PO4	PO5	P O6	P O7	P O8	P O9	PO 10	PO 11	PO1 2	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	2	1	1.66667
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	-	-	-	1	2	-	-	-	-	-	-	-	1.5
CO-6	-	-	-	1	2	-	-	-	-	-	-	1	1.33333
Average	1	-	2	-	-	-	-	-	-	-	-	1	1.33333
Course Name :	ENVIRONMENTAL LEGISLATION AND AUDIT-24100805												
CO	PO1	PO2	PO3	PO4	PO5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO1 2	Overall CO average



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													e
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	2	1	1.666 67
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	-	-	-	1	2	-	-	-	-	-	-	-	1.5
Average	1	-	2	-	-	-	-	-	-	-	-	1	1.333 33
Course Name :		Start-Up Project Part-II-(12300008)											
CO	PO1	PO2	PO3	PO4	PO5	P O6	P O7	P O8	P O9	PO 10	PO 11	PO1 2	Overa ll CO avera ge
CO-1	3	2	3	2	-	-	-	-	-	-	-	-	2.5
CO-2	2	2	1	1	-	-	-	-	-	-	-	-	1.5
CO-3	2	1	3	3	-	-	-	-	-	-	-	-	2.25
CO-4	2	2	3	2	-	-	-	-	-	-	-	-	2.25
Average	2.25	1.75	2.5	-	-	-	-	-	-	-	-	-	2.166 67



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CO PO MATRIX FOR ALL SUBJECTS OF CHEMICAL ENGINEERING

CO-PO matrix for all subjects B.tech Chemical Engineering 3rd sem													
Course Name :		Process Calculation (23020301)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	1	1	1.5
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	2	-	-	-	-	-	1	1.33333
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	-	-	-	-	2	-	-	-	-	1	1	1.25
Course Name :		Chemical Process Industries-I (23020302)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	2	-	-	-	-	-	-	-	2
CO-3	1	2	2	2	-	-	-	-	-	-	1	1	1.5
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	2	-	-	-	-	-	2	1.66667
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	2	2	2	-	-	-	-	1	1.5	1.625



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Course Name :		Organic Chemistry and Unit Process (23020303)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	2	1	1.66667
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	2	-	-	-	-	-	2	1.66667
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	2	1.5	2	-	-	-	-	-	1.5	1.64286
Course Name :		Fluid Flow Operations (23020304)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	2	1	1.66667
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	3	-	-	-	-	-	2	2
CO-6	1	-	-	-	3	-	-	-	-	-	-	-	2
Average	1	1.5	2	-	-	3	-	-	-	-	2	1.5	1.83333
Course Name :		Maths 3 (2300015)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	2	3	3	2	-	-	-	-	-	-	-	2.4
CO-2	2	2	1	2	3	-	-	-	-	-	-	-	2
CO-3	2	2	2	2	2	-	-	-	-	-	-	-	2
CO-4	3	2	2	2	1	-	-	-	-	-	-	-	2
CO-5	3	2	2	3	3	-	-	-	-	-	-	-	2.6
Average	2.4	2	2	2.4	2.2	-	-	-	-	-	-	-	2.2





Course Name :		Foundation Program in Enterprenurship (12300003)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	3	2	3	2	-	-	-	-	-	-	-	2.6
CO-2	1	2	3	2	3	-	-	-	-	-	-	-	2.2
CO-3	2	2	2	2	2	-	-	-	-	-	-	-	2
CO-4	2	2	1	2	1	-	-	-	-	-	-	-	1.6
CO-5	2	3	3	3	3	-	-	-	-	-	-	-	2.8
Average	2	2.4	2.2	2.4	2.2	-	-	-	-	-	-	-	2.24

CO-PO matrix for all subjects B.tech Chemical Engineering 4th sem

Course Name :		Chemical Process Industries-II (23020401)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	1	1	1.5
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	3	-	-	-	-	-	2	2
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	2	1.5	3	-	-	-	-	1	1.5	1.6875

Course Name :		Physical and Inorganic Chemistry (23020402)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	2	1	1.66667
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	2	-	-	-	-	-	3	2
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	2	1.5	2	-	-	-	-	2	2	1.75





Course Name :		Chemical Engineering Thermodynamics-I (23020403)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	2	2	1.83333
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	2	-	-	-	-	-	1	1.33333
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	2	1.5	2	-	-	-	-	2	1.5	1.6875
Course Name :		Process Heat Transfer (23020404)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	2	1	1.66667
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	2	-	-	-	-	-	3	2
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	2	1.5	2	-	-	-	-	2	2	1.75
Course Name :		Maths-4 (23000018)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	3	3	2	2	-	-	-	-	-	-	-	2.6
CO-2	2	2	2	2	3	-	-	-	-	-	-	-	2.2
CO-3	2	2	3	2	3	-	-	-	-	-	-	-	2.4
CO-4	3	2	3	2	3	-	-	-	-	-	-	-	2.6
CO-5	2	1	3	2	2	-	-	-	-	-	-	-	2
CO-6	2	2	3	3	2	-	-	-	-	-	-	-	2.4
CO-7	2	3	2	3	2	-	-	-	-	-	-	-	2.4
Average	2.28571	2.14286	2.71429	2.28571	2.42857	-	-	-	-	-	-	-	2.37143





Course Name :		Intermediate Program in Enterprenurship (12300004)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	3	2	-	-	-	-	-	-	-	-	2.5
CO-2	2	2	1	1	-	-	-	-	-	-	-	-	1.5
CO-3	2	1	3	3	-	-	-	-	-	-	-	-	2.25
CO-4	3	2	3	2	-	-	-	-	-	-	-	-	2.5
Average	2.5	1.75	2.5	2	-	-	-	-	-	-	-	-	2.1875

CO-PO matrix for all subjects B.tech Chemical Engineering 5th sem

Course Name :		Chemical Engineering Thermodynamics-II (23020501)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	2	1	1.66667
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	1	-	-	-	-	-	1	1
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	2	1.5	1	-	-	-	-	2	1	1.5
Course Name :		Mass Transfer Operation-I (23020502)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	1	2	1.66667
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	2	-	-	-	-	-	2	1.66667
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	2	1.5	2	-	-	-	-	1	2	1.625





Course Name :		Instrumentation and Process Control (23020503)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	2	1	1.66667
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	2	-	-	-	-	-	2	1.66667
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	2	1.5	2	-	-	-	-	2	1.5	1.6875
Course Name :		Mechanical Operation (23020504)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	1	-	-	-	-	-	-	2	1	1.5
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	2	-	-	-	-	-	2	1.66667
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	1	1.5	2	-	-	-	-	2	1.5	1.5625
Course Name :		Fundamental of Chemical Engineering Unit Operation (Elective 1) (23020505)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	2	1	1.66667
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	1	-	-	-	-	-	2	1.33333
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	2	1.5	1	-	-	-	-	2	1.5	1.5625





Course Name :		Intellectual property rights (12300005)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	2	3	-	-	-	-	-	-	-	-	-	2.33333
CO-2	3	3	1	-	-	-	-	-	-	-	-	-	2.33333
CO-3	2	2	2	-	-	-	-	-	-	-	-	-	2
Average	2.33333	2.33333	2	-	-	-	-	-	-	-	-	-	2.22222

CO-PO matrix for all subjects B.tech Chemical Engineering 6th sem

Course Name :		Process Equipment Design-I (23020601)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	2	-	-	-	-	-	-	-	2
CO-3	1	2	2	2	-	-	-	-	-	-	1	1	1.5
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	3	-	-	-	-	-	3	2.33333
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	2	2	3	-	-	-	-	1	2	1.8125

Course Name :		Mass Transfer Operation-II (23020602)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	1	1	1.5
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	2	-	-	-	-	-	2	1.66667
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	2	1.5	2	-	-	-	-	1	1.5	1.5625





Course Name :		Biochemical Engineering (23020603)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	2	1	1.66667
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	1	-	-	-	-	-	2	1.33333
CO-6	1	-	-	-	1	-	-	-	-	-	-	-	1
Average	1	1.5	2	2	1	1	-	-	-	-	2	1.5	1.5
Course Name :		Pollution Control and Safety Management (23020604)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	2	1	1.66667
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	1	-	-	-	-	-	1	1
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	2	1.5	1	-	-	-	-	2	1	1.5
Course Name :		Chemical Reaction Engineering - I (23020605)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	2	1	1.66667
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	2	-	-	-	-	-	2	1.66667
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	2	1.5	2	-	-	-	-	2	1.5	1.6875





Course Name :		Advanced Separation Techniques (23020606)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	2	1	1.66667
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	2	-	-	-	-	-	2	1.66667
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	2	1.5	2	-	-	-	-	2	1.5	1.6875
Course Name :		EXPERT PROGRAM IN ENTREPRENEURSHIP (12300006)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	3	3	3	-	-	-	-	-	-	-	-	3
CO-2	2	2	1	2	-	-	-	-	-	-	-	-	1.75
CO-3	1	2	2	1	-	-	-	-	-	-	-	-	1.5
Average	2	2.33333	2	2	-	-	-	-	-	-	-	-	2.08333
Table 3.14: CO-PO matrix for all subjects B.tech Chemical Engineering 7th sem													
Course Name :		Process Equipment Design-II (24020701)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	2	1	1.66667
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	2	-	-	-	-	-	2	1.66667
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	2	1.5	2	-	-	-	-	2	1.5	1.6875





Course Name :		Chemical Reaction Engineering-II (24020702)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	1	1	1.5
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	2	-	-	-	-	-	2	1.66667
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	2	1.5	2	-	-	-	-	1	1.5	1.5625
Course Name :		Computer Aided Process Synthesis (24020703)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	2	2	1.83333
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	2	-	-	-	-	-	2	1.66667
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	2	1.5	2	-	-	-	-	2	2	1.75
Course Name :		Plant Design and Project Engineering (24020704)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	2	2	1.83333
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	2	-	-	-	-	-	2	1.66667
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	2	1.5	2	-	-	-	-	2	2	1.75





Course Name :		Energy Technology (Elective-I) (24020706)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	2	1	1.66667
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	2	-	-	-	-	-	2	1.66667
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	2	1.5	2	-	-	-	-	2	1.5	1.6875
Course Name :		Startup Project-1 (12300007)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	3	3	3	-	-	-	-	-	-	-	-	3
CO-2	2	2	1	2	-	-	-	-	-	-	-	-	1.75
CO-3	1	2	2	1	-	-	-	-	-	-	-	-	1.5
CO-4	2	-	2	-	-	-	-	-	-	-	-	-	2
Average	2	2.33333	2	2	-	-	-	-	-	-	-	-	2.0625
CO-PO matrix for all subjects B.tech Chemical Engineering 8th sem													
Course Name :		Chemical System Modeling (24020801)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	2	2	1.83333
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	2	-	-	-	-	-	1	1.33333
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	2	1.5	2	-	-	-	-	2	1.5	1.6875





Course Name :		Petroleum Refining & Petrochemicals (24020802)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	2	1	1.66667
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	2	-	-	-	-	-	2	1.66667
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	2	1.5	2	-	-	-	-	2	1.5	1.6875
Course Name :		Process Simulation & Optimization (24020803)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	2	2	1.83333
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	1	-	-	-	-	-	2	1.33333
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	2	1.5	1	-	-	-	-	2	2	1.625
Course Name :		FERTILIZER TECHNOLOGY (24020804)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	2	2	1.83333
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	2	-	-	-	-	-	2	1.66667
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	2	1.5	2	-	-	-	-	2	2	1.75





Course Name :		Start-Up Project Part-II (12300008)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	3	2	-	-	-	-	-	-	-	-	2.5
CO-2	2	2	1	1	-	-	-	-	-	-	-	-	1.5
CO-3	2	1	3	3	-	-	-	-	-	-	-	-	2.25
CO-4	2	2	3	2	-	-	-	-	-	-	-	-	2.25
Average	2.25	1.75	2.5	2	-	-	-	-	-	-	-	-	2.125

CO-PO matrix for all subjects B.tech Chemical Engineering 3rd sem

Course Name :		Process Calculation (23020301)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	1	1	1.5
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	2	-	-	-	-	-	1	1.33333
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	-	-	-	-	2	-	-	-	-	1	1	1.25
Course Name :		Chemical Process Industries-I (23020302)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	2	-	-	-	-	-	-	-	2
CO-3	1	2	2	2	-	-	-	-	-	-	1	1	1.5
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	2	-	-	-	-	-	2	1.66667
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	2	2	2	-	-	-	-	1	1.5	1.625





Course Name :		Organic Chemistry and Unit Process (23020303)											
CO	PO1	PO2	PO3	PO4	PO5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	2	1	1.66667
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	2	-	-	-	-	-	2	1.66667
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	2	1.5	2	-	-	-	-	-	1.5	1.64286
Course Name :		Fluid Flow Operations (23020304)											
CO	PO1	PO2	PO3	PO4	PO5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	2	1	1.66667
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	3	-	-	-	-	-	2	2
CO-6	1	-	-	-	3	-	-	-	-	-	-	-	2
Average	1	1.5	2	-	-	3	-	-	-	-	2	1.5	1.83333
Course Name :		Maths 3 (2300015)											
CO	PO1	PO2	PO3	PO4	PO5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2	Overall CO average
CO-1	2	2	3	3	2	-	-	-	-	-	-	-	2.4
CO-2	2	2	1	2	3	-	-	-	-	-	-	-	2
CO-3	2	2	2	2	2	-	-	-	-	-	-	-	2
CO-4	3	2	2	2	1	-	-	-	-	-	-	-	2
CO-5	3	2	2	3	3	-	-	-	-	-	-	-	2.6
Average	2.4	2	2	2.4	2.2	-	-	-	-	-	-	-	2.2





Course Name :		Foundation Program in Enterprenurship (12300003)											
CO	PO1	PO2	PO3	PO4	PO5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2	Overall CO average
CO-1	3	3	2	3	2	-	-	-	-	-	-	-	2.6
CO-2	1	2	3	2	3	-	-	-	-	-	-	-	2.2
CO-3	2	2	2	2	2	-	-	-	-	-	-	-	2
CO-4	2	2	1	2	1	-	-	-	-	-	-	-	1.6
CO-5	2	3	3	3	3	-	-	-	-	-	-	-	2.8
Average	2	2.4	2.2	2.4	2.2	-	-	-	-	-	-	-	2.24

CO-PO matrix for all subjects B.tech Chemical Engineering 4th sem

Course Name :		Chemical Process Industries-II (23020401)											
CO	PO1	PO2	PO3	PO4	PO5	PO	PO	PO	PO	PO1	PO1	PO1	Overall CO age
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	1	1	1.5
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	3	-	-	-	-	-	2	2
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	2	1.5	3	-	-	-	-	1	1.5	1.6875

Course Name :		Physical and Inorganic Chemistry (23020402)											
CO	PO1	PO2	PO3	PO4	PO5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	2	1	1.66667
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	2	-	-	-	-	-	3	2
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	2	1.5	2	-	-	-	-	2	2	1.75





Course Name :		Chemical Engineering Thermodynamics-I (23020403)											
CO	PO1	PO2	PO3	PO4	PO5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	2	2	1.83333
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	2	-	-	-	-	-	1	1.33333
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	2	1.5	2	-	-	-	-	2	1.5	1.6875
Course Name :		Process Heat Transfer (23020404)											
CO	PO1	PO2	PO3	PO4	PO5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	2	1	1.66667
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	2	-	-	-	-	-	3	2
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	2	1.5	2	-	-	-	-	2	2	1.75
Course Name :		Maths-4 (23000018)											
CO	PO1	PO2	PO3	PO4	PO5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2	Overall CO average
CO-1	3	3	3	2	2	-	-	-	-	-	-	-	2.6
CO-2	2	2	2	2	3	-	-	-	-	-	-	-	2.2
CO-3	2	2	3	2	3	-	-	-	-	-	-	-	2.4
CO-4	3	2	3	2	3	-	-	-	-	-	-	-	2.6
CO-5	2	1	3	2	2	-	-	-	-	-	-	-	2
CO-6	2	2	3	3	2	-	-	-	-	-	-	-	2.4
CO-7	2	3	2	3	2	-	-	-	-	-	-	-	2.4
Average	2.28571	2.14286	2.71429	2.28571	2.42857	-	-	-	-	-	-	-	2.37143





Course Name :		Intermediate Program in Entrepreneurship (12300004)											
CO	PO1	PO2	PO3	PO4	PO5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2	Overall CO average
CO-1	3	2	3	2	-	-	-	-	-	-	-	-	2.5
CO-2	2	2	1	1	-	-	-	-	-	-	-	-	1.5
CO-3	2	1	3	3	-	-	-	-	-	-	-	-	2.25
CO-4	3	2	3	2	-	-	-	-	-	-	-	-	2.5
Average	2.5	1.75	2.5	2	-	-	-	-	-	-	-	-	2.1875

CO-PO matrix for all subjects B.tech Chemical Engineering 5th sem

Course Name :		Chemical Engineering Thermodynamics-II (23020501)											
CO	PO1	PO2	PO3	PO4	PO5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	2	1	1.66667
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	1	-	-	-	-	-	1	1
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	2	1.5	1	-	-	-	-	2	1	1.5
Course Name :		Mass Transfer Operation-I (23020502)											
CO	PO1	PO2	PO3	PO4	PO5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	1	2	1.66667
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	2	-	-	-	-	-	2	1.66667
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	2	1.5	2	-	-	-	-	1	2	1.625





Course Name :		Instrumentation and Process Control (23020503)											
CO	PO1	PO2	PO3	PO4	PO5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	2	1	1.66667
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	2	-	-	-	-	-	2	1.66667
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	2	1.5	2	-	-	-	-	2	1.5	1.6875
Course Name :		Mechanical Operation (23020504)											
CO	PO1	PO2	PO3	PO4	PO5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	1	-	-	-	-	-	-	2	1	1.5
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	2	-	-	-	-	-	2	1.66667
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	1	1.5	2	-	-	-	-	2	1.5	1.5625
Course Name :		Fundamental of Chemical Engineering Unit Operation (Elective 1) (23020505)											
CO	PO1	PO2	PO3	PO4	PO5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	2	1	1.66667
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	1	-	-	-	-	-	2	1.33333
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	2	1.5	1	-	-	-	-	2	1.5	1.5625





Course Name :		Intellectual property rights (12300005)											
CO	PO1	PO2	PO3	PO4	PO5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2	Overall CO average
CO-1	2	2	3	-	-	-	-	-	-	-	-	-	2.33333
CO-2	3	3	1	-	-	-	-	-	-	-	-	-	2.33333
CO-3	2	2	2	-	-	-	-	-	-	-	-	-	2
Average	2.33333	2.33333	2	-	-	-	-	-	-	-	-	-	2.22222

CO-PO matrix for all subjects B.tech Chemical Engineering 6th sem

Course Name :		Process Equipment Design-I (23020601)											
CO	PO1	PO2	PO3	PO4	PO5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	2	-	-	-	-	-	-	-	2
CO-3	1	2	2	2	-	-	-	-	-	-	1	1	1.5
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	3	-	-	-	-	-	3	2.33333
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	2	2	3	-	-	-	-	1	2	1.8125

Course Name :		Mass Transfer Operation-II (23020602)											
CO	PO1	PO2	PO3	PO4	PO5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	1	1	1.5
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	2	-	-	-	-	-	2	1.66667
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	2	1.5	2	-	-	-	-	1	1.5	1.5625





Course Name :		Biochemical Engineering (23020603)											
CO	PO1	PO2	PO3	PO4	PO5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	2	1	1.66667
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	1	-	-	-	-	-	2	1.33333
CO-6	1	-	-	-	1	-	-	-	-	-	-	-	1
Average	1	1.5	2	2	1	1	-	-	-	-	2	1.5	1.5
Course Name :		Pollution Control and Safety Management (23020604)											
CO	PO1	PO2	PO3	PO4	PO5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	2	1	1.66667
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	1	-	-	-	-	-	1	1
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	2	1.5	1	-	-	-	-	2	1	1.5
Course Name :		Chemical Reaction Engineering - I (23020605)											
CO	PO1	PO2	PO3	PO4	PO5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	2	1	1.66667
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	2	-	-	-	-	-	2	1.66667
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	2	1.5	2	-	-	-	-	2	1.5	1.6875





Course Name :		Advanced Separation Techniques (23020606)											
CO	PO1	PO2	PO3	PO4	PO5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	2	1	1.66667
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	2	-	-	-	-	-	2	1.66667
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	2	1.5	2	-	-	-	-	2	1.5	1.6875
Course Name :		EXPERT PROGRAM IN ENTREPRENEURSHIP (12300006)											
CO	PO1	PO2	PO3	PO4	PO5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2	Overall CO average
CO-1	3	3	3	3	-	-	-	-	-	-	-	-	3
CO-2	2	2	1	2	-	-	-	-	-	-	-	-	1.75
CO-3	1	2	2	1	-	-	-	-	-	-	-	-	1.5
Average	2	2.33333	2	2	-	-	-	-	-	-	-	-	2.08333
CO-PO matrix for all subjects B.tech Chemical Engineering 7th sem													
Course Name :		Process Equipment Design-II (24020701)											
CO	PO1	PO2	PO3	PO4	PO5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	2	1	1.66667
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	2	-	-	-	-	-	2	1.66667
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	2	1.5	2	-	-	-	-	2	1.5	1.6875





Course Name :		Chemical Reaction Engineering-II (24020702)											
CO	PO1	PO2	PO3	PO4	PO5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	1	1	1.5
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	2	-	-	-	-	-	2	1.66667
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	2	1.5	2	-	-	-	-	1	1.5	1.5625
Course Name :		Computer Aided Process Synthesis (24020703)											
CO	PO1	PO2	PO3	PO4	PO5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	2	2	1.83333
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	2	-	-	-	-	-	2	1.66667
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	2	1.5	2	-	-	-	-	2	2	1.75
Course Name :		Plant Design and Project Engineering (24020704)											
CO	PO1	PO2	PO3	PO4	PO5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	2	2	1.83333
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	2	-	-	-	-	-	2	1.66667
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	2	1.5	2	-	-	-	-	2	2	1.75





Course Name :		Energy Technology (Elective-I) (24020706)											
CO	PO1	PO2	PO3	PO4	PO5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	2	1	1.66667
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	2	-	-	-	-	-	2	1.66667
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	2	1.5	2	-	-	-	-	2	1.5	1.6875
Course Name :		Startup Project-1 (12300007)											
CO	PO1	PO2	PO3	PO4	PO5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2	Overall CO average
CO-1	3	3	3	3	-	-	-	-	-	-	-	-	3
CO-2	2	2	1	2	-	-	-	-	-	-	-	-	1.75
CO-3	1	2	2	1	-	-	-	-	-	-	-	-	1.5
CO-4	2	-	2	-	-	-	-	-	-	-	-	-	2
Average	2	2.33333	2	2	-	-	-	-	-	-	-	-	2.0625
CO-PO matrix for all subjects B.tech Chemical Engineering 8th sem													
Course Name :		Chemical System Modeling (24020801)											
CO	PO1	PO2	PO3	PO4	PO5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	2	2	1.83333
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	2	-	-	-	-	-	1	1.33333
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	2	1.5	2	-	-	-	-	2	1.5	1.6875





Course Name :		Petroleum Refining & Petrochemicals (24020802)											
CO	PO1	PO2	PO3	PO4	PO5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	2	1	1.66667
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	2	-	-	-	-	-	2	1.66667
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	2	1.5	2	-	-	-	-	2	1.5	1.6875
Course Name :		Process Simulation & Optimization (24020803)											
CO	PO1	PO2	PO3	PO4	PO5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	2	2	1.83333
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	1	-	-	-	-	-	2	1.33333
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	2	1.5	1	-	-	-	-	2	2	1.625
Course Name :		FERTILIZER TECHNOLOGY (24020804)											
CO	PO1	PO2	PO3	PO4	PO5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1
CO-3	1	2	2	2	-	-	-	-	-	-	2	2	1.83333
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2
CO-5	1	-	-	-	-	2	-	-	-	-	-	2	1.66667
CO-6	1	-	-	-	2	-	-	-	-	-	-	-	1.5
Average	1	1.5	2	2	1.5	2	-	-	-	-	2	2	1.75





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Course Name :		Start-Up Project Part-II (12300008)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	3	2	-	-	-	-	-	-	-	-	2.5
CO-2	2	2	1	1	-	-	-	-	-	-	-	-	1.5
CO-3	2	1	3	3	-	-	-	-	-	-	-	-	2.25
CO-4	2	2	3	2	-	-	-	-	-	-	-	-	2.25
Average	2.25	1.75	2.5	2	-	-	-	-	-	-	-	-	2.125



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SWARNIM INSTITUTE OF TECHNOLOGY

M.TECH ENVIRONMENTAL ENGG- 2023-24 Sem 1st to 4th

CO PO MATRIX FOR ALL SUBJECTS OF ENVIRONMENTAL ENGINEERING

Semester-I					
Course Name :		APPLICATION BASED SYSTEMS FOR TRANSPORT OF WATER & WASTEWATER-26020101			
CO	PO1	PO2	PO3	PO4	Overall CO average
CO-1	1	-	-	-	1
CO-2	1	-	1	-	1
CO-3	-	-	-	2	2
Average	1	-	1	2	1.3
Course Name :		ENVIRONMENTAL CHEMISTRY & MICROBIOLOGY-26020102			
CO	PO1	PO2	PO3	PO4	Overall CO average
CO-1	1	-	-	-	1
CO-2	1	-	1	-	1
CO-3	-	-	-	2	2
CO-4	-	1	-	-	1
CO-5	1	-	1	-	1
CO-6	-	2	-	-	2
Average	1	1.5	1	2	1.4
Course Name :		ENVIRONMENTAL IMPACT ASSESSMENT-26020103			
CO	PO1	PO2	PO3	PO4	Overall CO average
CO-1	1	-	-	1	1
CO-2	-	2	2	-	2
CO-3	1	-	-	2	1.5
Average	1	2	2	1.5	1.6



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Course Name :		WATER & WASTEWATER TECHNOLOGIES-26020104			
CO	PO1	PO2	PO3	PO4	Overall CO average
CO-1	1	-	-	-	1
CO-2	1	-	1	-	1
CO-3	-	-	-	2	2
CO-4	-	1	-	-	1
CO-5	1	-	1	-	1
CO-6	-	2	-	-	2
Average	1	1.5	1	2	1.4

Semester-II

Course Name :		INDUSTRIAL WATER & WASTEWATER TREATMENT-24020201			
CO	PO1	PO2	PO3	PO4	Overall CO average
CO- 1	2	1	-	1	1.3
CO- 2	1	-	2	-	1.5
Average	1.5	1	2	1	1.4
Course Name :		AIR & NOISE POLLUTION CONTROL-24020202			
CO	PO1	PO2	PO3	PO4	Overall CO average
CO- 1	1	-	-	-	1
CO- 2	-	-	2	-	2
CO- 3	-	1	-	2	1.5
CO- 4	2	-	-	-	2
Average	1.5	1	2	2	1.6
Course Name :		INDUSTRIAL HYGIENE AND SAFETY-24020203			
CO	PO1	PO2	PO3	PO4	Overall CO average
CO- 1	-	-	2	-	2
CO- 2	1	-	-	2	1.5
CO- 3	-	2	-	-	2
CO- 4	-	-	-	1	1
CO- 5	2	-	1	-	1.5
Average	1.5	2	1.5	1.5	1.625





Course Name :		SOLID AND HAZARDOUS WASTE MANAGEMENT-24020204			
CO	PO1	PO2	PO3	PO4	Overall CO average
CO- 1	2	-	-	-	2
CO- 2	-	-	2	-	2
CO- 3	-	2	-	-	2
CO- 4	1	-	-	-	1
CO- 5	-	1	-	1	1
CO- 6	-	-	1	-	1
Average	1.5	1.5	1.5	1	1.375

Semester-III

Course Name :		Air Pollution Control Equipment-24020302			
CO	PO1	PO2	PO3	PO4	Overall CO average
CO- 1	2	-	2	-	2
CO- 2	-	1	-	1	1
CO- 3	-	2	-	-	2
CO- 4	2	-	1	-	1.5
CO- 5	-	2	-	2	2
CO- 4	1	-	1	-	1
Average	1.7	1.7	1.3	1.5	1.5

Semester-IV

Course Name :		ENVIRONMENTAL LEGISLATIONS & MANAGEMENT-24020401			
CO	PO1	PO2	PO3	PO4	Overall CO average
CO-1	1	-	2	-	1.5
CO-2	-	-	-	1	1
CO-3	1	1	-	-	1
CO-4	-	-	1	-	1
CO-5	1	1	-	1	1
Average	1	1	1.5	1	1.125





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PROGRAM NAME : BACHELOR IN TECHNOLOGY IN AUTOMOBILE ENGINEERING
ACADEMIC YEAR 2023-24

CO-PO MAPPING B TECH SEMESTER 1

Course Name :		Maths-I (23000001)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	1	2	2	2	-	-	-	-	-	-	-	2.00
CO-2	2	2	2	2	1	-	-	-	-	-	-	-	1.80
CO-3	2	2	2	2	3	-	-	-	-	-	-	-	2.20
CO-4	3	1	3	3	2	-	-	-	-	-	-	-	2.40
CO-5	2	2	3	3	1	-	-	-	-	-	-	-	2.20
CO-6	2	2	2	2	2	-	-	-	-	-	-	-	2.00
Average	2.1	1	1	1	1	1	1	1	1	1	1	1	1.09

Course Name :		Fundamentals of Computer Programming (23000004)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	2	2	3	-	-	-	-	-	-	-	2.40
CO-2	3	2	2	3	2	-	-	-	-	-	-	-	2.40
CO-3	3	3	3	2	-	-	-	-	-	-	-	-	2.80
CO-4	2	3	2	3	-	-	-	-	-	-	-	-	2.50
CO-5	2	3	2	3	-	-	-	-	-	-	-	-	2.50
CO-6	2	2	2	2	-	-	2	2	3	-	-	-	2.10
Average	2.5	2.5	2.2	2.5	2.5	-	-	2	2	3	-	-	2.40





Course Name :		Elements of Electrical Engineering (23000012)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	1	1	1	1	1	1	1	1	1	1	2	1.30
CO-2	3	1	1	1	1	1	1	1	1	1	1	2	1.30
CO-3	3	1	1	1	1	1	1	1	1	1	1	2	1.30
CO-4	1	1	1	1	1	1	1	1	1	1	1	2	1.10
CO-5	2	1	1	1	1	1	1	1	1	1	1	1	1.10
CO-6	2	1	1	1	1	1	1	1	1	1	1	2	1.20
Average	2.3	1	1	1	1	1	1	1	1	-	-	-	1.10
Course Name :		Elements of Mechanical Engineering (23000003)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	-	-	-	-	-	-	3	2	2	3	-	-	2.50
CO-2	-	-	-	-	-	-	2	3	3	3	-	-	2.80
CO-3	-	-	-	-	-	-	3	3	2	2	-	-	2.50
CO-4	-	-	-	-	-	-	2	2	3	2	-	-	2.30
CO-5	-	-	-	-	-	-	3	2	2	2	-	-	2.30
Average	-	-	-	-	-	-	2.6	2.4	2.4	2.4	-	-	2.50
Course Name :		Orientation Program in Startuo and Entrepreneuirship (12300001)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
CO-2	1	1	1	1	1	1	1	1	1	1	1	1	1.00
CO-3	1	1	1	1	1	1	1	1	1	1	1	1	1.00
CO-4	1	1	1	1	1	1	1	1	1	1	1	1	1.00
Average	1	1	1	1	1	1	1	1	1	1	1	1	1.00
Course Name :		Environmental Studies (23000006)											





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CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1.00
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1.00
CO-3	1	2	2	2	-	-	-	-	-	-	1	1	1.50
CO-4	-	-	1	-	-	-	-	-	-	-	-	-	1.00
CO-5	2	1	1	1	-	-	-	-	-	-	-	-	1.30
Average	1.3	1.3	1.3	1.5	1	-	-	-	-	-	1	1	1.20

Course Name :		Workshop (23000029)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	-	-	-	-	-	-	-	-	-	-	1	1.00
CO-2	1	-	-	-	1	-	1	-	-	-	-	-	1.00
CO-3	1	1	-	-	-	-	-	-	-	-	-	-	1.00
CO-4	1	-	-	-	-	1	-	-	-	-	-	1	1.00
CO-5	1	-	-	-	-	-	-	-	1	1	1	-	1.00
Average	1	1	-	-	1	1	-	-	-	-	1	1	1.00



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CO-PO MAPPING B TECH SEMESTER 2

Course Name :		ENGINEERING PHYSICS(23000005)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	2	3	3	3	-	-	-	-	-	-	-	2.60
CO-2	2	3	3	2	2	-	-	-	-	-	-	-	2.40
CO-3	2	2	2	1	2	-	-	-	-	-	-	-	1.80
CO-4	2	2	3	2	3	-	-	-	-	-	-	-	2.40
CO-5	3	1	2	2	3	-	-	-	-	-	-	-	2.20
CO-6	3	2	3	3	2	-	-	-	-	-	-	-	2.60
CO-7	2	1	3	2	2	-	-	-	-	-	-	-	2.00
Average	2.5	1.5	2.8	2.3	2.5	-	-	-	-	-	-	-	2.30
Course Name :		COMMUNICATION SKILLS(23000008)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	-	-	-	-	-	-	3	2	2	3	-	-	2.50
CO-2	-	-	-	-	-	-	2	3	3	3	-	-	2.80
CO-3	-	-	-	-	-	-	3	3	2	2	-	-	2.50
CO-4	-	-	-	-	-	-	2	2	3	2	-	-	2.30
CO-5	-	-	-	-	-	-	3	2	2	2	-	-	2.30
Average	-	-	-	-	-	-	2.6	2.4	2.4	2.4	-	-	2.50

Course Name :	MATHS-II(23000010)
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CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	2	3	3	1	-	-	-	-	-			2.20
CO-2	3	3	1	2	3	-	-	-	-	-			2.40
CO-3	2	3	2	1	2	-	-	-	-	-			2.00
CO-4	3	2	2	2	1	-	-	-	-	-			2.00
CO-5	2	3	1	1	2	-	-	-	-	-			1.80
CO-6	1	2	2	3	1	-	-	-	-	-			1.80
Average	2.2	2.6	1.6	1.8	1.8	-	-	-	-	-	-	-	2.00

Course Name :

ENGINEERING GRAPHICS(23000011)

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	-	-	-	-	-	-	-	3	3	2	1	2	2.20
CO-2	-	-	-	-	-	-	-	1	2	2	2	2	1.80
CO-3	-	-	-	-	-	-	-	2	1	3	2	2	2.00
CO-4	-	-	-	-	-	-	-	2	2	2	3	2	2.20
CO-5	-	-	-	-	-	-	-	3	2	1	2	2	2.00
CO-6	-	-	-	-	-	-	-	2	3	2	2	1	2.00
Average	-	-	-	-	-	-	-	2.2	2.2	2	2	1.8	2.00

Course Name :

BASIC PROGRAM IN ENTREPRENEURSHIP(12300002)

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	3	3	3	-	-	-	-	-	-	-	-	3.00
CO-2	2	2	1	2	-	-	-	-	-	-	-	-	1.80
CO-3	1	2	2	1	-	-	-	-	-	-	-	-	1.50
CO-4	2	1	2	2	-	-	-	-	-	-	-	-	1.80
Average	2	2	2	2	-	-	-	-	-	-	-	-	2.00

Course Name :

ELEMENTS OF CIVIL ENGINEERING(23000015)





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CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	-	-	-	-	-	-	-	3	2	2	2	2	2.20
CO-2	-	-	-	-	-	-	-	2	1	2	1	2	1.60
CO-3	-	-	-	-	-	-	-	3	3	3	2	2	2.60
CO-4	-	-	-	-	-	-	-	2	2	3	2	2	2.20
CO-5	-	-	-	-	-	-	-	2	1	3	1	1	1.60
CO-6	-	-	-	-	-	-	-	3	1	2	2	1	1.80
Average	-	-	-	-	-	-	-	2.5	1.7	2.5	1.7	1.7	2.00

CO-PO MAPPING B TECH SEMESTER 3

Course Name :		Maths - 3 23000015											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	1	1	1	-	3	3	2	2	3	3	1.91
CO-2	-	-	-	-	1	-	2	1	1	1	2	2	1.43
CO-3	1	2	2	2	-	1	3	2	3	3	1	1	1.91
CO-4	-	-	3	-	1	-	2	2	2	2	1	2	1.88
CO-5	1	-	1	-	-	2	3	2	1	1	1	1	1.44
Average	1	1.5	1.75	1.5	1	1.5	2.6	2	1.8	1.8	1.6	1.8	1.65



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Course Name :		Mechanics of Solids 23080301											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	
CO-1	1	1	-	-	-	-	2	1	1	3	2	1	1.50
CO-2	-	-	-	-	1	-	1	2	2	2	3	2	1.86
CO-3	1	2	2	2	-	1	2	2	2	1	1	1	1.55
CO-4	-	-	3	-	-	-	3	2	2	2	2	2	2.29
CO-5	-	-	3	-	-	-	3	2	2	2	2	2	2.29
Average	1	1.5	2.66 667	2	1	1	2.2	1.8	1.8	2	2	1.6	1.71
Course Name :		Material Science and Metallurgy 23080302											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	
CO-1	1	1	-	-	-	2	3	3	2	1	2	-	1.88
CO-2	-	1	-	1	1	2	2	1	2	2	1	-	1.44
CO-3	1	2	2	2	2	1	1	1	1	2	1	1	1.42
CO-4	-	-	3	2	-	1	3	2	3	1	2	1	2.00
CO-5	1	-	2	1	-	1	2	3	2	3	1	2	1.80
Average	1	1.33 333	2.33 333	1.5	1.5	1.4	2.2	2	2	1.8	1.4	1.333 33	1.65
Course Name :		Manufacturing Process I 23080303											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	2	3	3	2	1	2	1	1.78
CO-2	-	-	-	-	1	2	2	1	3	2	-	-	1.83
CO-3	1	2	2	2	-	1	2	2	2	1	1	1	1.55
CO-4	-	-	3	-	-	2	1	1	1	2	2	-	1.71
CO-5	-	-	-	-	-	1	2	1	2	2	1	2	1.57
Average	1	1.5	2.5	2	1	1.6	2	1.6	2	1.6	1.5	1.333 33	1.64

Course Name :	Kinematics Of Machine- 23080304
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CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	2	3	3	2	-	2	3	2	3	2	1	2.27
CO-2	-	2	1	2	3	2	1	2	2	2	2	1	1.82
CO-3	-	-	-	2	2	-	3	2	2	3	2	1	2.13
CO-4	3	-	-	2	1	1	2	1	1	2	3	1	1.70
CO-5	3	-	2	3	3	2	1	2	2	3	2	2	2.27
Average	2.66 667	2	2	2.4	2.2	1.66 667	1.8	2	1.8	2.6	2.2	1.2	2.04

Course Name :

Electrical Technology -23080305

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	-	3	2	3	2	2	3	2	1	2	1	2	2.22
CO-2	-	-	3	2	3	2	3	1	2	2	2	1	2.25
CO-3	2	1	-	1	2	-	2	1	2	1	2	2	1.50
CO-4	-	-	-	2	1	-	2	2	1	2	1	3	1.67
Average	2	2	2.5	2	2	2	2.5	1.5	1.5	1.75	1.5	2	1.98

Course Name :

Foundation Program in Entrepreneurship 12300003

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	-	3	2	3	2	2	3	2	1	3	1	2	2.33
CO-2	-	-	3	2	3	2	3	1	2	2	2	1	2.25
CO-3	1	2	-	2	1	-	2	1	2	2	2	2	1.63
CO-4	-	-	-	2	1	-	3	1	3	2	2	3	2.00
Average	1	2.5	2.5	2.25	1.75	2	2.75	1.25	2	2.25	1.75	2	2.03





CO-PO MAPPING B TECH SEMESTER 4

Course Name :		Maths-4 23000018											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	3	3	2	2	-	-	-	-	-	-	-	2.60
CO-2	2	2	2	2	3	-	-	-	-	-	-	-	2.20
CO-3	2	2	3	2	3	-	-	-	-	-	-	-	2.40
CO-4	3	2	3	2	3	-	-	-	-	-	-	-	2.60
CO-5	2	1	3	2	2	-	-	-	-	-	-	-	2.00
CO-6	2	2	3	3	2	-	-	-	-	-	-	-	2.40
Average	2.33 333	2	2.83 333	2.16 667	2.5	-	-	-	-	-	-	-	2.37

Course Name :		AUTOMOBILE MEASUREMENT & METROLOGY 23010401											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	2	2	1	2	1	1	1.38
CO-2	-	-	-	-	1	-	3	2	3	2	1	1	1.86
CO-3	1	2	2	2	-	1	2	3	2	3	1	3	2.00
CO-4	-	-	2	-	-	-	2	2	2	1	1	1	1.57
CO-4	-	-	2	-	-	-	2	2	2	1	1	1	1.57
CO-4	-	-	2	-	-	-	2	2	2	1	1	1	1.57
Average	1	1.5	2	2	1	1	2.2	2.2	2	1.8	1	1.4	1.59





Course Name :		AUTOMOBILE MANUFACTURING PROCESSES 23010402											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	2	2	2	1	2	1	1.50
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1.00
CO-3	1	2	2	2	-	1	2	3	2	3	1	3	2.00
CO-4	-	-	2	-	-	-	2	2	1	2	2	1	1.71
Average	1	1.5	2	2	1	1	2	2.33333	1.66667	2	1.66667	1.66667	1.65
Course Name :		ENGINEERING THERMODYNAMICS 23090401											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	2	2	1	2	1	2	1.50
CO-2	-	-	-	-	1	-	2	-	1	2	1	-	1.40
CO-3	1	2	2	2	-	-	3	2	2	-	2	1	1.89
CO-4	-	-	2	-	-	-	2	-	1	1	2	-	1.60
CO-5	-	-	-	-	-	1	2	1	2	1	3		1.67
Average	1	1.5	2	2	1	1	2.2	1.66667	1.4	1.5	1.8	1.5	1.55
Course Name :		MACHINE DESIGN & INDUSTRIAL DRAFTING 23090403											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	1	2	1	2	1	2	1.38
CO-2	-	-	-	-	1	-	3	-	1	-	-	-	1.67
CO-3	1	2	2	2	2	-	1	2	3	2	2	1	1.82
CO-4	-	-	2	-	-	-	-	2	3	2	1	1	1.83
CO-5	1	1				2	1	2	1	1	2	1	1.33
Average	1	1.5	2	2	1.5	-	-	-	-	-	1.5	1.25	1.54





Course Name :		INTERMEDIATE PROGRAM IN ENTREPRENEURSHIP 12300004											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	3	2	-	-	2	-	1	2	1	-	2.14
CO-2	2	2	1	1	-	-	-	-	3	-	2	-	1.80
CO-3	2	1	3	3	-	1	-	2	-	1	-	-	1.86
CO-4	3	2	3	2	-	2	-	1	-	-	-	1	2.17
CO-5	2	1	-	-	1	-	-	-	-	-	-	-	1.33
Average	2.4	1.6	2.5	2	1	1.5	2	1.5	2	1.5	1.5	1	1.80

CO-PO MAPPING B TECH SEMESTER 5

Course Name :		Fluid Mechanics 23090501											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	2	1	2	1	2	3	2	1	2	1	1.58
CO-2	3	1	-	-	1	1	2	-	3	-	2	-	1.86
CO-3	2	1	2	2	2	3	2	-	-	-	2	1	1.89
CO-4	1	2	2	2	2	2	-	1	2	1	2	1	1.64
CO-5	1	1	2	2	3	3	-	-	-	-	-	-	2.00
Average	1.6	1.2	2	1.75	2	2	2	2	2.33 333	1	2	1	1.74





Course Name :		Heat Transfer 23090503											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	3	2	3	2	3	2	2.13
CO-2	-	-	-	-	1	-	2	2	2	1	2	1	1.57
CO-3	1	2	2	2	-	-	2	3	2	1	2	1	1.80
CO-4	-	-	2	-	-	1	2	1	2	1	2	1	1.50
CO-5	-	-	-	1	2	-	3	2	1	2	3	1	1.88
Average	1	1.5	2	1.5	1.5	1	2.4	2	2	1.4	2.4	1.2	1.66
Course Name :		Automobile Systems 23010503											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	2	2	1	2	-	-	-	-	-	-	1.50
CO-2	3	2	2	1	1	2	-	-	3	1	-	-	1.88
CO-3	1	2	2	2	2	1	-	2	-	2	2	1	1.70
CO-4	2	1	2	2	1	2	1	-	-	-	-	-	1.57
CO-5	3	2	2	1	2	1	-	1	1	1	-	-	1.56
Average	2	1.6	2	1.6	1.4	1.6	1	1.5	2	1.333333	2	1	1.59
Course Name :		Automobile Engines 23010504											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	2	3	2	3	2	3	2.13
CO-2	-	-	-	-	1	-	3	2	3	2	3	-	2.33
CO-3	1	2	2	2	-	-	2	2	2	2	2	1	1.80
CO-4	-	-	2	-	-	2	2	1	2	2	1	2	1.75
CO-5	-	-	-	-	-	-	3	2	1	2	-	-	2.00
Average	1	1.5	2	2	1	2	2.4	2	2	2.2	2	2	1.84
Course Name :		Automotive Electrical Systems 23010505											





CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	3	3	3	-	2	3	2	3	2	2	-	2.60
CO-2	2	2	1	2	-	3	2	3	2	3	2	-	2.20
CO-3	1	2	2	1	-	2	1	2	1	2	1	2	1.55
CO-4	-	-	-	-	1	3	2	3	2	3	2	-	2.29
CO-5	-	-	-	-	-	2	3	2	1	3	1	-	2.00
Average	2	2.33333	2	2	1	2.4	2.2	2.4	1.8	2.6	1.6	2	2.03

Course Name :		Automobile Chassis & Body Engineering 23010506											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	2	1	1	-	2	1	2	1	2	2	1	1.55
CO-2	2	1	1	3	-	2	3	3	2	2	2	2	2.09
CO-3	2	1	2	1	2	2	1	1	1	2	1	-	1.45
CO-4	1	1	1	-	1	1	2	3	2	1	2	-	1.50
CO-5	-	1	-	2	-	-	-	-	-	-	-	-	1.50
Average	1.75	1.2	1.25	1.75	1.5	1.75	1.75	2.25	1.5	1.75	1.75	1.5	1.64
Course Name :		Intellectual Property Rights 12300005											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	3	3	3	-	1	2	1	2	1	1	-	2.00
CO-2	2	2	1	2	2	2	3	2	3	2	3	1	2.08
CO-3	1	2	2	1	1	2	1	2	1	2	1	-	1.45
CO-4	-	-	-	-	-	2	2	-	1	2	1	2	1.67
Average	2	2.33333	2	2	1.5	1.75	2	1.66667	1.75	1.75	1.5	1.5	1.81

CO-PO MAPPING B TECH SEMESTER 6





Course Name :		MODERN QUALITY TECHNIQUES 23010601											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	2	3	2	3	2	2	-	2.00
CO-2	1	-	2	-	1	2	2	1	2	2	3	-	1.78
CO-3	1	2	2	2	-	1	2	1	1	-	2	1	1.50
CO-4	-	-	-	-	-	1	2	2	1	1	2	1	1.43
CO-5	-	-	-	-	-	2	1	2	2	3	3	2	2.14
Average	1	1.5	2	2	1	1.6	2	1.6	1.8	2	2.4	1.3333	1.69
Course Name :		Dynamics of Machinery 23090601											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	1	-	-	-	-	1	2	1	2	3	2	1.75
CO-2	-	-	1	-	2	1	2	3	2	2	2	3	2.00
CO-3	2	2	2	2	-	-	2	3	2	2	2	1	2.00
CO-4	-	-	2	-	-	1	2	3	2	2	-	2	2.00
CO-5	-	-	-	1	2	-	1	2	-	1	1	-	1.33
Average	2	1.5	1.66667	1.5	2	1	1.6	2.6	1.75	1.8	2	2	1.78
Course Name:		Alternative fuel & power systems 23010603											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	1	-	-	-	-	2	3	2	2	3	-	2.14
CO-2	-	-	-	-	1	-	3	2	2	-	-	-	2.00
CO-3	2	1	2	2	-	2	1	1	2	2	2	1	1.64
CO-4	-	-	2	-	-	-	1	-	-	-	-	-	1.50
CO-5	2	-	-	1	2	-	2	2	2	1	2	2	1.78
Average	2	1	2	1.5	1.5	2	1.8	2	2	1.666667	2.333333	1.5	1.78





Course Name :		Hybrid Vehicle Technology 23010604											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	3	-	-	-	2	2	2	2	1	-	-	2.00
CO-2	-	-	-	-	1	2	1	2	1	2	1	-	1.43
CO-3	1	2	2	2	-	2	2	3	-	-	2	1	1.89
CO-4	-	-	2	-	-	-	-	3	2	1	-	-	2.00
CO-5	-	-	-	1	2	1	2	-	2	-	3	-	1.83
Average	1.5	2.5	2	1.5	1.5	1.75	1.75	2.5	1.75	1.333333	2	1	1.76
Course Name :		Special Purpose Vehicles 23010605											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	2	3	2	3	2	3	2	3	2	3	-	2.36
CO-2	1	2	1	1	-	2	-	3	2	-	-	-	1.71
CO-3	1	1	3	3	-	2	-	3	-	2	-	1	2.00
CO-4	1	2	3	2	-	-	2	-	3	2	-	-	2.14
Average	1	1.75	2.5	2	3	2	2.5	2.66667	2.66667	2	3	1	2.17
Course Name :		Vehicle Maintenance & Garage Practice 23010606											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	-	1	2	1	2	1	2	1	2	1	2	-	1.44
CO-2	-	2	1	1	-	-	-	-	-	-	-	-	1.33
CO-3	3	2	3	3	2	-	2	-	2	-	2	2	2.43
CO-4	-	2	3	2	-	-	2	-	-	3	2	-	2.40
CO-5	1	2	1	2	1	2	1	2	-	-	-	-	1.50
Average	2	1.8	2	1.8	1.66667	1.5	1.75	1.5	2	2	2	2	1.83





Course Name :		EXPERT PROGRAM IN ENTREPRENEURSHIP 12300006											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	3	2	-	-	1	-	2	3	-	-	2.29
CO-2	2	2	1	1	1	1	-	2	-	1	-	-	1.38
CO-3	2	1	3	3	-	-	-	-	2	3	2	2	2.25
CO-4	2	2	3	2	-	1	1	-	-	-	-	-	1.83
Average	2.25	1.75	2.5	2	1	1	1	2	2	2.333333	2	2	1.82

CO-PO MAPPING B TECH SEMESTER 7													
Course Name :		Vehicle Testing & Homologation 23010701											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	3	2	-	-	1	-	2	3	-	-	2.29
CO-2	2	2	1	1	1	1	-	2	-	-	-	-	1.43
CO-3	2	1	3	3	-	-	-	-	2	3	2	2	2.25
CO-4	2	2	3	2	-	1	1	-	-	-	-	-	1.83
CO-5	2	2	1	1	1	2	-	3	3	2	-	-	1.89
CO-6	3	2	2	1	1	1	-	2	2	2	-	-	1.78
Average	2.2	1.8	2.2	1.8	1	1.333333	1	2.5	2.333333	2.666667	2	2	1.90
Course Name :		Vehicle Dynamics 23010708											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	3	2	-	-	1	-	2	3	-	-	2.29
CO-2	2	2	1	1	1	1	-	2	-	1	-	-	1.38
CO-3	2	1	3	3	-	-	-	-	2	3	2	2	2.25
CO-4	2	2	3	2	-	1	1	-	-	-	-	-	1.83
CO-5	2	1	2	1	1	1	2	2	1	-	-	1	1.40
Average	2.2	1.6	2.4	1.8	1	1	1.333333	2	1.666667	2.333333	2	1.5	1.74





Course Name :		Automobile Component Design 23010703											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	3	2	-	-	1	-	2	3	-	-	2.29
CO-2	2	2	1	1	1	1	-	2	-	1	-	-	1.38
CO-3	2	1	3	3	-	-	-	-	2	3	2	2	2.25
CO-4	2	2	3	2	-	1	1	-	-	-	-	-	1.83
CO-5	1	2	1	2	1	2	1	1	1	2	1	2	1.42
Average	2	1.8	2.2	2	1	1.33 333	1	1.5	1.66 667	2.25	1.5	2	1.69
Course Name :		Two & Three Wheeler 23010704											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	3	2	-	-	1	-	2	3	-	-	2.29
CO-2	2	2	1	1	1	1	-	2	-	1	-	-	1.38
CO-3	2	1	3	3	-	1	-	1	2	3	2	2	2.00
CO-4	2	2	3	2	-	1	1	-	-	-	-	-	1.83
CO-5	1	1	2	1	2	1	2	1	2	3	2		1.64
Average	2	1.6	2.4	1.8	1.5	1	1.33 333	1.33 333	2	2.5	2	2	1.79
Course Name :		Noise Vibration Harness & Safety 23010707											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	3	2	2	-	-	1	-	2	1	-	-	1.86
CO-2	3	2	1	1	1	1	-	2	-	1	-	-	1.50
CO-3	2	1	3	2	-	-	-	1	2	3	0	2	1.78
CO-4	2	2	3	2	1	1	1	-	-	-	-	-	1.71
CO-5	1	2	1	2	3	2	2	1	2	3	2	1	1.83
Average	2	2	2	1.8	1.66 667	1.33 333	1.33 333	1.33 333	2	2	1	1.5	1.74





Course Name :		Start up Project-I 12300007											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	3	2	-	-	1	-	2	3	-	-	2.29
CO-2	2	2	1	1	1	1	-	2	-	1	-	-	1.38
CO-3	2	1	3	3	-	-	-	-	2	3	2	2	2.25
CO-4	2	2	3	2	-	1	1	-	-	-	-	-	1.83
Average	2.25	1.75	2.5	2	1	1	1	2	2	2.333333	2	2	1.82
Course Name :		Project - I 23000023											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	3	2	-	-	1	-	2	3	1	-	2.13
CO-2	2	2	1	1	1	1	-	2	-	1	-	-	1.38
CO-3	2	1	3	3	2	3	2	3	2	3	2	2	2.33
CO-4	2	2	3	2	-	1	1	2	1	2	1	-	1.70
CO-5	1	2	1	1	1	1	1	2	1	2	1	2	1.33
Average	2	1.8	2.2	1.8	1.333333	1.5	1.25	2.25	1.5	2.2	1.25	2	1.76

CO-PO MAPPING B TECH SEMESTER 8													
Course Name :		PROJECT 2 23000025											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	3	2	1	2	1	3	2	3	1	-	2.09
CO-2	2	2	-	1	1	1	-	2	-	1	-	-	1.43
CO-3	2	-	3	3	2	1	-	-	2	3	2	2	2.22
CO-4	-	2	3	2	-	1	1	-	-	-	-	-	1.80
CO-5	1	2	1	2	1	2	1	2	1	3	2	1	1.58
Average	2	2	2.5	2	1.25	1.4	1	2.333333	1.666667	2.5	1.666667	1.5	1.82





Course Name :		Vehicle Body Engineering 23010802											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	3	2	1	2	1	2	2	3	1	-	2.00
CO-2	2	2	1	-	-	1	-	2	-	1	-	-	1.50
CO-3	-	-	-	3	-	-	-	-	2	3	2	2	2.40
CO-4	-	2	3	2	-	1	1	-	-	-	-	-	1.80
CO-5	1	1	1	1	-	-	-	-	-	-	-	-	1.00
Average	2	1.75	2	2	1	1.33333	1	2	2	2.33333	1.5	2	1.74
Course Name :		Automobile System Design 23010801											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	1	2	2	-	-	1	-	2	3	-	-	1.86
CO-2	2	2	1	1	1	1	-	2	-	1	-	-	1.38
CO-3	3	1	2	3	1	1	1	2	2	3	2	2	1.92
CO-4	2	2	3	2	1	1	1	2	-	-	-	-	1.75
CO-5	1	2	2	1	2	2	2	3	2	2	3	3	2.08
Average	2	1.6	2	1.8	1.25	1.25	1.25	2.25	2	2.25	2.5	2.5	1.89
Course Name :		Start-Up Project Part-II (12300008)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	2	3	2	-	-	2	-	2	3	-	-	2.29
CO-2	1	2	1	1	1	1	-	2	-	1	-	-	1.25
CO-3	2	1	1	2	-	1	3	1	2	2	2	1	1.64
CO-4	1	1	3	2	-	1	1	-	1	2	2	-	1.56
Average	1.5	1.5	2	1.75	1	1	2	1.5	1.66667	2	2	1	1.58





SWARNIM INSTITUTE OF TECHNOLOGY
PROGRAM NAME: ARTIFICIAL INTELLIGENCE
YEAR: - 1ST - 8TH SEMESTER
THIS DATA IS COMPILED FROM CRITERIA 1.1.1

CO-PO matrix for all subjects of Artificial Intelligence semester 1													
Course Name :		Maths-I (23000001)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23000001.1	3	1	2	2	2	-	-	-	-	-	-	-	2
23000001.2	2	2	2	2	1	-	-	-	-	-	-	-	1.8
23000001.3	2	2	2	2	3	-	-	-	-	-	-	-	2.2
23000001.4	3	1	3	3	2	-	-	-	-	-	-	-	2.4
23000001.5	2	2	3	3	1	-	-	-	-	-	-	-	2.2
23000001.6	2	2	2	2	2	-	-	-	-	-	-	-	2
Average	2.1	1	1	1	1	1	1	1	1	1	1	1	1
Course Name :		Fundamentals of Computer Programming (23000004)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23000004.1	3	2	2	2	3	-	-	-	-	-	-	-	2.4
23000004.2	3	2	2	3	2	-	-	-	-	-	-	-	2.4
23000004.3	3	3	3	2	-	-	-	-	-	-	-	-	2.8
23000004.4	2	3	2	3	-	-	-	-	-	-	-	-	2.5
23000004.5	2	3	2	3	-	-	-	-	-	-	-	-	2.5
23000004.6	2	2	2	2	-	-		2	2	3	-	-	2.1
Average	2.5	2.5	2.2	2.5	2.5	-	-	2	2	3	-	-	2.4





Course Name :		Elements of Electrical Engineering (23000012)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23000012.1	3	1	1	1	1	1	1	1	1	1	1	2	1.3
23000012.2	3	1	1	1	1	1	1	1	1	1	1	2	1.3
23000012.3	3	1	1	1	1	1	1	1	1	1	1	2	1.3
23000012.4	1	1	1	1	1	1	1	1	1	1	1	2	1.1
23000012.5	2	1	1	1	1	1	1	1	1	1	1	1	1.1
23000012.6	2	1	1	1	1	1	1	1	1	1	1	2	1.2
Average	2.3	1	1	1	1	1	1	1	1	-	-	-	1.1
Course Name :		Elements of Mechanical Engineering (23000003)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23000003.1	-	-	-	-	-	-	3	2	2	3	-	-	2.5
23000003.2	-	-	-	-	-	-	2	3	3	3	-	-	2.8
23000003.3	-	-	-	-	-	-	3	3	2	2	-	-	2.5
23000003.4	-	-	-	-	-	-	2	2	3	2	-	-	2.3
23000003.5	-	-	-	-	-	-	3	2	2	2	-	-	2.3
Average	-	-	-	-	-	-	2.6	2.4	2.4	2.4	-	-	2.5
Course Name :		Orientation Program in Start-up and Entrepreneurship (12300001)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
12300001.1	1	1	1	1	1	1	1	1	1	1	1	1	1
12300001.2	1	1	1	1	1	1	1	1	1	1	1	1	1
12300001.3	1	1	1	1	1	1	1	1	1	1	1	1	1
12300001.4	1	1	1	1	1	1	1	1	1	1	1	1	1
Average	1	1	1	1	1	1	1	1	1	1	1	1	1





Course Name :		Environmental Studies (23000006)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23000006.1	1	1	-	-	-	-	-	-	-	-	-	-	1
23000006.2	-	-	-	-	1	-	-	-	-	-	-	-	1
23000006.3	1	2	2	2	-	-	-	-	-	-	1	1	1.5
23000006.4	-	-	1	-	-	-	-	-	-	-	-	-	1
23000006.5	2	1	1	1	-	-	-	-	-	-	-	-	1.3
Average	1.3	1.3	1.3	1.5	1	-	-	-	-	-	1	1	1.2
Course Name :		Workshop (23000029)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23000029.1	1	-	-	-	-	-	-	-	-	-	-	1	1
23000029.2	1	-	-	-	1	-	1	-	-	-	-	-	1
23000029.3	1	1	-	-	-	-	-	-	-	-	-	-	1
23000029.4	1	-	-	-	-	1	-	-	-	-	-	1	1
23000029.5	1	-	-	-	-	-	-	-	1	1	1	-	1
Average	1	1	-	-	1	1	-	-	-	-	1	1	1





CO-PO matrix for all subjects B.Tech sem-2

Course Name : MATHS-II(23000010)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23000010.1	2	2	3	3	1	-	-	-	-	-			2.2
23000010.2	3	3	1	2	3	-	-	-	-	-			2.4
23000010.3	2	3	2	1	2	-	-	-	-	-			2
23000010.4	3	2	2	2	1	-	-	-	-	-			2
23000010.5	2	3	1	1	2	-	-	-	-	-			1.8
23000010.6	1	2	2	3	1	-	-	-	-	-			1.8
Average	2.2	2.6	1.6	1.8	1.8	-	-	-	-	-	-	-	2
Course Name : CHEMISTRY(23020216)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23020216.1	1	1	-	-	-	-	-	-	-	-	-	-	1
23020216.2	-	-	-	-	1	-	-	-	-	-	-	-	1
23020216.3	1	2	2	2	-	-	-	-	-	-	2	1	1.7
23020216.4	-	-	2	-	-	-	-	-	-	-	-	-	2
23020216.5	1	-	-	-	-	2	-	-	-	-	-	2	1.7
Average	1	1.5	2	2	1	2	-	-	-	-	2	1.5	1.6
Course Name : Personality Development(24190203)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24190203.1	-	-	-	-	-	-	3	2	2	3	-	-	2.5
24190203.2	-	-	-	-	-	-	2	3	3	3	-	-	2.8
24190203.3	-	-	-	-	-	-	3	3	2	2	-	-	2.5
24190203.4	-	-	-	-	-	-	2	2	3	2	-	-	2.3
24190203.5	-	-	-	-	-	-	3	2	2	2	-	-	2.3
Average	-	-	-	-	-	-	2.6	2.4	2.4	2.4	-	-	2.5





Course Name :		Web Technology(24190204)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24190204.1	-	-	-	-	-	-	2	2	2	1	2	-	1.8
24190204.2	-	-	-	-	-	-	3	2	3	2	2	-	2.4
24190204.3	-	-	-	-	-	-	2	3	2	2	3	-	2.4
Average	-	-	-	-	-	-	2.4	2.4	2.4	1.9	2.3	-	2.3
Course Name :		Engineering Graphics & Design(24190206)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24190206.1	-	-	-	-	-	-	-	1	2	2	1	3	1.9
24190206.2	-	-	-	-	-	-	-	2	2	1	3	2.3	1.9
24190206.3	-	-	-	-	-	-	-	3	2	3	2	1	1.9
24190206.4	-	-	-	-	-	-	-	3	1	2	3	3	1.9
24190206.5	-	-	-	-	-	-	-	1	3	3	3	2	1.9
24190206.6	-	-	-	-	-	-	-	2	3	3	2	1	1.9
Average	-	-	-	-	-	-	-	2	2.2	2.3	2.3	2.1	1.9
Course Name :		Mentoring and Counselling(24190207)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24190207.1	-	-	-	-	-	-	-	2	2	2	2	-	2
24190207.2	-	-	-	-	-	-	-	3	3	2	3	-	2.8
24190207.3	-	-	-	-	-	-	-	2	2	1	2	-	1.8
24190207.4	-	-	-	-	-	-	-	3	3	3	2	-	2.8
Average	-	-	-	-	-	-	-	2.5	2.5	2	2.3	-	2.3





Course Name :		Open Project / MOOC(24190208)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24190208.1	-	-	-	-	-	-	-	2	3	2	2	-	2.4
24190208.2	-	-	-	-	-	-	-	3	3	2	3	-	2.3
24190208.3	-	-	-	-	-	-	-	2	1	1	2	-	2.5
24190208.4	-	-	-	-	-	-	-	3	2	2	1	-	2.4
Average	-	-	-	-	-	-	-	2.5	2.3	1.8	2	-	2.4

CO-PO matrix for all subjects B.Tech sem-3

Course Name :		Discrete Mathematics(24170301)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24170301.1	2	2	3	3	2	3	3	-	2	2	1	3	2.36
24170301.2	2	2	1	2	3	-	2	2	-	-	2	-	2
24170301.3	3	2	3	2	2	1	2	3	2	1	-	2	2.09
24170301.4	3	2	2	2	1	2	-	1	2	2	3	1	1.91
24170301.5	3	2	2	3	3	2	1	2	-	-	3	2	2.3
Average	2.6	2	2.2	2.4	2.2	2	2	2	2	1.67	2.25	2	2.11

Course Name :		Computer Organization and Architecture(24170302)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24170302.1	2	2	3	3	2	-	3	2	2	2	3	-	2.4
24170302.2	2	2	1	2	3	2	2	-	3	-	2	3	2.2
24170302.3	3	2	3	2	2	-	2	3	3	3	-	2	2.5
24170302.4	3	2	2	2	1	2	-	2	2	2	2	2	2
24170302.5	3	2	2	3	3	3	1	3	-	3	-	2	2.5
Average	2.6	1	1	2	3	2.3	2	2.5	2.5	2.5	2.33	2.25	2.17





Course Name :		Operating Systems(24170303)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24170303.1	2	2	3	2	2	3	3	-	2	2	1	3	2.27
24170303.2	2	2	3	2	3	-	2	2	-	-	2	-	2.25
24170303.3	3	2	2	3	2	1	2	3	2	1	-	2	2.09
24170303.4	3	2	2	2	1	2	-	1	2	2	3	1	1.91
24170303.5	3	2	2	3	3	2	1	2	-	-	3	2	2.3
Average	2.6	2	2.4	2.4	2.2	2	2	2	2	1.67	2.25	2	2.13
Course Name :		Data Structures and Algorithm(24170304)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24170304.1	2	2	3	3	2	3	3	-	2	2	1	3	2.36
24170304.2	2	2	1	2	3	-	2	2	-	-	2	-	2
24170304.3	3	2	3	2	2	1	2	3	2	1	-	2	2.09
24170304.4	3	2	2	2	1	2	-	1	2	2	3	1	1.91
24170304.5	3	2	2	3	3	2	1	2	-	-	3	2	2.3
Average	2.6	2	2.2	2.4	2.2	2	2	2	2	1.67	2.25	2	2.11
Course Name :		Foundation Program in Entrepreneurship(12300003)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
12300003.1	2	2	3	3	2	3	3	-	2	2	1	3	2.36
12300003.2	2	2	1	2	3	-	2	2	-	-	2	-	2
12300003.3	1	2	3	2	2	1	2	3	2	1	-	2	1.91
12300003.4	3	2	2	2	1	2	-	1	2	2	3	1	1.91
12300003.5	1	2	2	3	3	2	1	2	-	-	3	2	2.1
Average	1.8	2	2.2	2.4	2.2	2	2	2	2	1.67	2.25	2	2.04





CO-PO matrix for all subjects of Artificial Intelligence semester-4

Course Name :		Soft skills and Aptitude - I(24170401)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24170306.1	3	2	3	3	2	3	-	2	2	2	1	3	2.36
24170306.2	2	2	1	2	3	1	2	-	-	-	2	-	1.88
24170306.3	3	2	2	2	2	-	2	3	2	1	-	2	2.1
24170306.4	3	2	3	2	1	2	-	3	2	2	3	1	2.18
24170306.5	3	2	2	3	3	-	1	2	-	-	3	2	2.33
Average	2.8	2	2.2	2.4	2.2	2	1.67	2.5	2	1.67	2.25	2	2.14
Course Name :		Inferential Statistics(24170402)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24170402.1	3	2	3	3	2	3	-	2	2	2	1	3	2.36
24170402.2	2	2	1	2	3	1	2	-	-	-	2	-	1.88
24170402.3	3	2	2	2	2	-	2	3	2	1	-	2	2.1
24170402.4	3	2	3	2	1	2	-	3	2	2	3	1	2.18
24170402.5	3	2	2	3	3	-	1	2	-	-	3	2	2.33
Average	2.8	2	2.2	2.4	2.2	2	1.67	2.5	2	1.67	2.25	2	2.14
Course Name :		Database Management Systems(24170403)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24170403.1	3	2	3	3	2	3	-	2	2	2	1	3	2.36
24170403.2	2	2	1	2	3	1	2	-	-	-	2	-	1.88
24170403.3	3	2	2	2	2	-	2	3	2	1	-	2	2.1
24170403.4	3	2	3	2	1	2	-	3	2	2	3	1	2.18
24170403.5	3	2	2	3	3	-	1	2	-	-	3	2	2.33
Average	2.8	2	2.2	2.4	2.2	2	1.67	2.5	2	1.67	2.25	2	2.14





Course Name :		Software Engineering (24170404)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24170404.1	2	2	3	3	2	-	3	2	2	2	3	1	2.27
24170404.2	2	2	3	2	3	2	2	2	3	3	2	3	2.42
24170404.3	3	2	2	3	2	-	2	3	3	3	3	2	2.55
24170404.4	3	1	2	2	1	2	-	2	2	2	2	2	1.91
24170404.5	3	3	3	3	3	3	1	3	-	3	-	2	2.7
Average	2.6	2	2.6	2.6	2.2	2.3	2	2.4	2.5	2.6	2.5	2	2.36
Course Name :		Python Programming (24170405)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24170405.1	2	3	2	3	3	-	3	2	2	2	3	2	2.45
24170405.2	3	3	1	2	3	2	2	2	3	1	2	3	2.25
24170405.3	3	2	2	1	2	-	2	3	3	3	3	2	2.36
24170405.4	1	2	2	2	1	2	-	2	2	2	2	2	1.82
24170405.5	3	3	3	3	3	3	1	3	-	3	-	2	2.7
Average	2.4	2.6	2	2.2	2.4	2.3	2	2.4	2.5	2.2	2.5	2.2	2.31
Course Name :		Computer Networks (24170406)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24170406.1	2	2	2	3	2	-	3	2	2	2	3	-	2.3
24170406.2	2	3	1	2	3	2	2	-	3	-	2	3	2.3
24170406.3	2	2	2	1	2	-	2	3	3	3	-	2	2.2
24170406.4	1	1	2	2	1	2	-	2	2	2	2	2	1.73
24170406.5	3	3	3	3	3	3	1	3	-	3	-	2	2.7
Average	2	2.2	2	2.2	2.2	2.3	2	2.5	2.5	2.5	2.33	2.25	2.25





Course Name :		Artificial Neural Networks(24170407)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24170407.1	2	2	2	3	2	1	3	2	2	2	3	2	2.17
24170407.2	2	3	1	2	2	2	2	-	3	2	1	3	2.09
24170407.3	3	2	2	3	2	2	2	3	3	2	-	2	2.36
24170407.4	1	1	3	2	1	2	-	2	2	2	2	3	1.91
24170407.5	3	3	3	3	3	3	1	3	-	3	-	2	2.7
Average	2.2	2.2	2.2	2.6	2	2	2	2.5	2.5	2.2	2	2.4	2.23

Course Name :		Intermediate Program in Entrepreneurship (12300004)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
12300004.1	2	2	2	3	2	1	3	2	2	2	3	2	2.17
12300004.2	3	3	1	2	3	2	2	-	3	2	1	3	2.27
12300004.3	3	2	2	3	2	2	2	3	3	2	-	2	2.36
12300004.4	1	1	3	2	1	2	-	2	2	2	2	3	1.91
12300004.5	3	3	3	3	2	3	1	3	-	3	-	2	2.6
Average	2.4	2.2	2.2	2.6	2	2	2	2.5	2.5	2.2	2	2.4	2.25

CO-PO matrix for all subjects of Artificial Intelligence semester- 5

Course Name :		Digital Image Processing(24170501)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24170501.1	2	2	3	3	2	3	1	2	2	2	1	3	2.17
24170501.2	2	2	1	3	3	1	2	3	3	2	2		2.18
24170501.3	3	2	2	2	2	-	2	3	2	1		2	2.1
24170501.4	3	2	3	2	1	2	-	3	2	2	3	1	2.18
24170501.5	3	2	2	3	3	-	1	2	-	-	3	2	2.33
Average	2.6	2	2.2	2.6	2.2	2	2	2	2	2	2	2	2.13





Course Name :		Machine Learning(24170502)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24170502.1	3	2	3	3	2	3	-	2	2	2	1	3	2.36
24170502.2	2	2	1	2	3	1	2	-	-	-	2	-	1.88
24170502.3	3	2	2	2	2	-	2	3	2	1	-	2	2.1
24170502.4	3	2	3	2	1	2	-	3	2	2	3	1	2.18
24170502.5	3	2	2	3	3	-	1	2	-	-	3	2	2.33
Average	2.8	2	2.2	2.4	2.2	2	1.67	2.5	2	1.67	2.25	2	2.14
Course Name :		NoSQL Databases(24170508)											
CO	PO1	2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24170508.1	2	2	3	3	2	3	-	2	2	2		3	2.4
24170508.2	3	2	1	2	3	-	2	2	-	3	2		2.22
24170508.3	2	2	3	2	2	-	2	3	1	-		2	2.11
24170508.4	3	2	2	2	1	2	-	1	2	2	2	1	1.82
24170508.5	3	2	2	3	3	-	1	3	3	-	3	2	2.5
Average	2.6	2	2.2	2.4	2.2	2.5	1.67	2.2	2	2.33	2.33	2	2.2
Course Name :		Fuzzy Logic and Applications(24170505)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24170505.1	2	2	2	3	2	3	-	2	2	2	1	3	2.18
24170505.2	3	2	2	3	2	1	2	-	-	-	2	-	2.13
24170505.3	1	1	3	2	1	-	2	3	2	1	-	2	1.8
24170505.4	2	2	3	3	2	2	-	3	2	2	3	1	2.27
24170505.5	3	2	1	2	3	-	1	2	-	-	3	2	2.11
24170505.6	2	2	3	2	2	-	-	-	-	-	-	-	2.2
Average	2.17	1.8	2.33	2.5	2	2	1.67	2.5	2	1.67	2.25	2	2.08





Course Name :		Sensor Technology(24170503)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24170503.1	2	2	3	3	2	3	-	2	2	2	-	3	2.4
24170503.2	3	2	1	2	3	-	2	2	-	3	2	2	2.2
24170503.3	2	3	2	2	2	1	2	3	1	2	1	2	1.92
24170503.4	3	2	2	3	1	2	-	1	2	2	2	3	2.09
24170503.5	3	2	2	3	3	3	1	3	3	-	3	2	2.55
Average	2.6	2.2	2	2.6	2.2	2.3	1.67	2.2	2	2.25	2	2.4	2.2

CO-PO matrix for all subjects of Artificial Intelligence semester- 6

Course Name :		Deep Learning(24170601)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24170601.1	2	2	3	3	2	3	-	2	2	2		3	2.4
24170601.2	2	2	1	2	3	3	2	-	-	-	2	2	2.11
24170601.3	2	2	2	2	2	-	2	3	3	-			2.25
24170601.4	3	2	2	2	1	2	-	1	2	2	3	1	1.91
24170601.5	3	2	2	3	3	1	1	-	-	-	1	2	2
Average	2.4	2	2	2.4	2.2	2.3	1.67	2	2.33	2	2	2	2.1

Course Name :		Advanced Machine Learning(24170602)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24170602.1	1	2	3	3	2	3	3	-	2	2	1	3	2.27
24170602.2	3	2	1	3	3	-	2	2	-	-	2	-	2.25
24170602.3	2	2	2	2	2	1	2	3	2	1	-	2	1.91
24170602.4	3	2	2	2	1	2	-	1	2	2	3	1	1.91
24170602.5	3	2	2	3	3	2	1	2	-	-	3	2	2.3
Average	2.4	2	2	2.6	2.2	2	2	2	2	1.67	2.25	2	2.09





Course Name :		Computer Vision(24170602)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24170602.1	2	2	3	2	2	3	3	-	2	2	1	3	2.27
24170602.2	2	2	3	2	3	-	2	2	-	-	2	-	2.25
24170602.3	3	2	2	3	2	1	2	3	2	1	-	2	2.09
24170602.4	3	2	2	2	1	2	-	1	2	2	3	1	1.91
24170602.5	3	2	2	3	3	2	1	2	-	-	3	2	2.3
Average	2.6	2	2.4	2.4	2.2	2	2	2	2	1.67	2.25	2	2.13
Course Name :		Blockchain Fundamentals(24170608)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24170608.1	2	2	3	3	2	-	3	2	2	2	3	-	2.4
24170608.2	2	2	1	2	3	2	2	-	3	-	2	3	2.2
24170608.3	2	2	2	2	2	-	2	3	3	3	-	2	2.3
24170608.4	3	2	2	2	1	2	-	2	2	2	2	2	2
24170608.5	3	2	2	3	3	3	1	3	-	3	-	2	2.5
Average	2.4	2	2	2.4	2.2	2.3	2	2.5	2.5	2	2.33	2.25	2.24
Course Name :		Natural Language Processing(24170603)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24170603.1	2	2	3	3	2	-	3	2	2	2	3	-	2.4
24170603.2	2	2	1	2	3	2	2	-	3	-	2	3	2.2
24170603.3	3	2	3	2	2	-	2	3	3	3	-	2	2.5
24170603.4	3	2	2	2	1	2	-	2	2	2	2	2	2
24170603.5	3	2	2	3	3	3	1	3	-	3	-	2	2.5
24170603.6	1	1	1	2	3	2.3	2	2.5	2.5	2.5	2.33	2.25	2.03
Average	2	1.8	2	2.33	2.33	2	1.5	2.6	2.25	1.75	2.25	2	2.07





Table 3.13: CO-PO matrix for all subjects of Artificial Intelligence semester- 7

Course Name : Infrastructure Containers(24170708)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24170708.1	2	2	3	3	2	-	3	2	2	2	3	-	2.4
24170708.2	2	2	1	2	3	2	2	-	3	-	2	3	2.2
24170708.3	3	2	3	2	2	-	2	3	3	3	-	2	2.5
24170708.4	3	2	2	2	1	2	-	2	2	2	2	2	2
24170708.5	3	2	2	3	3	3	1	3	-	3	-	2	2.5
Average	2.6	2	2.2	2.4	2.2	2.3	2	2.5	2.5	2.5	2.33	2.25	2.32
Course Name : Environmental Science(24170710)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24170710.1	2	2	3	3	2	3	-	2	2	2	1	3	2.27
24170710.2	2	2	1	2	3	1	2	1	3	-	2		1.9
24170710.3	3	2	3	2	2	-	2	3	2	1		2	2.2
24170710.4	3	2	2	2	1	2	-	3	2	2	3	1	2.09
24170710.5	3	2	2	3	3	-	1	2	-	-	3	2	2.33
Average	2.6	2	2.2	2.4	2.2	2	1.67	2.2	2.25	1.67	2.25	2	2.12
Course Name : Machine Learning using Cloud Service(24170702)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24170702.1	2	2	3	3	2	3	-	2	2	2	1	3	2.27
24170702.2	3	2	1	2	3	1	2	1	3	-	2		2
24170702.3	2	3	2	2	2	-	2	3	2	1		2	2.1
24170702.4	3	3	3	2	1	2	-	3	2	2	3	1	2.27
24170702.5	3	2	2	3	3	-	1	2	-	-	3	2	2.33
Average	2.6	2.4	2.2	2.4	2.2	2	1.67	2.2	2.25	1.67	2.25	2	2.15





Course Name :		Chat-Bot Development(24170703)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24170703.1	2	2	3	3	2	-	3	2	2	2	3	-	2.4
24170703.2	2	2	1	2	3	2	2	-	3	-	2	3	2.2
24170703.3	3	2	3	2	2	-	2	3	3	3	-	2	2.5
24170703.4	3	2	2	2	1	2	-	2	2	2	2	2	2
24170703.5	3	2	2	3	3	3	1	3	-	3	-	2	2.5
Average	2.6	2	2.2	2.4	2.2	2.3	2	2.5	2.5	2.5	2.33	2.25	2.32

Course Name :		Information Security Fundamentals(24170707)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24170707.1	2	2	3	3	2	-	3	2	2	2	3	3	2.45
24170707.2	2	2	1	2	3	2	2	-	3	-	2		2.11
24170707.3	3	2	3	2	2	-	2	3	3	3	-	2	2.5
24170707.4	3	2	2	2	1	2	-	2	2	2	2	1	1.91
24170707.5	3	2	2	3	3	3	1	3	-	3	-	2	2.5
Average	2.6	2	2.2	2.4	2.2	2.3	2	2.5	2.5	2.5	2.33	2	2.3

Table 3.13: CO-PO matrix for all subjects of Artificial Intelligence semester- 8

Course Name :		MAJOR PROJECT(24130801)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24130801.1	-	-	-	-	-	-	3	2	2	2	3	3	2.5
24130801.2	-	-	-	-	-	2	2	-	3	-	2		2.25
24130801.3	-	-	-	-	-	-	2	3	3	3	-	2	2.6
24130801.4	-	-	-	-	-	2	-	2	2	2	2	1	1.83
24130801.5	-	-	-	-	-	3	1	3	-	3	-	2	2.4
Average	-	-	-	-	-	2.3	2	2.5	2.5	2.5	2.33	2	2.31





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Course Name :		Start-Up Project Part-II(12300008)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
12300008.1	-	-	-	-	-	-	3	2	2	2	3	3	2.5
12300008.2	-	-	-	-	-	2	2	-	1	1	2		1.6
12300008.3	-	-	-	-	-	-	2	3	3	3	-	2	2.6
12300008.4	-	-	-	-	-	2	-	2	2	2	2	1	1.83
12300008.5	-	-	-	-	-	3	2	2	-	2	1	2	2
Average	-	-	-	-	-	2.3	2.25	2.25	2	2	2	2	2.12
Course Name :		TECHNICAL SEMINAR (24170802)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24170802.1	-	-	-	-	-	-	2	2	2	2	1	1	1.67
24170802.2	-	-	-	-	-	2	2	-	1	1	2		1.6
24170802.3	-	-	-	-	-	-	2	1	2	2	-	2	1.8
24170802.4	-	-	-	-	-	2	-	2	2	2	2	1	1.83
24170802.5	-	-	-	-	-	3	2	2	-	2	1	1	1.83
Average	-	-	-	-	-	2.3	2	1.75	1.75	1.8	1.5	1.25	1.77



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SWARRNIM INSTITUTE OF TECHNOLOGY

PROGRAM NAME: CTIS

ACADEMIC YEAR: 2023-2024

CO-PO MAPPING of CE CTIS

CO-PO MAPPING for all subjects B.tech sem-1

Maths-I (23000001)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23000001.1	3	1	2	2	2	2	-	1	2	2	1	-	1.8
23000001.2	2	2	2	2	1	-	2	2	2	1	3	-	1.9
23000001.3	2	2	2	2	3	1	-	3	1	2	2	2	2
23000001.4	3	1	3	3	2	-	2	2	1	2	2	1	2
23000001.1	2	2	3	3	1	3	-	1	2	2	3	2	2.18
23000001.1	2	2	2	2	2	-	-	1	1	1	1	1	1.5
Average	1.93	1.87	1.91	1.87	1.82	1.8	1.82	1.8	1.76	1.84	1.87	1.78	1.84
Fundamentals of Computer Programming (23000004)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23000004.1	3	2	2	2	3	2	2	2	2	2	2	-	2.18
23000004.2	3	2	2	3	2	2	2	3	2	2	3	-	2.36
23000004.3	3	3	3	2	-	3	3	2	3	3	2	1	2.55
23000004.4	2	3	2	3	-	3	2	3	3	2	3	2	2.55
23000004.5	2	3	2	3	-	3	2	3	3	2	3	-	2.6
23000004.6	2	2	2	2	-	2	2	2	2	2	2	-	2
Average	2.5	2.5	2.2	2.5	2.5	2.5	2.2	2.5	2.5	2.2	2.5	1.5	2.34
Elements of Electrical Engineering (23000012)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23000012.1	3	1	2	2	3	2	2	2	2	2	2	2	2.1
23000012.2	3	1	2	3	2	2	2	3	2	2	3	2	2.3
23000012.3	3	1	3	2	-	3	3	2	3	3	2	2	2.5
23000012.4	1	1	2	3	-	3	2	3	3	2	3	2	2.3
23000012.5	2	1	2	3	-	3	2	3	3	2	3	1	2.3
23000012.6	2	1	2	2	-	2	2	2	2	2	2	2	1.9
Average	2.3	1	2.2	2.5	2.5	2.5	2.2	2.5	2.5	2.2	2.5	1.8	2.2





Elements of Mechanical Engineering (23000003)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23000003.1	2	2	2	2	2	3	3	2	2	3	2	2	2.25
23000003.2	2	2	3	2	2	2	2	3	3	3	3	2	2.42
23000003.3	3	3	2	3	3	3	3	3	2	2	2	2	2.58
23000003.4	3	2	3	3	2	2	2	2	3	2	-	-	2.4
23000003.5	3	2	3	3	2	3	3	2	2	2	-	-	2.5
Average	2.6	2.2	2.6	2.6	2.2	2.6	2.6	2.4	2.4	2.4	2.3	2	2.41
Orientation Program in Startuo and Entrepreneurship (12300001)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
12300001.1	1	1	1	1	1	1	1	1	1	1	1	1	1
12300001.2	1	1	1	1	1	1	1	1	1	1	1	1	1
12300001.3	1	1	1	1	1	1	1	1	1	1	1	1	1
12300001.4	1	1	1	1	1	1	1	1	1	1	1	1	1
Average	1	1	1	1	1	1	1	1	1	1	1	1	1
CO-PO MAPING for all subjects B.tech sem-2													
MATHS-II(23000010)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23000010.1	2	2	3	3	1	-	2	3	3	1			2.22
23000010.2	3	3	1	2	3	-	3	1	2	3	1	2	2.18
23000010.3	2	3	2	1	2	1	3	2	1	2	2	1	1.83
23000010.4	3	2	2	2	1	2	2	2	2	1	1	2	1.83
23000010.5	2	3	1	1	2	-	3	1	1	2	3	1	1.82
23000010.6	1	2	2	3	1	-	2	2	3	1			1.89
Average	2.2	2.6	1.6	1.8	1.8	1.5	2.6	1.6	1.8	1.8	1.8	1.5	1.9
CHEMISTRY(23020216)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
23020216.1	1	1	-	-	-	-	-	-	-	-	-	-	1
23020216.2	-	2	3	3	1	-	2	3	3	-	-	-	2.4
23020216.3	1	3	1	2	3	-	3	1	2	2	2	1	1.9
23020216.4	-	3	2	1	2	1	3	2	1	1	-	-	1.8
23020216.5	1	2	2	2	1	2	2	2	2	2	-	2	1.8
Average	1	2.2	2	2	1.75	1.5	2.5	2	2	1.67	2	1.5	1.8





		Personality Development(24190203)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24190203.1	1	1	-	-	-	-	-	-	-	3	-	-	1.67
24190203.2	-	2	3	3	1	-	2	3	3	3	-	-	2.5
24190203.3	1	3	1	2	3	-	3	1	2	2	1	-	1.9
24190203.4	-	3	2	1	2	1	3	2	1	2	2	1	1.8
24190203.5	1	2	2	2	1	2	2	2	2	2	-	-	1.8
Average	1	2.2	2	2	1.75	1.5	2.5	2	2	2.4	1.5	1	1.93
		Web Technology(24190204)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24190204.1	2	2	2	1	2	-	2	2	2	1	2	-	1.8
24190204.2	3	2	3	2	2	1	3	2	3	2	2	1	2.17
24190204.3	2	3	2	2	3	2	2	3	2	2	3	-	2.36
Average	2.33	2.33	2.33	1.67	2.33	1.5	2.33	2.33	2.33	1.67	2.33	1	2.04
		Introduction to Cloud Technology(24190205)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24190205.1	1	2	2	1	3	1	3	1	2	2	1	3	1.8
24190205.2	2	2	1	3	2	3	2	2	2	1	3	2	2.1
24190205.3	3	1	2	2	1	2	1	3	1	2	2	1	1.8
24190205.4	2	1	2	2	3	2	3	2	1	2	2	3	2.1
24190205.5	1	2	2	3	1	3	1	1	2	2	3	1	1.8
Average	1.8	1.6	1.8	2.2	2	2.2	2	1.8	1.6	1.8	2.2	2	1.92
		Engineering Graphics & Design(24190206)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24190206.1	1	2	2	1	3	1	2	1	2	2	1	3	1.9
24190206.2	2	2	1	3	2.3	2	2	2	2	1	3	2.3	1.9
24190206.3	3	2	3	2	1	3	2	3	2	3	2	1	1.9
24190206.4	3	1	2	3	3	3	1	3	1	2	3	3	1.9
24190206.5	1	3	3	3	2	1	3	1	3	3	3	2	1.9
24190206.6	2	3	3	2	1	2	3	2	3	3	2	1	1.9
Average	2	2.17	2.33	2.33	2.05	2	2.17	2	2.17	2.33	2.33	2.05	1.9





Mentoring and Counselling(24190207)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24190207.1	2	2	2	2	2	2	2	2	2	2	2	2	2
24190207.2	3	3	2	3	3	2	3	3	3	2	3	3	2.8
24190207.3	2	2	1	2	2	1	2	2	2	1	2	2	1.8
24190207.4	3	3	3	2	3	3	2	3	3	3	2	2	2.7
Average	2.5	2.5	2	2.25	2.5	2	2.25	2.5	2.5	2	2.25	2.25	2.3
CO-PO MAPING for all subjects B.tech sem-3													
Discrete Mathematics(24130301)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24130301.1	3	3	3	2	2	-	-	-	2	2	1	2	2.43
24130301.2	3	3	3	2	3	-	2	-	-	-	2	1	2.67
24130301.3	2	3	3	2	2	-	2	1	-	-	1	-	2.14
24130301.4	3	2	3	1	-	2	-	-	2	2	-	3	2.14
24130301.5	2	2	2	2	3	-	3	-	-	-	2	1	2.33
Average	2.33	2.6	2.8	1.8	2.5	2	2.33	1	2	2	1.5	1.75	2.34
Computer Organization and Architecture(24130302)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24130302.1	3	3	3	2	2	-	-	-	2	2	1	2	2.43
24130302.2	3	3	3	2	3	-	2	-	-	-	2	1	2.67
24130302.3	2	3	3	2	2	-	2	1	-	-	1	-	2.14
24130302.4	3	2	3	1	-	2	-	-	2	2	-	3	2.14
24130302.5	2	2	2	2	3	-	3	-	-	-	2	1	2.33
Average	2.6	2.6	2.8	1.8	2.5	2	2.33	1	2	2	1.5	1.75	2.34
Operating Systems(24130303)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24130303.1	3	3	3	2	2	-	-	-	2	2	1	2	2.43
24130303.2	3	3	3	2	3	-	2	-	-	-	2	1	2.67
24130303.3	2	3	3	2	2	-	2	1	-	-	1	-	2.14
24130303.4	3	2	3	1	-	2	-	-	2	2	-	3	2.14
24130303.5	2	2	2	2	3	-	3	-	-	-	2	1	2.33
Average	2.6	2.6	2.8	1.8	2.5	2	2.33	1	2	2	1.5	1.75	2.34





		Data Structures and Algorithm (24130304)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24130304.1	3	3	3	2	2	-	-	-	2	2	1	2	2.43
24130304.2	3	3	3	2	3	-	2	-	-	-	2	1	2.67
24130304.3	2	3	3	2	2	-	2	1	-	-	1	-	2.14
24130304.4	3	2	3	1	-	2	-	-	2	2	-	3	2.14
24130304.5	2	2	2	2	3	-	3	-	-	-	2	1	2.33
Average	2.6	2.6	2.8	1.8	2.5	2	2.33	1	2	2	1.5	1.75	2.34
		Object Oriented Programming using Java(24130305)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24130305.1	3	3	3	2	2	-	-	-	2	2	1	2	2.43
24130305.2	3	3	3	2	3	-	2	-	-	-	2	1	2.67
24130305.3	2	3	3	2	2	-	2	1	-	-	1	-	2.14
24130305.4	3	2	3	1	-	2	-	-	2	2	-	3	2.14
24130305.5	2	2	2	2	3	-	3	-	-	-	2	1	2.33
Average	2.6	2.6	2.8	1.8	2.5	2	2.33	1	2	2	1.5	1.75	2.34
		Introduction to Information Security(24130306)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24130306.1	3	3	3	2	2	-	-	-	2	2	1	2	2.43
24130306.2	3	3	3	2	3	-	2	-	-	-	2	1	2.67
24130306.3	2	3	3	2	2	-	2	1	-	-	1	-	2.14
24130306.4	3	2	3	1	-	2	-	-	2	2	-	3	2.14
24130306.5	2	2	2	2	3	-	3	-	-	-	2	1	2.33
Average	2.6	2.6	2.8	1.8	2.5	2	2.33	1	2	2	1.5	1.75	2.34





CO-PO MAPING for all subjects B.tech sem-4

CO-PO MAPING for all subjects B.tech sem-4													
Soft skills and Aptitude - I(24130401)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24130301.1	3	3	3	2	2	-	-	-	2	2	1	2	2.43
24130301.2	3	3	3	2	3	-	2	-	-	-	2	1	2.67
24130301.3	2	3	3	2	2	-	2	1	-	-	1	-	2.14
24130301.4	3	2	3	1	-	2	-	-	2	2	-	3	2.14
24130301.5	2	2	2	2	3	-	3	-	-	-	2	1	2.33
Average	2.6	2.6	2.8	1.8	2.5	2	2.33	1	2	2	1.5	1.75	2.34
Linux Administration(24130402)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24130301.1	3	3	3	2	2	-	-	-	2	2	1	2	2.43
24130301.2	3	3	3	2	3	-	2	-	-	-	2	1	2.67
24130301.3	2	3	3	2	2	-	2	1	-	-	1	-	2.14
24130301.4	3	2	3	1	-	2	-	-	2	2	-	3	2.14
24130301.5	2	2	2	2	3	-	3	-	-	-	2	1	2.33
Average	2.6	2.6	2.8	1.8	2.5	2	2.33	1	2	2	1.5	1.75	2.34
Database Management Systems(24130403)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24130301.1	3	3	3	2	2	-	-	-	2	2	1	2	2.43
24130301.2	3	3	3	2	3	-	2	-	-	-	2	1	2.67
24130301.3	2	3	3	2	2	-	2	1	-	-	1	-	2.14
24130301.4	3	2	3	1	-	2	-	-	2	2	-	3	2.14
24130301.5	2	2	2	2	3	-	3	-	-	-	2	1	2.33
Average	2.6	2.6	2.8	1.8	2.5	2	2.33	1	2	2	1.5	1.75	2.34





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		Software Engineering(24130404)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24130301.1	3	3	3	2	2	-	-	-	2	2	1	2	2.43
24130301.2	3	3	3	2	3	-	2	-	-	-	2	1	2.67
24130301.3	2	3	3	2	2	-	2	1	-	-	1	-	2.14
24130301.4	3	2	3	1	-	2	-	-	2	2	-	3	2.14
24130301.5	2	2	2	2	3	-	3	-	-	-	2	1	2.33
Average	2.6	2.6	2.8	1.8	2.5	2	2.33	1	2	2	1.5	1.75	2.34
		Python Programming(24130405)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24130301.1	3	3	3	2	2	-	-	-	2	2	1	2	2.43
24130301.2	3	3	3	2	3	-	2	-	-	-	2	1	2.67
24130301.3	2	3	3	2	2	-	2	1	-	-	1	-	2.14
24130301.4	3	2	3	1	-	2	-	-	2	2	-	3	2.14
24130301.5	2	2	2	2	3	-	3	-	-	-	2	1	2.33
Average	2.6	2.6	2.8	1.8	2.5	2	2.33	1	2	2	1.5	1.75	2.34
		Computer Networks(24130406)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24130301.1	3	3	3	2	2	-	-	-	2	2	1	2	2.43
24130301.2	3	3	3	2	3	-	2	-	-	-	2	1	2.67
24130301.3	2	3	3	2	2	-	2	1	-	-	1	-	2.14
24130301.4	3	2	3	1	-	2	-	-	2	2	-	3	2.14
24130301.5	2	2	2	2	3	-	3	-	-	-	2	1	2.33
Average	2.6	2.6	2.8	1.8	2.5	2	2.33	1	2	2	1.5	1.75	2.34



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Cryptography Fundamentals (24130407)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24130301.1	3	3	3	2	2	-	-	-	2	2	1	2	2.43
24130301.2	3	3	3	2	3	-	2	-	-	-	2	1	2.67
24130301.3	2	3	3	2	2	-	2	1	-	-	1	-	2.14
24130301.4	3	2	3	1	-	2	-	-	2	2	-	3	2.14
24130301.5	2	2	2	2	3	-	3	-	-	-	2	1	2.33
Average	2.6	2.6	2.8	1.8	2.5	2	2.33	1	2	2	1.5	1.75	2.34
CO-PO MAPING for all subjects B.tech sem-5													
Soft skills and Aptitude-II(24130501)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24130501.1	3	3	3	2	2	-	-	-	2	2	1	2	2.43
24130501.2	3	3	3	2	3	-	2	-	-	-	2	1	2.67
24130501.3	2	3	3	2	2	-	2	1	-	-	1	-	2.14
24130501.4	3	2	3	1	-	2	-	-	2	2	-	3	2.14
24130501.5	2	2	2	2	3	-	3	-	-	-	2	1	2.33
Average	2.6	2.6	2.8	1.8	2.5	2	2.33	1	2	2	1.5	1.75	2.34
Design and Analysis of Algorithms(24130502)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24130502.1	2	2	1	2	3	-	-	-	2	2	1	2	2
24130502.2	2	2	1	2	3	-	2	-	-	-	2	1	2
24130502.3	2	2	2	2	2	-	2	1	-	-	1	-	1.86
24130502.4	3	2	2	2	1	2	-	-	2	2	-	3	2
24130502.5	2	2	1	2	3	-	3	-	-	-	2	1	2.17
Average	2.2	2	1.4	2	2.4	2	2.33	1	2	2	1.5	1.75	1.93
Ethical Hacking(24130503)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24130503.1	2	2	1	2	3	-	-	-	2	2	-	3	2
24130503.2	2	2	1	2	3	-	2	-	-	-	2	1	2
24130503.3	2	2	2	2	2	-	2	1	-	-	2	-	1.86
24130503.4	3	2	2	2	1	2	-	-	2	2	1	2	2
24130503.5	2	2	1	2	3	-	3	-	-	-	2	1	2.17
Average	2.2	2	1.4	2	2.4	2	2.33	1	2	2	1.75	1.75	1.93





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Introduction to Cryptocurrency and Bitcoin (24130505)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24130505.1	2	2	1	2	3	-	-	-	2	2	2	1	2
24130505.2	2	2	1	2	3	-	2	-	-	-	2	-	2
24130505.3	2	2	2	2	2	-	2	1	-	-	1	2	1.86
24130505.4	3	2	2	2	1	2	-	-	2	2	2	1	2
24130505.5	2	2	1	2	3	-	3	-	-	-	-	3	2.17
Average	2.2	2	1.4	2	2.4	2	2.33	1	2	2	1.75	1.75	1.93
Principles of Virtualization(24130506)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24130506.1	2	2	1	2	3	-	-	-	2	2	1	2	2
24130506.2	2	2	1	2	3	-	2	-	-	-	2	1	2
24130506.3	2	2	2	2	2	-	2	1	-	-	-	3	1.86
24130506.4	3	2	2	2	1	2	-	-	2	2	2	1	2
24130506.5	2	2	1	2	3	-	3	-	-	-	2	-	2.17
Average	2.2	2	1.4	2	2.4	2	2.33	1	2	2	1.75	1.75	1.93
Network Security(24130508)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24130508.1	2	2	1	2	3	-	-	-	2	2	1	2	2
24130508.2	2	2	1	2	3	-	2	-	-	-	2	1	2
24130508.3	2	2	2	2	2	-	2	1	-	-	-	3	1.86
24130508.4	3	2	2	2	1	2	-	-	2	2	2	1	2
24130508.5	2	2	1	2	3	-	3	-	-	-	2	-	2.17
Average	2.2	2	1.4	2	2.4	2	2.33	1	2	2	1.75	1.75	1.93
CO-PO MAPING for all subjects B.tech sem-6													
Personality Development Lab(24130601)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24130601.1	3	3	3	2	3	-	-	-	2	2	2	1	2.57
24130601.2	3	3	3	2	3	-	2	-	-	-	2	-	2.67
24130601.3	2	3	3	2	2	-	2	1	-	-	2	1	2.14
24130601.4	3	2	3	1	1	2	-	-	2	2	-	3	2
24130601.5	2	2	1	2	3	-	3	-	-	-	1	2	2.17
Average	2.6	2.6	2.6	1.8	2.4	2	2.33	1	2	2	1.75	1.75	2.13



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		Cloud web services (24130602)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24130602.1	3	3	3	2	3	-	-	-	2	2	2	1	2.57
24130602.2	3	3	3	2	3	-	2	-	-	-	-	3	2.67
24130602.3	2	3	3	2	2	-	2	1	-	-	1	2	2.14
24130602.4	3	2	3	1	1	2	-	-	2	2	2	1	2
24130602.5	2	2	1	2	3	-	3	-	-	-	2	-	2.17
Average	2.6	2.6	2.6	1.8	2.4	2	2.33	1	2	2	1.75	1.75	2.13
		Digital Forensic Investigation(24130603)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24130603.1	3	3	3	2	3	-	-	-	2	2	3	-	2.57
24130603.2	3	3	3	2	3	-	2	-	-	-	2	1	2.67
24130603.3	2	3	3	2	2	-	2	1	-	-	1	2	2.14
24130603.4	3	2	3	1	1	2	-	-	2	2	2	1	2
24130603.5	2	2	1	2	3	-	3	-	-	-	2	-	2.17
Average	2.6	2.6	2.6	1.8	2.4	2	2.33	1	2	2	2	1.33	2.13
		Linux Security and Forensics(24130607)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24130607.1	3	3	3	2	3	-	-	-	2	2	2	1	2.57
24130607.2	3	3	3	2	3	-	2	-	-	-	1	2	2.67
24130607.3	2	3	3	2	2	-	2	1	-	-	2	1	2.14
24130607.4	3	2	3	1	1	2	-	-	2	2	2	-	2
24130607.5	2	2	1	2	3	-	3	-	-	-	2	-	2.17
Average	2.6	2.6	2.6	1.8	2.4	2	2.33	1	2	2	1.8	1.33	2.13
		Storage and Data Centre (24130608)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24130608.1	3	3	3	2	3	-	-	-	2	2	2	1	2.57
24130608.2	3	3	3	2	3	-	2	-	-	-	2	-	2.67
24130608.3	2	3	3	2	2	-	2	1	-	-	2	-	2.14
24130608.4	3	2	3	1	1	2	-	-	2	2	2	1	2
24130608.5	2	2	1	2	3	-	3	-	-	-	1	2	2.17
Average	2.6	2.6	2.6	1.8	2.4	2	2.33	1	2	2	1.8	1.33	2.13



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CO-PO MAPING for all subjects B.tech sem-7

Machine Learning(24130707)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24130707.1	3	3	3	2	3	-	-	-	2	2	2	-	2.57
24130707.2	3	3	3	2	3	-	2	-	-	-	2	1	2.67
24130707.3	2	3	3	2	2	-	2	1	-	-	1	2	2.14
24130707.4	3	2	3	1	1	2	-	-	2	2	3	-	2
24130707.5	2	2	1	2	3	-	3	-	-	-	2	1	2.17
Average	2.6	2.6	2.6	1.8	2.4	2	2.33	1	2	2	2	1.33	2.13
Block Chain(24130706)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24130706.1	3	3	3	2	3	-	-	-	2	2	2	1	2.57
24130706.2	3	3	3	2	3	-	2	-	-	-	1	2	2.67
24130706.3	2	3	3	2	2	-	2	1	-	-	3	-	2.14
24130706.4	3	2	3	1	1	2	-	-	2	2	2	1	2
24130706.5	2	2	1	2	3	-	3	-	-	-	1	2	2.17
Average	2.6	2.6	2.6	1.8	2.4	2	2.33	1	2	2	1.8	1.5	2.13
IT Governance and Risk Management(24130704)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24130704.1	3	3	3	2	3	-	-	-	2	2	3	-	2.57
24130704.2	3	3	3	2	3	-	2	-	-	-	2	1	2.67
24130704.3	2	3	3	2	2	-	2	1	-	-	1	2	2.14
24130704.4	3	2	3	1	1	2	-	-	2	2	2	1	2
24130704.5	2	2	1	2	3	-	3	-	-	-	1	2	2.17
Average	2.6	2.6	2.6	1.8	2.4	2	2.33	1	2	2	1.8	1.5	2.13
Environmental Science(24130710)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24130710.1	3	3	3	2	3	-	-	-	2	2	3	-	2.57
24130710.2	3	3	3	2	3	-	2	-	-	-	2	1	2.67
24130710.3	2	3	3	2	2	-	2	1	-	-	1	2	2.14
24130710.4	3	2	3	1	1	2	-	-	2	2	2	1	2
24130710.5	2	2	1	2	3	-	3	-	-	-	1	2	2.17
Average	2.6	2.6	2.6	1.8	2.4	2	2.33	1	2	2	1.8	1.5	2.13





CO-PO MAPING for all subjects B.tech sem-8

Industrial Training/Major Project (PT)(24130801)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24130801.1	3	3	3	2	2	-	-	-	2	2	2	-	2.43
24130801.2	3	3	3	2	3	-	2	-	-	-	3	-	2.67
24130801.3	2	3	3	2	2	-	2	1	-	-	2	-	2.14
24130801.4	3	2	3	1	-	2	-	-	2	2	-	2	2.14
24130801.5	2	2	2	2	3	-	3	-	-	-	3	-	2.33
24130801.6	3	3	3	2	-	-	-	-	3	3	-	-	2.83
Average	2.67	2.67	2.83	1.83	2.5	2	2.33	1	2.33	2.33	2.5	2	2.25
Technical Seminar(24130802)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
24130802.1	3	3	3	2	2	-	-	-	2	2	2	2	2.43
24130802.2	3	3	3	2	3	-	2	-	-	-	2	3	2.67
24130802.3	2	3	3	2	2	-	2	1	-	-	2	2	2.14
24130802.4	3	2	3	1	-	2	-	-	2	2	1	-	2.14
24130802.5	2	2	2	2	3	-	3	-	-	-	2	3	2.33
24130802.6	3	3	3	2	-	-	-	-	3	3	2	-	2.83
Average	2.67	2.67	2.83	1.83	2.5	2	2.33	1	2.33	2.33	1.83	2.5	2.25
Start-Up Project Part-II(12300008)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
12300008.1	3	3	3	2	2	-	-	-	2	2	2	2	2.43
12300008.2	3	3	3	2	3	-	2	-	-	-	2	3	2.67
12300008.3	2	3	3	2	2	-	2	1	-	-	2	2	2.14
12300008.4	3	2	3	1	-	2	-	-	2	2	1	-	2.14
12300008.5	2	2	2	2	3	-	3	-	-	-	2	3	2.33
12300008.6	3	3	3	2	-	-	-	-	3	3	2	-	2.83
Average	2.67	2.67	2.83	1.83	2.5	2	2.33	1	2.33	2.33	1.83	2.5	2.25





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PROGRAM NAME : Mechanical Engineering
Year: 1st to 4th

CO-PO matrix for all subjects B.Tech sem-1

Course Name		Maths-I (23000001)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	1	2	2	2	-	-	-	-	-	-	-	2.00
CO-2	2	2	2	2	1	-	-	-	-	-	-	-	1.80
CO-3	2	2	2	2	3	-	-	-	-	-	-	-	2.20
CO-4	3	1	3	3	2	-	-	-	-	-	-	-	2.40
CO-5	2	2	3	3	1	-	-	-	-	-	-	-	2.20
CO-6	2	2	2	2	2	-	-	-	-	-	-	-	2.00
Average	2.1	1	1	1	1	1	1	1	1	1	1	1	1.09
Course Name		Fundamentals of Computer Programming (23000004)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	2	2	3	-	-	-	-	-	-	-	2.40
CO-2	3	2	2	3	2	-	-	-	-	-	-	-	2.40
CO-3	3	3	3	2	-	-	-	-	-	-	-	-	2.80
CO-4	2	3	2	3	-	-	-	-	-	-	-	-	2.50
CO-5	2	3	2	3	-	-	-	-	-	-	-	-	2.50
CO-6	2	2	2	2	-	-		2	2	3	-	-	2.10
Average	2.5	2.5	2.2	2.5	2.5	-	-	2	2	3	-	-	2.40



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Course Name		Elements of Electrical Engineering (23000012)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	1	1	1	1	1	1	1	1	1	1	2	1.30
CO-2	3	1	1	1	1	1	1	1	1	1	1	2	1.30
CO-3	3	1	1	1	1	1	1	1	1	1	1	2	1.30
CO-4	1	1	1	1	1	1	1	1	1	1	1	2	1.10
CO-5	2	1	1	1	1	1	1	1	1	1	1	1	1.10
CO-6	2	1	1	1	1	1	1	1	1	1	1	2	1.20
Average	2.3	1	1	1	1	1	1	1	1	-	-	-	1.10
Course Name		Elements of Mechanical Engineering (23000003)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	-	-	-	-	-	-	3	2	2	3	-	-	2.50
CO-2	-	-	-	-	-	-	2	3	3	3	-	-	2.80
CO-3	-	-	-	-	-	-	3	3	2	2	-	-	2.50
CO-4	-	-	-	-	-	-	2	2	3	2	-	-	2.30
CO-5	-	-	-	-	-	-	3	2	2	2	-	-	2.30
Average	-	-	-	-	-	-	2.6	2.4	2.4	2.4	-	-	2.50



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Course Name		Orientation Program in Startuo and Entrepreneuirship (12300001)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	1	1	1	1	1	1	1	1	1	1	1.00
CO-2	1	1	1	1	1	1	1	1	1	1	1	1	1.00
CO-3	1	1	1	1	1	1	1	1	1	1	1	1	1.00
CO-4	1	1	1	1	1	1	1	1	1	1	1	1	1.00
Average	1	1	1	1	1	1	1	1	1	1	1	1	1.00
Course Name		Environmental Studies (23000006)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1.00
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1.00
CO-3	1	2	2	2	-	-	-	-	-	-	1	1	1.50
CO-4	-	-	1	-	-	-	-	-	-	-	-	-	1.00
CO-5	2	1	1	1	-	-	-	-	-	-	-	-	1.30
Average	1.3	1.3	1.3	1.5	1	-	-	-	-	-	1	1	1.20
Course Name		Workshop (23000029)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	-	-	-	-	-	-	-	-	-	-	1	1.00
CO-2	1	-	-	-	1	-	1	-	-	-	-	-	1.00
CO-3	1	1	-	-	-	-	-	-	-	-	-	-	1.00
CO-4	1	-	-	-	-	1	-	-	-	-	-	1	1.00
CO-5	1	-	-	-	-	-	-	-	1	1	1		1.00
Average	1	1	-	-	1	1	-	-	-	-	1	1	1.00





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CO-PO matrix for all subjects B.tech sem-2

Course Name		ENGINEERING PHYSICS(23000005)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	2	3	3	3	-	-	-	-	-	-	-	2.60
CO-2	2	3	3	2	2	-	-	-	-	-	-	-	2.40
CO-3	2	2	2	1	2	-	-	-	-	-	-	-	1.80
CO-4	2	2	3	2	3	-	-	-	-	-	-	-	2.40
CO-5	3	1	2	2	3	-	-	-	-	-	-	-	2.20
CO-6	3	2	3	3	2	-	-	-	-	-	-	-	2.60
CO-7	2	1	3	2	2	-	-	-	-	-	-	-	2.00
Average	2.5	1.5	2.8	2.3	2.5	-	-	-	-	-	-	-	2.30
Course Name		COMMUNICATION SKILLS(23000008)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	-	-	-	-	-	-	3	2	2	3	-	-	2.50
CO-2	-	-	-	-	-	-	2	3	3	3	-	-	2.80
CO-3	-	-	-	-	-	-	3	3	2	2	-	-	2.50
CO-4	-	-	-	-	-	-	2	2	3	2	-	-	2.30
CO-5	-	-	-	-	-	-	3	2	2	2	-	-	2.30
Average	-	-	-	-	-	-	2.6	2.4	2.4	2.4	-	-	2.50



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Course Name		MATHS-II (23000010)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2	2	3	3	1	-	-	-	-	-			2.20
CO-2	3	3	1	2	3	-	-	-	-	-			2.40
CO-3	2	3	2	1	2	-	-	-	-	-			2.00
CO-4	3	2	2	2	1	-	-	-	-	-			2.00
CO-5	2	3	1	1	2	-	-	-	-	-			1.80
CO-6	1	2	2	3	1	-	-	-	-	-			1.80
Average	2.2	2.6	1.6	1.8	1.8	-	-	-	-	-	-	-	2.00
Course Name		ENGINEERING GRAPHICS(23000011)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	-	-	-	-	-	-	-	3	3	2	1	2	2.20
CO-2	-	-	-	-	-	-	-	1	2	2	2	2	1.80
CO-3	-	-	-	-	-	-	-	2	1	3	2	2	2.00
CO-4	-	-	-	-	-	-	-	2	2	2	3	2	2.20
CO-5	-	-	-	-	-	-	-	3	2	1	2	2	2.00
CO-6	-	-	-	-	-	-	-	2	3	2	2	1	2.00
Average	-	-	-	-	-	-	-	2.2	2.2	2	2	1.8	2.00



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Course Name		BASIC PROGRAM IN ENTREPRENURESHIP (12300002)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	3	3	3	-	-	-	-	-	-	-	-	3.00
CO-2	2	2	1	2	-	-	-	-	-	-	-	-	1.80
CO-3	1	2	2	1	-	-	-	-	-	-	-	-	1.50
CO-4	2	1	2	2	-	-	-	-	-	-	-	-	1.80
Average	2	2	2	2	-	-	-	-	-	-	-	-	2.00
Course Name		ELEMENTS OF CIVIL ENGINEERING (23000030)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	-	-	-	-	-	-	-	3	2	2	2	2	2.20
CO-2	-	-	-	-	-	-	-	2	1	2	1	2	1.60
CO-3	-	-	-	-	-	-	-	3	3	3	2	2	2.60
CO-4	-	-	-	-	-	-	-	2	2	3	2	2	2.20
CO-5	-	-	-	-	-	-	-	2	1	3	1	1	1.60
CO-6	-	-	-	-	-	-	-	3	1	2	2	1	1.80
Average	-	-	-	-	-	-	-	2.5	1.7	2.5	1.7	1.7	2.00



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Course Name		CHEMISTRY (23020216)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	-	-	-	-	-	-	1.00
CO-2	-	-	-	-	1	-	-	-	-	-	-	-	1.00
CO-3	1	2	2	2	-	-	-	-	-	-	2	1	1.70
CO-4	-	-	2	-	-	-	-	-	-	-	-	-	2.00
CO-5	1	-	-	-	-	2	-	-	-	-	-	2	1.70
Average	1	1.5	2	2	1	2	-	-	-	-	2	1.5	1.60

Course Name		Personality Development (24190203)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	-	-	-	-	-	-	3	2	2	3	-	-	2.50
CO-2	-	-	-	-	-	-	2	3	3	3	-	-	2.80
CO-3	-	-	-	-	-	-	3	3	2	2	-	-	2.50
CO-4	-	-	-	-	-	-	2	2	3	2	-	-	2.30
CO-5	-	-	-	-	-	-	3	2	2	2	-	-	2.30
Average	-	-	-	-	-	-	2.6	2.4	2.4	2.4	-	-	2.50





Course Name		Maths-3 (23000015)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	1	1	1	-	3	3	2	2	3	3	1.91
CO-2	-	-	-	-	1	-	2	1	1	1	2	2	1.43
CO-3	1	2	2	2	-	1	3	2	3	3	1	1	1.91
CO-4	-	-	3	-	1	-	2	2	2	2	1	2	1.88
CO-5	1	-	1	-	-	2	3	2	1	1	1	1	1.44
Average	1	1.5	1.75	1.5	1	1.5	2.6	2	1.8	1.8	1.6	1.8	1.65
Course Name		Mechanics of solids (23080301)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	
CO-1	1	1	-	-	-	-	2	1	1	3	2	1	1.50
CO-2	-	-	-	-	1	-	1	2	2	2	3	2	1.86
CO-3	1	2	2	2	-	1	2	2	2	1	1	1	1.55
CO-4	-	-	3	-	-	-	3	2	2	2	2	2	2.29
Average	1	1.5	2.5	2	1	1	2	1.75	1.75	2	2	1.5	1.67
Course Name		Manufacturing Process -I (23080303)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	
CO-1	1	1	-	-	-	2	3	3	2	1	2	-	1.88
CO-2	-	1	-	1	1	2	2	1	2	2	1	-	1.44
CO-3	1	2	2	2	2	1	1	1	1	2	1	1	1.42
CO-4	-	-	3	2	-	1	3	2	3	1	2	1	2.00
CO-5	1	-	2	1	-	1	2	3	2	3	1	2	1.80
Average	1	1.33	2.33	1.5	1.5	1.4	2.2	2	2	1.8	1.4	1.3333	1.65





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Course Name		Material Science & Metallurgy (23110304)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	2	3	3	2	1	2	1	1.78
CO-2	-	-	-	-	1	2	2	1	3	2	-	-	1.83
CO-3	1	2	2	2	-	1	2	2	2	1	1	1	1.55
CO-4	-	-	3	-	-	2	1	1	1	2	2	-	1.71
CO-5	-	-	-	-	-	1	2	1	2	2	1	2	1.57
Average	1	1.5	2.5	2	1	1.6	2	1.6	2	1.6	1.5	1.3333	1.64
Course Name		Kinematics Of Machine (23080304)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO- 1	2	2	3	3	2	-	2	3	2	3	2	1	2.27
CO- 2	-	2	1	2	3	2	1	2	2	2	2	1	1.82
CO- 3	-	-	-	2	2	-	3	2	2	3	2	1	2.13
CO- 4	3	-	-	2	1	1	2	1	1	2	3	1	1.70
CO- 5	3	-	2	3	3	2	1	2	2	3	2	2	2.27
Average	2.67	2	2	2.4	2.2	1.67	1.8	2	1.8	2.6	2.2	1.2	2.04



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Course Name		Electrical Technology (23080305)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO- 1	-	3	2	3	2	2	3	2	1	2	1	2	2.22
CO- 2	-	-	3	2	3	2	3	1	2	2	2	1	2.25
CO- 3	2	2	-	2	2	-	2	1	2	1	2	2	1.75
CO- 4	-	-	-	2	1	-	2	2	1	2	1	3	1.67
Average	2	2.5	2.5	2.25	2	2	2.5	1.5	1.5	1.75	1.5	2	2.05
Course Name		Entrepreneurship (23000014)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO- 1	-	3	2	3	2	2	3	2	1	3	1	2	2.33
CO- 2	-	-	3	2	3	2	3	1	1	2	2	1	2.13
CO- 3	2	2	-	2	2	-	2	1	1	2	2	2	1.75
CO- 4	-	-	-	2	1	-	1	2	3	2	2	3	1.83
Average	2	2.5	2.5	2.25	2	2	2.25	1.5	1.5	2.25	1.75	2	2.08



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CO-PO matrix for all subjects of Mechanical engineering semester-IV

Course Name		Maths-4 23000018											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO- 1	3	3	3	2	2	-	-	-	-	-	-	-	2.60
CO- 2	2	2	2	2	3	-	-	-	-	-	-	-	2.20
CO- 3	2	2	3	2	3	-	-	-	-	-	-	-	2.40
CO- 4	3	2	3	2	3	-	-	-	-	-	-	-	2.60
CO- 5	2	1	3	2	2	-	-	-	-	-	-	-	2.00
CO- 6	2	2	3	3	2	-	-	-	-	-	-	-	2.40
CO- 7	2	3	2	3	2	-	-	-	-	-	-	-	2.40
Average	2.29	2.14	2.71	2.29	2.43	-	-	-	-	-	-	-	2.37
Course Name		Machine Design & Industrial Drafting (23110401)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO- 1	1	1	-	-	-	-	2	2	1	2	1	1	1.38
CO- 2	-	-	-	-	1	-	3	2	3	2	1	1	1.86
CO- 3	1	2	2	2	-	1	2	3	2	3	1	3	2.00
CO- 4	-	-	2	-	-	-	2	2	2	1	1	1	1.57
Average	1	1.5	2	2	1	1	2.25	2.25	2	2	1	1.5	1.63





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Course Name		Engineering Thermodynamics (23090401)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO- 1	1	1	-	-	-	-	2	2	2	1	2	1	1.50
CO- 2	-	-	-	-	1	-	-	-	-	-	-	-	1.00
CO- 3	1	2	2	2	-	1	2	3	2	3	1	3	2.00
CO- 4	-	-	2	-	-	-	2	2	1	2	2	1	1.71
Average	1	1.5	2	2	1	1	2	2.33	1.67	2	1.6667	1.6667	1.65
Course Name		Project Feasibility & Marketing Skill (23000017)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO- 1	1	1	-	-	-	-	2	2	1	2	1	2	1.50
CO- 2	-	-	-	-	1	-	2	-	1	2	1	-	1.40
CO- 3	1	2	2	2	-	-	3	2	2	-	2	1	1.89
CO- 4	-	-	2	-	-	-	2	-	1	1	2	-	1.60
CO-5	-	-	-	-	-	1	2	1	2	1	3	-	1.67
Average	1	1.5	2	2	1	1	2.2	1.67	1.4	1.5	1.8	1.5	1.55



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Course Name		MECHANICAL MEASUREMENT & METROLOGY (23090402)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO- 1	1	1	-	-	-	-	1	2	1	2	1	2	1.38
CO- 2	-	-	-	-	1	-	3	-	1	-	-	-	1.67
CO- 3	1	2	2	2	2	-	1	2	3	2	2	1	1.82
CO- 4	-	-	2	-	-	-	-	2	3	2	1	1	1.83
CO-5	1	1				2	1	2	1	1	2	1	1.33
Average	1	1.5	2	2	1.5	-	-	-	-	-	1.5	1.25	1.54
Course Name		MANUFACTURING PROCESS II (23090404)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO- 1	3	2	3	2	-	-	2	-	1	2	1	-	2.14
CO- 2	2	2	1	1	-	-	-	-	3	-	2	-	1.80
CO- 3	2	1	3	3	-	1	-	2	-	1	-	-	1.86
CO- 4	3	2	3	2	-	2	-	1	-	-	-	1	2.17
CO-5	2	1	-	-	1	-	-	-	-	-	-	-	1.33
Average	2.4	1.6	2.5	2	1	1.5	2	1.5	2	1.5	1.5	1	1.80



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CO-PO matrix for all subjects of Mechanical engineering semester-V

Course Name		Fluid Mechanics (23090501)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO- 1	1	1	2	1	2	1	2	3	2	1	2	1	1.58
CO- 2	3	1	-	-	1	1	2	-	3	-	2	-	1.86
CO- 3	2	1	2	2	2	3	2	-	-	-	2	1	1.89
CO-4	1	2	2	2	2	2	-	1	2	1	2	1	1.64
CO-5	1	1	2	2	3	3	-	-	-	-	-	-	2.00
CO-6	2	3	2	1	2	1	-	-	-	-	-	-	1.83
Average	1.67	1.5	2	1.6	2	1.83	2	2	2.33	1	2	1	1.74
Course Name		Design of Machine Elements (23090502)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO- 1	1	1	-	-	-	-	3	2	3	2	3	2	2.13
CO- 2	-	-	-	-	1	-	2	2	2	1	2	1	1.57
CO- 3	1	2	2	2	-	-	2	3	2	1	2	1	1.80
CO- 4	-	-	2	-	-	1	2	1	2	1	2	1	1.50
CO- 5	-	-	-	1	2	-	3	2	1	2	3	1	1.88
Average	1	1.5	2	1.5	1.5	1	2.4	2	2	1.4	2.4	1.2	1.66





Course Name		Heat Transfer (23090503)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	2	2	1	2	-	-	-	-	-	-	1.50
CO-2	3	2	2	1	1	2	-	-	3	1	-	-	1.88
CO-3	1	2	2	2	2	1	-	2	-	2	2	1	1.70
CO-4	2	1	2	2	1	2	1	-	-	-	-	-	1.57
CO-5	3	2	2	1	2	1	-	1	1	1	-	-	1.56
Average	2	1.6	2	1.6	1.4	1.6	1	1.5	2	1.3333	2	1	1.59
Course Name		Theory of Machines (23090504)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	2	3	2	3	2	3	2.13
CO-2	-	-	-	-	1	-	3	2	3	2	3	-	2.33
CO-3	1	2	2	2	-	-	2	2	2	2	2	1	1.80
CO-4	-	-	2	-	-	2	2	1	2	2	1	2	1.75
CO-5	-	-	-	-	-	-	3	2	1	2	-	-	2.00
Average	1	1.5	2	2	1	2	2.4	2	2	2.2	2	2	1.84





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Course Name		Control Engineering (23090505)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	3	3	3	-	2	3	2	3	2	2	-	2.60
CO-2	2	2	1	2	-	3	2	3	2	3	2	-	2.20
CO-3	1	2	2	1	-	2	1	2	1	2	1	2	1.55
CO-4	-	-	-	-	1	3	2	3	2	3	2	-	2.29
CO-5	-	-	-	-	-	2	3	2	1	3	1	-	2.00
Average	2	2.33	2	2	1	2.4	2.2	2.4	1.8	2.6	1.6	2	2.03
Course Name		Case Study (23000027)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	3	3	3	-	2	1	2	1	2	2	1	2.09
CO-2	2	2	1	2	-	3	2	3	2	3	2	3	2.27
CO-3	1	2	2	1	-	2	1	1	1	2	1	-	1.40
CO-4	1	1	1	-	2	1	2	3	2	1	2	-	1.60
CO-5	-	1	-	2	-	-	-	-	-	-	-	-	1.50
Average	1.75	1.8	1.75	2	2	2	1.5	2.25	1.5	2	1.75	2	1.86



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Course Name		Intellectual Property Rights (12300005)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	3	3	3	-	1	2	1	2	1	1	-	2.00
CO-2	2	2	1	2	2	2	3	2	3	2	3	1	2.08
CO-3	1	2	2	1	1	2	1	2	1	2	1	-	1.45
CO-4	-	-	-	-	-	2	2	-	1	2	1	2	1.67
Average	2	2.33	2	2	1.5	1.75	2	1.67	1.75	1.75	1.5	1.5	1.81

CO-PO matrix for all subjects of Mechanical Engineering semester-VI

Course Name		DYNAMICS OF MACHINERY (23090601)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	2	3	2	3	3	2	-	2.13
CO-2	-	-	-	-	1	2	2	2	3	2	3	-	2.14
CO-3	1	2	2	2	-	1	2	2	2	-	2	1	1.70
CO-4	-	-	-	-	-	1	2	2	2	1	2	1	1.57
CO-5	-	-	-	-	-	2	1	2	2	3	3	2	2.14
Average	1	1.5	2	2	1	1.6	2	2	2.4	2.25	2.4	1.3333	1.79





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Course Name		FLUID POWER ENGINEERING (23090602)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	3	2	3	2	3	2	2.13
CO-2	-	-	-	-	1	-	2	3	2	3	2	3	2.29
CO-3	1	2	2	2	-	-	2	3	2	2	2	1	1.90
CO-4	-	-	2	-	-	1	2	3	2	2	-	2	2.00
CO-5	-	-	-	1	2	-	1	2	-	1	1	-	1.33
Average	1	1.5	2	1.5	1.5	1	2	2.6	2.25	2	2	2	1.78
Course Name		PRODUCTION TECHNOLOGY (23090603)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	-	2	3	2	2	3	-	2.00
CO-2	-	-	-	-	1	-	2	2	2	-	-	-	1.75
CO-3	1	2	2	2	-	1	2	1	2	2	2	1	1.64
CO-4	-	-	2	-	-	-	1	-	-	-	-	-	1.50
CO-5	2	-	-	1	2	-	2	2	2	1	2	2	1.78
Average	1.33	1.5	2	1.5	1.5	1	1.8	2	2	1.6667	2.3333	1.5	1.68



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Course Name		REFRIGERATION AND AIRCONDITIONING (23090604)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	1	-	-	-	2	2	2	2	1	-	-	1.57
CO-2	-	-	-	-	1	2	1	2	1	2	1	-	1.43
CO-3	1	2	2	2	-	2	2	3	-	-	2	1	1.89
CO-4	-	-	2	-	-	-	-	3	2	1	-	-	2.00
CO-5	-	-	-	1	2	1	2	-	2	-	3	-	1.83
Average	1	1.5	2	1.5	1.5	1.75	1.75	2.5	1.75	1.3333	2	1	1.63
Course Name		INDUSTRIAL ENGINEERING (23090605)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1	2	3	2	3	2	3	2	3	2	3	-	2.36
CO-2	1	2	1	1	-	2	-	3	2	-	-	-	1.71
CO-3	1	1	3	3	-	2	-	3	-	2	-	1	2.00
CO-4	1	2	3	2	-	-	2	-	3	2	-	-	2.14
Average	1	1.75	2.5	2	3	2	2.5	2.67	2.67	2	3	1	2.17



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Course Name		SEMINAR (23000026)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	-	1	2	1	2	1	2	1	2	1	2	-	1.44
CO-2	-	2	1	1	-	-	-	-	-	-	-	-	1.33
CO-3	2	1	3	3	1	-	1	-	1	-	1	2	1.71
CO-4	-	2	3	2	-	-	2	-	-	3	2	-	2.40
CO-5	1	2	1	2	1	2	1	-	-	-	-	-	1.43
Average	1.5	1.6	2	1.8	1.33	1.5	1.5	1	1.5	2	1.6667	2	1.62
Course Name		EXPERT PROGRAM IN ENTREPRENEURSHIP (12300006)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	3	2	-	-	1	-	2	3	-	-	2.29
CO-2	2	2	1	1	1	1	-	2	-	1	-	-	1.38
CO-3	2	1	3	3	-	-	-	-	2	3	2	2	2.25
CO-4	2	2	3	2	-	1	1	-	-	-	-	-	1.83
Average	2.25	1.75	2.5	2	1	1	1	2	2	2.3333	2	2	1.82



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CO-PO matrix for all subjects of Mechanical Engineering semester-VII

Course Name		Computer Aided Design & Manufacturing (23090701)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	3	2	-	-	1	-	2	3	-	-	2.29
CO-2	2	2	1	1	1	1	-	2	-	-	-	-	1.43
CO-3	2	1	3	3	-	-	-	-	2	3	2	2	2.25
CO-4	2	2	3	2	-	1	1	-	-	-	-	-	1.83
CO-5	2	2	1	1	1	2	-	3	3	2	-	-	1.89
Average	2.2	1.8	2.2	1.8	1	1.33	1	2.5	2.33	2.6667	2	2	1.90
Course Name		Power Plant Engineering (23090702)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	3	2	-	-	1	-	2	3	-	-	2.29
CO-2	2	2	1	1	1	1	-	2	-	1	-	-	1.38
CO-3	2	1	3	3	-	-	-	-	2	3	2	2	2.25
CO-4	2	2	3	2	-	1	1	-	-	-	-	-	1.83
CO-5	2	1	2	1	1	1	2	2	1	-	-	1	1.40
Average	2.2	1.6	2.4	1.8	1	1	1.33	2	1.67	2.3333	2	1.5	1.74





Course Name		Operation Research (23090703)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	3	2	-	-	1	-	2	3	-	-	2.29
CO-2	2	2	1	1	1	1	-	2	-	1	-	-	1.38
CO-3	2	1	3	3	-	-	-	-	2	3	2	2	2.25
CO-4	2	2	3	2	-	1	1	-	-	-	-	-	1.83
CO-5	1	2	1	2	1	2	1	1	1	2	1	2	1.42
Average	2	1.8	2.2	2	1	1.33	1	1.5	1.67	2.25	1.5	2	1.69
Course Name		Machine Design (23090704)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	3	2	-	-	1	-	2	3	-	-	2.29
CO-2	2	2	1	1	1	1	-	2	-	1	-	-	1.38
CO-3	2	1	3	3	-	1	-	1	2	3	2	2	2.00
CO-4	2	2	3	2	-	1	1	-	-	-	-	-	1.83
CO-5	1	1	2	1	2	1	2	1	2	3	2		1.64
Average	2	1.6	2.4	1.8	1.5	1	1.33	1.33	2	2.5	2	2	1.79





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Course Name		Metal Forming Analysis (23090712)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	3	2	-	-	1	-	2	1	-	-	2.00
CO-2	2	2	1	1	1	1	-	2	-	1	-	-	1.38
CO-3	2	1	3	3	-	-	-	-	2	3	2	2	2.25
CO-4	2	2	3	2	1	1	1	-	-	-	-	-	1.71
CO-5	1	2	1	2	3	2	2	1	2	3	2		1.91
Average	2	1.8	2.2	2	1.67	1.33	1.33	1.5	2	2	2	2	1.85
Course Name		Start up Project-I (123000007)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	3	2	-	-	1	-	2	3	-	-	2.29
CO-2	2	2	1	1	1	1	-	2	-	1	-	-	1.38
CO-3	2	1	3	3	-	-	-	-	2	3	2	2	2.25
CO-4	2	2	3	2	-	1	1	-	-	-	-	-	1.83
Average	2.25	1.75	2.5	2	1	1	1	2	2	2.3333	2	2	1.82



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Course Name		Project – I (23000023)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	3	2	-	-	1	-	2	3	1	-	2.13
CO-2	2	2	1	1	1	1	-	2	-	1	-	-	1.38
CO-3	2	1	3	3	2	3	2	3	2	3	2	2	2.33
CO-4	2	2	3	2	-	1	1	2	1	2	1	-	1.70
CO-5	1	2	1	1	1	1	1	2	1	2	1	2	1.33
Average	2	1.8	2.2	1.8	1.33	1.5	1.25	2.25	1.5	2.2	1.25	2	1.76

CO-PO matrix for all subjects of Mechanical Engineering semester-VIII

Course Name		PROJECT 2 (23000025)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	3	2	1	2	1	3	2	3	1	-	2.09
CO-2	2	2	-	1	1	1	-	2	-	1	-	-	1.43
CO-3	2	-	3	3	2	1	-	-	2	3	2	2	2.22
CO-4	-	2	3	2	-	1	1	-	-	-	-	-	1.80
CO-5	1	2	1	2	1	2	1	2	1	3	2	1	1.58
Average	2	2	2.5	2	1.25	1.4	1	2.33	1.67	2.5	1.6667	1.5	1.82





Course Name		INDUSTRIAL TRAINING (23000028)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	3	2	1	2	1	2	2	3	1	-	2.00
CO-2	2	2	1	-	-	1	-	2	-	1	-	-	1.50
CO-3	-	-	-	3	-	-	-	-	2	3	2	2	2.40
CO-4	-	2	3	2	-	1	1	-	-	-	-	-	1.80
CO-5	1	1	1	1	-	-	-	-	-	-	-	-	1.00
Average	2	1.75	2	2	1	1.33	1	2	2	2.3333	1.5	2	1.74
Course Name		ENERGY CONSERVATION AND MANAGEMENT (23090805)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	3	2	-	-	1	-	2	3	-	-	2.29
CO-2	2	2	1	1	1	1	-	2	-	1	-	-	1.38
CO-3	2	1	3	3	1	1	2	3	2	3	2	2	2.08
CO-4	2	2	3	2	1	1	1	2	-	-	-	-	1.75
CO-5	1	2	2	1	2	2	2	3	2	2	3	3	2.08
Average	2	1.8	2.4	1.8	1.25	1.25	1.5	2.5	2	2.25	2.5	2.5	1.98





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Course Name		Start-Up Project Part-II (12300008)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	3	2	3	2	-	-	1	-	2	3	-	-	2.29
CO-2	2	2	1	1	1	1	-	2	-	1	-	-	1.38
CO-3	2	1	1	1	-	1	2	1	2	3	2	2	1.64
CO-4	1	1	3	2	-	1	1	-	1	2	2	-	1.56
Average	2	1.5	2	1.5	1	1	1.33	1.5	1.67	2.25	2	2	1.65



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SWARRNIM INSTITUTE OF TECHNOLOGY

PROGRAM NAME: MACHINE LEARNING AND ARTIFICIAL INTELLIGENCE

1ST - 4TH SEMESTER

CO PO MAPPING FOR ALL SUBJECTS OF MLAI

M.Tech Sem-1													
Course Name :		Digital Forensics(26060101)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2.00	3.00	2.00	1.00	-	-	-	1.00	-	2.00	2.00		1.86
CO-2	3.00	2.00	3.00	2.00	-	1.00	1.00	-	-	2.00		2.00	2.00
CO-3	3.00	3.00	3.00	2.00	2.00	-	-	-	2.00	3.00	2.00	2.00	2.44
CO-4	3.00	2.00	2.00	1.00	-	-	-	1.00	2.00	2.00			1.86
CO-5	3.00	2.00	3.00	1.00	2.00	-	1.00	1.00	3.00	2.00	2.00		2.00
Average	2.80	2.40	2.60	1.40	2.00	1.00	1.00	1.00	2.33	2.20	2.00	2.00	2.03
Course Name :		Artificial Intelligence(26060102)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1.00	3.00	2.00	3.00	3.00	2.00	1.00	1.00	2.00	2.00	1.00	-	1.91
CO-2	1.00	2.00	3.00	3.00	2.00	1.00	2.00	2.00	2.00	2.00	-	3.00	2.09
CO-3	2.00	1.00	2.00	3.00	3.00	2.00	3.00	3.00	1.00	1.00	1.00	-	2.00
CO-4	3.00	2.00	1.00	2.00	3.00	3.00	2.00	2.00	1.00	1.00	3.00	2.00	2.08
CO-5	2.00	2.00	3.00	2.00	1.00	2.00	3.00	3.00	2.00	2.00	1.00	-	2.09
Average	1.80	2.00	2.20	2.60	2.40	2.00	2.20	2.20	1.60	1.60	1.50	2.50	2.03





Course Name :		Cloud Computing(26060103)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2.00	2.00	3.00	3.00	2.00	-	-	-	-	2.00	-	-	2.30
CO-2	2.00	2.00	1.00	2.00	3.00	-	-	2.00	1.00	3.00	2.00	1.00	1.90
CO-3	2.00	2.00	2.00	2.00	2.00	1.00	-	-	1.00	3.00	1.00	-	1.80
CO-4	3.00	2.00	2.00	2.00	1.00	-	-	-	2.00	3.00	-	2.00	2.10
CO-5	3.00	2.00	2.00	3.00	3.00	-	3.00	-	1.00	3.00	1.00	1.00	2.20
Average	2.40	2.00	2.00	2.40	2.20	1.00	3.00	2.00	1.25	2.80	1.33	1.33	2.06

Course Name :		Data Mining and Warehousing(26060104)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2.00	2.00	3.00	3.00	2.00	1.00	-	-	-	2.00	2.00	1.00	2.00
CO-2	2.00	2.00	1.00	2.00	3.00	-	-	1.00	-	3.00	1.00	1.00	1.80
CO-3	2.00	1.00	2.00	2.00	2.00	-	-	1.00	-	3.00	1.00	-	1.75
CO-4	3.00	2.00	1.00	2.00	1.00	-	1.00	-	2.00	3.00	-	1.00	1.80
CO-5	3.00	2.00	2.00	3.00	3.00	-	-	1.00	1.00	3.00	1.00	-	2.10
Average	2.40	1.80	1.80	2.40	2.20	1.00	1.00	1.00	1.50	2.80	1.25	1.00	1.89





Course Name :		Research Skills(26010001)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2.00	2.00	3.00	3.00	1.00	1.00	-	-	-	2.00	-	-	2.00
CO-2	2.00	3.00	1.00	1.00	3.00	-	-	-	1.00	3.00	-	1.00	1.88
CO-3	2.00	1.00	1.00	2.00	2.00	-	2.00	-	1.00	3.00	1.00		1.67
CO-4	3.00	3.00	2.00	1.00	1.00	-	-	-	2.00	3.00	-	2.00	2.13
CO-5	3.00	2.00	2.00	2.00	3.00	-	-	2.00	1.00	3.00	2.00	1.00	
Average	2.40	2.20	1.80	1.80	2.00	1.00	2.00	2.00	1.25	2.80	1.50	1.33	1.92

M.Tech Sem-2

Course Name :		Business Analytics(24060201)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1.00	3.00	2.00	3.00	3.00	3.00	1.00	2.00	3.00	2.00	2.00	3.00	2.33
CO-2	1.00	2.00	3.00	3.00	2.00	3.00	2.00	-	3.00	-	3.00	-	2.44
CO-3	2.00	1.00	2.00	3.00	3.00	2.00	3.00	-	2.00	-	-	2.00	2.22
CO-4	3.00	2.00	1.00	2.00	3.00	1.00	2.00	2.00	2.00	2.00	-	-	2.00
CO-5	2.00	2.00	3.00	2.00	1.00	-	1.00	-	3.00	2.00	2.00	3.00	2.10
Average	1.80	2.00	2.20	2.60	2.40	2.25	1.80	2.00	2.60	2.00	2.33	2.67	2.22





Course Name :		Neural Networks(24060202)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1.00	3.00	2.00	3.00	3.00	2.00	1.00	1.00	2.00	2.00	1.00		1.91
CO-2	1.00	2.00	3.00	3.00	2.00	1.00	2.00	2.00	2.00	2.00		3.00	2.09
CO-3	2.00	1.00	2.00	3.00	3.00	2.00	-	3.00	1.00	1.00	1.00		1.90
CO-4	3.00	2.00	1.00	2.00	3.00	3.00	2.00	-	1.00	1.00	3.00	2.00	2.09
CO-5	2.00	2.00	3.00	2.00	1.00	2.00	3.00	3.00	-	2.00	1.00		2.10
Average	1.80	2.00	2.20	2.60	2.40	2.00	2.00	2.25	1.50	1.60	1.50	2.50	2.02

Course Name :		Cryptography and Biometrics(24060203)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2.00	2.00	3.00	3.00	2.00	-	2.00	3.00	-	2.00	3.00	-	2.40
CO-2	2.00	2.00	1.00	2.00	3.00	-	-	2.00	1.00	3.00	1.00	2.00	1.90
CO-3	2.00	2.00	2.00	2.00	2.00	1.00	-	-	2.00	-	-	2.00	1.90
CO-4	3.00	2.00	2.00	2.00	1.00	2.00	-	3.00	2.00	2.00	2.00	-	2.10
CO-5	3.00	2.00	2.00	3.00	3.00	-	3.00	-	1.00	3.00	2.00	3.00	2.50
Average	2.40	2.00	2.00	2.40	2.20	1.50	2.50	2.67	1.50	2.50	2.00	2.33	2.16





Course Name :		Soft Computing(24060204)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2.00	2.00	3.00	3.00	2.00	1.00	2.00	-	-	2.00	2.00	1.00	2.00
CO-2	2.00	2.00	1.00	1.00	3.00	-	-	1.00	-	3.00	1.00	1.00	1.70
CO-3	2.00	1.00	2.00	2.00	2.00	3.00	-	1.00	-	3.00	1.00	2.00	1.90
CO-4	3.00	2.00	1.00	3.00	3.00	3.00	1.00	-	2.00	3.00	2.00	1.00	2.20
CO-5	3.00	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	3.00	1.00	1.00	1.80
Average	2.40	1.80	1.80	2.20	2.40	2.25	1.67	1.00	1.50	2.80	1.40	1.20	1.92

Course Name :		Software Project Management(24060206)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2.00	2.00	3.00	3.00	2.00	1.00	2.00	-	-	2.00		1.00	2.00
CO-2	2.00	3.00	1.00	2.00	3.00	-	-	2.00	1.00	3.00	1.00	1.00	1.90
CO-3	2.00	2.00	3.00	2.00	2.00	2.00	2.00	-	1.00	3.00	3.00	1.00	2.09
CO-4	3.00	3.00	2.00	2.00	1.00	-	2.00	-	2.00	3.00	1.00		2.11
CO-5	3.00	2.00	2.00	2.00	3.00	2.00	-	2.00	1.00	3.00		2.00	
Average	2.40	2.40	2.20	2.20	2.20	1.67	2.00	2.00	1.25	2.80	1.67	1.25	2.03





M.Tech Sem-3

Course Name :		Machine Learning(24060301)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2.00	3.00	1.00	2.00	-	-	-	1.00	-	2.00	2.00		1.86
CO-2	2.00	3.00	2.00	2.00	-	-	2.00	-	-	2.00		2.00	2.14
CO-3	3.00	3.00	2.00	2.00	2.00	1.00	-	-	3.00	3.00	2.00	2.00	2.30
CO-4	3.00	2.00	3.00	2.00	-	-	-	1.00	2.00	2.00			2.14
CO-5	3.00	2.00	3.00	1.00	2.00	-	2.00	1.00	3.00	2.00	2.00		2.10
Average	2.60	2.60	2.20	1.80	2.00	1.00	2.00	1.00	2.67	2.20	2.00	2.00	2.11

Course Name :		Seminar 1(24000001)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1.00	-	-	-	-	-	1.00	1.00	2.00	2.00	1.00	2	1.33
CO-2	-	-	1.00	-	-	-	2.00	2.00	2.00	2.00	3	3.00	2.00
CO-3	-	1.00	-	-	-	-	3.00	3.00	3.00	1.00	2.00		2.20
CO-4	-	-	-	1.00	-	1.00	2.00	2.00	2.00	2.00	3.00	3.00	2.00
CO-5	-	-	-	-	1.00	-	3.00	3.00	3.00	3.00	2.00		2.50
Average	1.00	1.00	1.00	1.00	1.00	1.00	2.20	2.20	2.40	2.00	2.00	3.00	2.01





Course Name :		Internal Review(24000002)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1.00	-	-	-	-	2.00	2.00	3.00	3.00	2.00	2.00	3.00	2.30
CO-2	-	-	1.00	-	-	2.00	2.00	1.00	2.00	3.00	-	2.00	1.90
CO-3	-	1.00	-	-	-	2.00	2.00	2.00	2.00	2.00	1.00	-	1.70
CO-4	-	-	-	1.00	-	3.00	2.00	2.00	2.00	1.00	2.00	1.00	1.80
CO-5	-	-	-	-	1.00	3.00	2.00	2.00	3.00	3.00	-	3.00	2.40
Average	1.00	1.00	1.00	1.00	1.00	2.40	2.00	2.00	2.40	2.20	1.67	2.25	2.02

Course Name :		Dissertation Phase I(26060104)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1.00	-	-	-	-	2.00	3.00	1.00	-	2.00	3.00	1.00	1.86
CO-2	-	-	1.00	-	-	3.00	2.00	3.00	-	1.00	3.00	1.00	2.00
CO-3	-	1.00	-	-	-	1.00	3.00	2.00	-	2.00	2.00		1.83
CO-4	-	-	-	1.00	-	-	3.00	1.00	3.00	2.00		1.00	1.80
CO-5	-	-	-	-	1.00	-	-	1.00	1.00	3.00	3.00		1.80
Average	1.00	1.00	1.00	1.00	1.00	2.00	2.75	1.60	2.00	2.00	2.75	1.00	1.86





M.Tech Sem-4

Course Name : Seminar II(24000006)

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	-	-	1.00	-	-	-	-	1.00	-	2.00	2.00	1	1.50
CO-2	1.00	1.00	-	-	-	-	2.00	-	-	2.00	1	2.00	1.60
CO-3	-	-	-	-	1.00	-	-	3.00	3.00	3.00	2.00	2.00	2.33
CO-4	-	-	-	1.00	-	3.00	-	3.00	2.00	2.00	1	-	2.20
CO-5	-	-	-	-	-	-	2.00	1.00	3.00	2.00	2.00	2	2.00
Average	1.00	1.00	1.00	1.00	1.00	3.00	2.00	2.00	2.67	2.20	2.00	2.00	1.93

Course Name : External Mid Sem Review(24000004)

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	-	-	1.00	-	-	-	1.00	1.00	2.00	2.00	1.00	2	1.33
CO-2	1.00	1.00	-	-	-	-	2.00	1.00	3.00	2.00	3	3.00	1.86
CO-3	-	-	-	-	1.00	-	3.00	3.00	3.00	1.00	2.00		2.20
CO-4	-	-	-	1.00	-	2.00	2.00	2.00	2.00	3.00	3.00	3.00	2.25
CO-5	-	-	-	-	-	-	3.00	3.00	3.00	3.00	2.00		2.80
Average	1.00	1.00	1.00	1.00	1.00	2.00	2.20	2.00	2.60	2.20	2.00	3.00	2.09





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Course Name :		Dissertation Phase II(24000005)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	-	-	1.00	-	-	3.00	1.00	2.00	-	2.00	3.00	2.00	2.00
CO-2	1.00	1.00	-	-	-	2.00	2.00	3.00	1.00	3.00	2.00	3.00	2.00
CO-3	-	-	-	-	1.00	1.00	3.00	3.00	1.00	3.00	3.00	3.00	2.30
CO-4	-	-	-	1.00	-	2.00	-	3.00	2.00	3.00	-	3.00	2.30
CO-5	-	-	-	-	-	2.00	3.00	-	1.00	3.00	3.00	-	2.40
Average	1.00	1.00	1.00	1.00	1.00	2.00	2.25	2.75	1.25	2.80	2.75	2.75	2.20



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PROGRAM NAME: CYBER SECURITY

1ST - 4TH SEMESTER

CO PO MAPPING FOR ALL SUBJECTS OF CS

M.Tech Sem-1													
Course Name :		Digital Forensics(26050101)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1.00	3.00	2.00	3.00	3.00	2.00	1.00	1.00	2.00	2.00	1.00	-	1.91
CO-2	1.00	2.00	3.00	3.00	2.00	1.00	2.00	2.00	2.00	2.00	-	3.00	2.09
CO-3	2.00	1.00	2.00	3.00	3.00	2.00	3.00	3.00	1.00	1.00	1.00	-	2.00
CO-4	3.00	2.00	1.00	2.00	3.00	3.00	2.00	2.00	1.00	1.00	3.00	2.00	2.08
CO-5	2.00	2.00	3.00	2.00	1.00	2.00	3.00	3.00	2.00	2.00	1.00	-	2.09
Average	1.80	2.00	2.20	2.60	2.40	2.00	2.20	2.20	1.60	1.60	1.50	2.50	2.03
Course Name :		Cyber Security(26050102)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1.00	3.00	2.00	3.00	3.00	2.00	1.00	1.00	2.00	2.00	1.00	-	1.91
CO-2	1.00	2.00	3.00	3.00	2.00	1.00	2.00	2.00	2.00	2.00	-	3.00	2.09
CO-3	2.00	1.00	2.00	3.00	3.00	2.00	3.00	3.00	1.00	1.00	1.00	-	2.00
CO-4	3.00	2.00	1.00	2.00	3.00	3.00	2.00	2.00	1.00	1.00	3.00	2.00	2.08
CO-5	2.00	2.00	3.00	2.00	1.00	2.00	3.00	3.00	2.00	2.00	1.00	-	2.09
Average	1.80	2.00	2.20	2.60	2.40	2.00	2.20	2.20	1.60	1.60	1.50	2.50	2.03



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Course Name :		Cloud Computing(26050103)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2.00	2.00	3.00	3.00	2.00	-	-	-	-	2.00	-	-	2.33
CO-2	2.00	2.00	1.00	2.00	3.00	-	-	2.00	1.00	3.00	2.00	1.00	1.90
CO-3	2.00	2.00	2.00	2.00	2.00	1.00	-	-	1.00	3.00	1.00	-	1.80
CO-4	3.00	2.00	2.00	2.00	1.00	-	-	-	2.00	3.00	-	2.00	2.13
CO-5	3.00	2.00	2.00	3.00	3.00	-	3.00	-	1.00	3.00	1.00	1.00	2.20
Average	2.40	2.00	2.00	2.40	2.20	1.00	3.00	2.00	1.25	2.80	1.33	1.33	2.07

Course Name :		Data Mining and Warehousing(26050104)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2.00	2.00	3.00	3.00	2.00	1.00	-	-	-	2.00	2.00	1.00	2.00
CO-2	2.00	2.00	1.00	2.00	3.00	-	-	1.00	-	3.00	1.00	1.00	1.78
CO-3	2.00	1.00	2.00	2.00	2.00	-	-	1.00	-	3.00	1.00	-	1.80
CO-4	3.00	2.00	1.00	2.00	1.00	-	1.00	-	2.00	3.00	-	1.00	1.78
CO-5	3.00	2.00	2.00	3.00	3.00	-	-	1.00	1.00	3.00	1.00	-	2.11
Average	2.40	1.80	1.80	2.40	2.20	1.00	1.00	1.00	1.50	2.80	1.25	1.00	1.89





Course Name :		Research Skills(26010001)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2.00	2.00	3.00	3.00	1.00	1.00	-	-	-	2.00	-	-	2.00
CO-2	2.00	3.00	1.00	1.00	3.00	-	-	-	1.00	3.00	-	1.00	1.88
CO-3	2.00	1.00	1.00	2.00	2.00	-	2.00	-	1.00	3.00	1.00		1.67
CO-4	3.00	3.00	2.00	1.00	1.00	-	-	-	2.00	3.00	-	2.00	2.13
CO-5	3.00	2.00	2.00	2.00	3.00	-	-	2.00	1.00	3.00	2.00	1.00	
Average	2.40	2.20	1.80	1.80	2.00	1.00	2.00	2.00	1.25	2.80	1.50	1.33	1.92

M.Tech Sem-2

Course Name :		Network Programming(26300201)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1.00	3.00	2.00	3.00	3.00	3.00	1.00	2.00	3.00	2.00	2.00	3.00	2.33
CO-2	1.00	2.00	3.00	3.00	2.00	3.00	2.00	-	3.00	-	3.00	-	2.44
CO-3	2.00	1.00	2.00	3.00	3.00	2.00	3.00	-	2.00	-	-	2.00	2.22
CO-4	3.00	2.00	1.00	2.00	3.00	1.00	2.00	2.00	2.00	2.00	-	-	2.00
CO-5	2.00	2.00	3.00	2.00	1.00	-	1.00	-	3.00	2.00	2.00	3.00	
Average	1.80	2.00	2.20	2.60	2.40	2.25	1.80	2.00	2.60	2.00	2.33	2.67	2.25





Course Name :		Ethical Hacking(26300202)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1.00	3.00	2.00	3.00	3.00	2.00	1.00	1.00	2.00	2.00	1.00		1.91
CO-2	1.00	2.00	3.00	3.00	1.00	1.00	2.00	2.00	2.00	2.00		3.00	2.00
CO-3	2.00	1.00	2.00	3.00	2.00	2.00	-	3.00	1.00	1.00	1.00		1.80
CO-4	3.00	2.00	1.00	2.00	3.00	2.00	2.00	-	1.00	1.00	3.00	2.00	2.00
CO-5	2.00	2.00	3.00	2.00	1.00	1.00	3.00	3.00	-	2.00	1.00		2.00
Average	1.80	2.00	2.20	2.60	2.00	1.60	2.00	2.25	1.50	1.60	1.50	2.50	1.94

Course Name :		Cryptography and Biometrics(26300203)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2.00	2.00	3.00	3.00	2.00	-	2.00	3.00	-	2.00	3.00	-	2.40
CO-2	2.00	2.00	1.00	2.00	3.00	-	-	2.00	1.00	3.00	1.00	2.00	1.90
CO-3	2.00	2.00	2.00	2.00	2.00	1.00	-	-	2.00	-	-	2.00	1.90
CO-4	3.00	2.00	2.00	2.00	1.00	2.00	-	3.00	2.00	2.00	2.00	-	2.10
CO-5	3.00	2.00	2.00	3.00	3.00	-	3.00	-	1.00	3.00	2.00	3.00	2.50
Average	2.40	2.00	2.00	2.40	2.20	1.50	2.50	2.67	1.50	2.50	2.00	2.33	2.16





Course Name : Soft Computing(26300204)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2.00	2.00	3.00	3.00	2.00	1.00	2.00	-	-	2.00	2.00	1.00	2.00
CO-2	2.00	2.00	1.00	1.00	3.00	-	-	1.00	-	3.00	1.00	1.00	1.70
CO-3	2.00	1.00	2.00	2.00	2.00	3.00	-	1.00	-	3.00	1.00	2.00	1.90
CO-4	3.00	2.00	1.00	3.00	3.00	3.00	1.00	-	2.00	3.00	2.00	1.00	2.20
CO-5	3.00	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	3.00	1.00	1.00	1.80
Average	2.40	1.80	1.80	2.20	2.40	2.25	1.67	1.00	1.50	2.80	1.40	1.20	1.92

Course Name : Software Project Management(26300206)													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2.00	2.00	3.00	3.00	2.00	1.00	2.00	-	-	2.00		1.00	2.00
CO-2	2.00	3.00	1.00	2.00	3.00	-	-	2.00	1.00	3.00	1.00	1.00	1.90
CO-3	2.00	2.00	3.00	2.00	2.00	2.00	2.00	-	1.00	3.00	3.00	1.00	2.09
CO-4	3.00	3.00	2.00	2.00	1.00	-	2.00	-	2.00	3.00	1.00		2.11
CO-5	3.00	2.00	2.00	2.00	3.00	2.00	-	2.00	1.00	3.00		2.00	
Average	2.40	2.40	2.20	2.20	2.20	1.67	2.00	2.00	1.25	2.80	1.67	1.25	2.03





M.Tech Sem-3

Course Name : Cyber Law (24050301)

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	2.00	3.00	1.00	2.00	-	-	-	1.00	-	2.00	2.00		1.86
CO-2	2.00	3.00	2.00	2.00	-	-	2.00	-	-	2.00		2.00	2.14
CO-3	3.00	3.00	2.00	2.00	2.00	1.00	-	-	3.00	3.00	2.00	2.00	2.30
CO-4	3.00	2.00	3.00	2.00	-	-	-	1.00	2.00	2.00			2.14
CO-5	3.00	2.00	3.00	1.00	2.00	-	2.00	1.00	3.00	2.00	2.00		2.10
Average	2.60	2.60	2.20	1.80	2.00	1.00	2.00	1.00	2.67	2.20	2.00	2.00	2.11

Course Name : Seminar 1(24000001)

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1.00	-	-	-	-	-	1.00	1.00	2.00	2.00	1.00	2	1.33
CO-2	-	-	1.00	-	-	-	2.00	2.00	2.00	2.00	3	3.00	2.00
CO-3	-	1.00	-	-	-	-	3.00	3.00	3.00	1.00	2.00		2.20
CO-4	-	-	-	1.00	-	1.00	2.00	2.00	2.00	2.00	3.00	3.00	2.00
CO-5	-	-	-	-	1.00	-	3.00	3.00	3.00	3.00	2.00		2.50
Average	1.00	1.00	1.00	1.00	1.00	1.00	2.20	2.20	2.40	2.00	2.00	3.00	2.01





Course Name :		Internal Review(24000002)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1.00	-	-	-	-	2.00	2.00	3.00	3.00	2.00	2.00	3.00	2.30
CO-2	-	-	1.00	-	-	2.00	2.00	1.00	2.00	3.00	-	2.00	1.90
CO-3	-	1.00	-	-	-	2.00	2.00	2.00	2.00	2.00	1.00	-	1.70
CO-4	-	-	-	1.00	-	3.00	2.00	2.00	2.00	1.00	2.00	1.00	1.80
CO-5	-	-	-	-	1.00	3.00	2.00	2.00	3.00	3.00	-	3.00	2.40
Average	1.00	1.00	1.00	1.00	1.00	2.40	2.00	2.00	2.40	2.20	1.67	2.25	2.02

Course Name :		Dissertation Phase I(26060104)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	1.00	-	-	-	-	2.00	3.00	1.00	-	2.00	3.00	1.00	1.86
CO-2	-	-	1.00	-	-	3.00	2.00	3.00	-	1.00	3.00	1.00	2.00
CO-3	-	1.00	-	-	-	1.00	3.00	2.00	-	2.00	2.00	-	1.83
CO-4	-	-	-	1.00	-	-	3.00	1.00	3.00	2.00	-	1.00	1.80
CO-5	-	-	-	-	1.00	-	-	1.00	1.00	3.00	3.00	-	1.80
Average	1.00	1.00	1.00	1.00	1.00	2.00	2.75	1.60	2.00	2.00	2.75	1.00	1.86





M.Tech Sem-4

Course Name : Seminar II(24000006)

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	-	-	1.00	-	-	-	-	1.00	-	2.00	2.00	1	1.50
CO-2	1.00	1.00	-	-	-	-	2.00	-	-	2.00	1	2.00	1.60
CO-3	-	-	-	-	1.00	-	-	3.00	3.00	3.00	2.00	2.00	2.33
CO-4	-	-	-	1.00	-	3.00	-	3.00	2.00	2.00	1	-	2.20
CO-5	-	-	-	-	-	-	2.00	1.00	3.00	2.00	2.00	2	2.00
Average	1.00	1.00	1.00	1.00	1.00	3.00	2.00	2.00	2.67	2.20	2.00	2.00	1.93

Course Name : External Mid Sem Review(24000004)

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	-	-	1.00	-	-	-	1.00	1.00	2.00	2.00	1.00	2	1.33
CO-2	1.00	1.00	-	-	-	-	2.00	1.00	3.00	2.00	3	3.00	1.86
CO-3	-	-	-	-	1.00	-	3.00	3.00	3.00	1.00	2.00		2.20
CO-4	-	-	-	1.00	-	2.00	2.00	2.00	2.00	3.00	3.00	3.00	2.25
CO-5	-	-	-	-	-	-	3.00	3.00	3.00	3.00	2.00		2.80
Average	1.00	1.00	1.00	1.00	1.00	2.00	2.20	2.00	2.60	2.20	2.00	3.00	2.09





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Course Name :		Dissertation Phase II(24000005)											
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO average
CO-1	-	-	1.00	-	-	3.00	1.00	2.00	-	2.00	3.00	2.00	2.00
CO-2	1.00	1.00	-	-	-	2.00	2.00	3.00	1.00	3.00	2.00	3.00	2.00
CO-3	-	-	-	-	1.00	1.00	3.00	3.00	1.00	3.00	3.00	3.00	2.30
CO-4	-	-	-	1.00	-	2.00	-	3.00	2.00	3.00	-	3.00	2.30
CO-5	-	-	-	-	-	2.00	3.00	-	1.00	3.00	3.00	-	2.40
Average	1.00	1.00	1.00	1.00	1.00	2.00	2.25	2.75	1.25	2.80	2.75	2.75	2.20



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