
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Formal Languages & Automata Theory

Subject Code : CS501PC

Year/Sem : III-I

Regulation : R18

CO1	Able to Define context free language and construct related context free grammar
CO2	Able to Classify the abstract machines and their power to recognize the languages
CO3	Able to distinguish between decidability and un decidability of Problems
CO4	Able to Design Finite State Machines for modeling and solving computing problems
CO5	Able to Solve mathematical functions by related abstract machines.

Course
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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Formal Languages & Automata Theory

Subject Code : CS501PC

Year/Sem : III-I

Regulation : R18

Mapping Matrix of CO's and PO's:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12	PSO1	PSO2
CO1	2	2	1	1	1									
CO2	2	2	1	2	2								2	
CO3	2	2	1	2	1									
CO4	2	2	2	1	2								2	
CO5	2	2	1	1	2								2	

Note: 1* LOW

2* MEDIUM

3* HIGH

Course
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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Software Engineering

Subject Code : CS502PC

Year/Sem : III-I

Regulation : R18

CO1	Able to define software engineering process and practices, and demonstrate various process models
CO2	Able to identify different types of risks in software development
CO3	Able to distinguish different testing strategies and it's working
CO4	Able to Estimate the quality of software process
CO5	Able to develop the SRS document for project.

Course
Coordinator

Program
Coordinator

HOD

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Software Engineering

Subject Code : CS502PC

Year/Sem : III-I

Regulation : R18

Mapping Matrix of CO's and PO's:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12	PSO1	PSO2
CO1	3	2	3	2	2				2		2	2		3
CO2	2	3	2	2					2		2	2	2	2
CO3	2	2	2	2	3				2		2	2	2	3
CO4	2	2	2	2	3	2		2	2		2			2
CO5	3	3	3	3	3	2		2	2		2	2	2	2

Note: 1* LOW

2* MEDIUM

3* HIGH

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Computer Networks

Subject Code : CS503PC

Year/Sem : III-I

Regulation : R18

CO1	Define Network and its components
CO2	Illustrate the functionality of OSI and TCP/IP reference models
CO3	Compare different network layer protocols
CO4	Evaluate Architecture for Application layer protocols
CO5	Choose appropriate protocol for desired communication service

Course
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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Computer Networks

Subject Code : CS503PC

Year/Sem : III-I

Regulation : R18

Mapping Matrix of CO's and PO's:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12	PSO1	PSO2
CO1	3													
CO2	2	2											2	
CO3	2	2	2											
CO4	3	3											3	
CO5	2	2	2											2

Note: 1* LOW

2* MEDIUM

3* HIGH

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Web Technologies

Subject Code : CS504PC

Year/Sem : III-I

Regulation : R18

CO1	Able to explain server side scripting and make use of PHP
CO2	Able to define client side scripting and make use of JavaScript and AJAX to validate at client side.
CO3	Able to define XML and choose appropriate parser techniques (DOM and SAX).
CO4	Able demonstrate Server side programming and adopt to build applications with java Servlets and JSP's.
CO5	Able to contrast server side scripting and Server side programming and develop database connectivity by make use of java and PHP.

Course
Coordinator

Program
Coordinator

HOD

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Web Technologies

Subject Code : CS504PC

Year/Sem : III-I

Regulation : R18

Mapping Matrix of CO's and PO's:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12	PSO1	PSO2
CO1	2		2		1							1	2	1
CO2	3	2	3		1							1	2	1
CO3	1	1	2										1	
CO4	2	2	3	1	2							1	2	1
CO5	1	1	2	1	1							1	2	1

Note: 1* LOW

2* MEDIUM

3* HIGH

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Principles of Programming Languages

Subject Code : CS515PE

Year/Sem : III-I

Regulation : R18

CO1	Able to explain the important features of the programming language.
CO2	Able to distinguish or differentiate programming under different paradigms.
CO3	Ability to assess merits and demerits of a particular programming language.
CO4	Able to choose a particular programming language to develop a specific software application.
CO5	Able to develop simple programs in logical and functional paradigms.

Course
Coordinator

Program
Coordinator

HOD

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Principles of Programming Languages

Subject Code : CS515PE

Year/Sem : III-I

Regulation : R18

Mapping Matrix of CO's and PO's:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12	PSO1	PSO2
CO1	3											3	2	2
CO2	3				2							2	2	2
CO3	3	3	3	3	2							2	2	2
CO4	3	3	3	3	2	2						3	2	2
CO5	3	3	3	3	2	2						2	2	2

Note: 1* LOW

2* MEDIUM

3* HIGH

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Computer Graphics

Subject Code : CS521PE

Year/Sem : III-I

Regulation : R18

CO1	Able to Define basics of Computer Graphics, display devices along with output primitives
CO2	Able to Outline various 2D, 3D geometric transformations and viewing
CO3	Able to Compare and Contrast various object representation
CO4	Able to List various algorithms to detect hidden surfaces and rendering
CO5	Able to Create animation scenes

Course
Coordinator

Program
Coordinator

HOD

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Computer Graphics

Subject Code : CS521PE

Year/Sem : III-I

Regulation : R18

Mapping Matrix of CO's and PO's:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12	PSO1	PSO2
CO1	1	2	2	2	2					3		3		
CO2	3	2	2	1	2					3		3		
CO3	1	3	3	2	2					3		3		
CO4	3	2	2	2	2					3		3		
CO5	3	1	1	2	1					3		3		

Note: 1* LOW

2* MEDIUM

3* HIGH

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Software Engineering Lab

Subject Code : CS505PC

Year/Sem : III-I

Regulation : R18

CO1	Able to Plan a software engineering process life cycle
CO2	Able to elicit, analyze and specify software requirements
CO3	Able to Analyze and translate a specification into a design.
CO4	Able to Built an SRS documents :Realize design practically, using an appropriate software engineering
CO5	Develop prototype model for a given case study using modern engineering tools

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Software Engineering Lab

Subject Code : CS505PC

Year/Sem : III-I

Regulation : R18

Mapping Matrix of CO's and PO's:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12	PSO1	PSO2
CO1	3	3	3	3	3					3	2		3	3
CO2	3	3	3	3	3					3				3
CO3	3	3	3	3	3					3	2		2	3
CO4	3	3	3	3	3					3	2		2	3
CO5	3	3	3	3	3					3	2		3	3

Note: 1* LOW

2* MEDIUM

3* HIGH

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Computer Networks & Web Technologies Lab

Subject Code : CS506PC

Year/Sem : III-I

Regulation : R18

CO1	Analyze error detection and error correction codes in data link layer.
CO2	Implement and analyze routing and congestion issues Encoding and Decoding techniques.
CO3	Understand and implement server-side scripting and programming with PHP, java Servlets and JSP's.
CO4	Understand and implement client-side scripting with JavaScript and perform validations.
CO5	Understand how to parse and use XML Data with Java and create static web pages with HTML.

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Name of the Subject : Computer Networks & Web Technologies Lab

Subject Code : CS506PC

Year/Sem : III-I

Regulation : R18

Mapping Matrix of CO's and PO's:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12	PSO1	PSO2
CO1	3	3											3	
CO2	3	2											2	
CO3	3	3	3	2									2	2
CO4	3	3	3	2									2	2
CO5	3	2	2										2	

Note: 1* LOW

2* MEDIUM

3* HIGH

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Advanced Communication Skills Lab

Subject Code : EN508HS

Year/Sem : III-I

Regulation : R18

CO1	Develops confidence to use relevant vocabulary, using apt kinesics or body language in communication.
CO2	Infer the meaning of the text easily through comprehension techniques like, skimming, scanning and effective reading through proper vocabulary
CO3	Analyze the writing skills through letters, reports and resume writing from the text and use for all professional settings.
CO4	Gather ideas, information and organize them relevantly in making presentations.
CO5	Self assured to organize and deliver discussions, presentations and strategies to face the interviews effectively.

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Name of the Subject : Advanced Communication Skills Lab

Subject Code : EN508HS

Year/Sem : III-I

Regulation : R18

Mapping Matrix of CO's and PO's:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12	PSO1	PSO2
CO1							3	1	3	3	3			
CO2							3	1	3	3	3			
CO3								1	3	3	3			
CO4							3		3	3	3			
CO5							2	1	3	3	3			

Note: 1* LOW

2* MEDIUM

3* HIGH

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Intellectual Property Rights

Subject Code : *MC510

Year/Sem : III-I

Regulation : R18

CO1	Able to Define different types of Intellectual Property Rights.
CO2	Able to Classify different Intellectual Property Rights
CO3	Able to Identify importance of Trademark & Copy Right Laws.
CO4	Able to Explain importance of Patents, Trade Secret Laws
CO5	Able to Create new Intellectual Properties

Course
Coordinator

Program
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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Intellectual Property Rights

Subject Code : *MC510

Year/Sem : III-I

Regulation : R18

Mapping Matrix of CO's and PO's:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12	PSO1	PSO2
CO1	3	3	3	3	3			3		3		3		
CO2	3	3	3	3	3			3		3		3		
CO3	3	3	3	3	3	2		3		3		3		
CO4	3	3	3	3	3	2		3		3		3		
CO5	3	3	3	3	3			3		3		3		

Note: 1* LOW

2* MEDIUM

3* HIGH

Course
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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Artificial Intelligence

Subject Code :

Year/Sem : III-I

Regulation : R18

CO1	Able to Understand Artificial intelligence agents
CO2	Able to Represent Knowledge
CO3	Able to Apply the Reasoning techniques to the knowledge
CO4	Able to Understand markov models.
CO5	Able to build simple knowledge based systems

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Artificial Intelligence

Subject Code :

Year/Sem : III-I

Regulation : R18

Mapping Matrix of CO's and PO's:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12	PSO1	PSO2
CO1	1	1												
CO2	3	2		1									1	2
CO3	1	3	3											
CO4	3	2	2										2	
CO5	1	2	2											

Note: 1* LOW

2* MEDIUM

3* HIGH

Course
Coordinator

Program
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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Machine Learning

Subject Code : CS601PC

Year/Sem : III-II

Regulation : R18

CO1	Able to Define will-prosed learning problem, concept learning and apply decision tree learning in real time applications
CO2	Able to design and evaluate artificial neural network
CO3	Able to apply Bayesian learning, computational learning theory and instance-based learning on different applications
CO4	Able to address the real world problem in machine learning using reinforcement learning, genetic algorithm and FOIL algorithm
CO5	Able to analyze inductive and analytical learning for machine learning applications

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Machine Learning

Subject Code : CS601PC

Year/Sem : III-II

Regulation : R18

Mapping Matrix of CO's and PO's:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12	PSO1	PSO2
CO1	3	3	3	3	3							3	2	
CO2	3	3	3	3	3							3	2	
CO3	3	3	3	3	3							3	2	
CO4	3	3	3	3	3							3	2	
CO5	3	3	3	3	3							3	2	

Note: 1* LOW

2* MEDIUM

3* HIGH

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Compiler Design

Subject Code : CS602PC

Year/Sem : III-II

Regulation : R18

CO1	Demonstrate the knowledge of translators, patterns, tokens & regular expressions and design a Lexical analyzer
CO2	Construct a top down and bottom up parser
CO3	Explain syntax directed translation and intermediate code generation
CO4	Apply code optimization techniques to improve the performance of a program in terms of space and time complexity
CO5	Explain run time environment and develop algorithms for code generation

Course
Coordinator

Program
Coordinator

HOD

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Compiler Design

Subject Code : CS602PC

Year/Sem : III-II

Regulation : R18

Mapping Matrix of CO's and PO's:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12	PSO1	PSO2
CO1	3	3	3	2						2			3	3
CO2	3	3	2	3						2			3	3
CO3	3	2	2	2						2			1	1
CO4	3	2	2	2						2			1	1
CO5	3	3	3	2						2			3	3

Note: 1* LOW

2* MEDIUM

3* HIGH

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Name of the Subject : Design and Analysis of Algorithms

Subject Code : CS603PC

Year/Sem : III-II

Regulation : R18

CO1	Describe different types of Algorithms
CO2	Estimate performance of an Algorithm
CO3	Compare different types of design techniques of Algorithms
CO4	Choose Appropriate design techniques or Algorithms for solving problems
CO5	Develop Algorithms for real time scenarios

Course
Coordinator

Program
Coordinator

HOD

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Design and Analysis of Algorithms

Subject Code : CS603PC

Year/Sem : III-II

Regulation : R18

Mapping Matrix of CO's and PO's:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12	PSO1	PSO2
CO1	1													
CO2	3	3	3	2										
CO3	3	2	2	2	2									
CO4	3	3	3	3	3								2	2
CO5	3	3	3	3	2								3	3

Note: 1* LOW

2* MEDIUM

3* HIGH

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Software Testing Methodologies

Subject Code : CS615PE

Year/Sem : III-II

Regulation : R18

CO1	Able to define purpose of testing and various testing techniques.
CO2	Able to compare transaction and data flow testing
CO3	Able to build application in domain testing
CO4	Able to analyze logic based testing.
CO5	Able to assess software quality by using various building tools.

Course
Coordinator

Program
Coordinator

HOD

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Software Testing Methodologies

Subject Code : CS615PE

Year/Sem : III-II

Regulation : R18

Mapping Matrix of CO's and PO's:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12	PSO1	PSO2
CO1	3	3	3	2	3	-	-	-	-	-	-	-	-	-
CO2	-	2	2	1	-	-	-	-	-	-	-	-	-	2
CO3	-	2	2	2	-	-	-	-	-	-	-	-	-	2
CO4	-	3	-	3	3	-	-	-	2	-	-	-	-	2
CO5	-	3	-	2	3	2	-	-	-	-	-	-	-	3

Note: 1* LOW

2* MEDIUM

3* HIGH

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Name of the Subject : Fundamentals of Internet of Things

Subject Code : EC600OE

Year/Sem : III-II

Regulation : R18

CO1	Explain the whole process line of extracting knowledge from Internet of Things
CO2	Make use of program Knowledge and configure Arduino board for various designs.
CO3	Develop Python Scripting language to be used in IOT devices.
CO4	Create IOT applications using Raspberry PI Platform.
CO5	Design IoT Applications in different domains

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Fundamentals of Internet of Things

Subject Code : EC600OE

Year/Sem : III-II

Regulation : R18

Mapping Matrix of CO's and PO's:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12	PSO1	PSO2
CO1	3													
CO2	2	2	2	2	2									
CO3	2	2	2	2	2								2	2
CO4	2	2	2	2	2							2	3	3
CO5	2	2	2	2	2							2	3	3

Note: 1* LOW

2* MEDIUM

3* HIGH

Course
Coordinator

Program
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HOD

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Machine Learning Lab

Subject Code : CS604PC

Year/Sem : III-II

Regulation : R18

CO1	Understand the implementation of mathematical and statistical methods of machine learning algorithms using Python
CO2	Develop a python programming for extracting data from database
CO3	Design and Evaluate various supervised algorithms through python
CO4	Understand and Develop search based algorithm for solving optimization problems
CO5	Design and Develop the code for words classification system using artificial neural network algorithms.

Course
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Name of the Subject : Machine Learning Lab

Subject Code : CS604PC

Year/Sem : III-II

Regulation : R18

Mapping Matrix of CO's and PO's:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12	PSO1	PSO2
CO1	2	2	1	1	2							2	2	1
CO2	3	2	2		2							2	2	2
CO3	2	2	2	1	2							2	2	2
CO4	2	2	1									2	1	2
CO5	2	2	3	2	2							2	2	2

Note: 1* LOW

2* MEDIUM

3* HIGH

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Name of the Subject : Compiler Design Lab

Subject Code : CS605PC

Year/Sem : III-II

Regulation : R18

CO1	Design a Lexical analyzer
CO2	Construct a top down parser
CO3	Convert given statements into three address code
CO4	Construct a bottom up parser
CO5	Translate BNF rules into YACC form

Course
Coordinator

Program
Coordinator

HOD

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Compiler Design Lab

Subject Code : CS605PC

Year/Sem : III-II

Regulation : R18

Mapping Matrix of CO's and PO's:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12	PSO1	PSO2
CO1	3	3	3	2						2		2	3	3
CO2	3	3	2	3						2		2	3	3
CO3	3	3	3	2						2		2	3	3
CO4	3	3	2	3						2		2	3	3
CO5	3	3	2	3						2		2	3	3

Note: 1* LOW

2* MEDIUM

3* HIGH

Course
Coordinator

Program
Coordinator

HOD



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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Software Testing Methodologies Lab

Subject Code : CS625PE

Year/Sem : III-II

Regulation : R18

CO1	Able to define purpose of testing and various testing techniques.
CO2	Able to compare the flow of applications
CO3	Able to build the test cases
CO4	Able to execute the test cases
CO5	Able to analysis application working functionality

Course
Coordinator

Program
Coordinator

HOD

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Software Testing Methodologies Lab

Subject Code : CS625PE

Year/Sem : III-II

Regulation : R18

Mapping Matrix of CO's and PO's:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12	PSO1	PSO2
CO1	3	3	3	2	3									
CO2		2	2	1										2
CO3		2	2	2										2
CO4		3		3	3				2					2
CO5		3		2	3	2								3

Note: 1* LOW

2* MEDIUM

3* HIGH

Course
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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Cryptography & Network Security

Subject Code : CS701PC

Year/Sem : IV-I

Regulation : R18

CO1	Understand and apply the cryptographic algorithms to safeguard from intruders
CO2	Compare and contrast symmetric and asymmetric encryption systems and their vulnerability to attack
CO3	Implement the various key distribution, management and message authentication schemes to send the messages with security
CO4	Identify information system requirements for Transport level, wireless network, E-Mail and IP
CO5	Design a network security system by implementing all the concepts of encryption and decryption algorithms

Course
Coordinator

Program
Coordinator

HOD

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Cryptography & Network Security

Subject Code : CS701PC

Year/Sem : IV-I

Regulation : R18

Mapping Matrix of CO's and PO's:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12	PSO1	PSO2
CO1	3	3	3	1	1	1						1	2	
CO2	3	3	3	2	1	1						1	2	
CO3	3	3	3	2	1	1						1	2	
CO4	3	3	3	2	1	1						1	2	
CO5	3	3	3	3	3	3			2			3	3	2

Note: 1* LOW

2* MEDIUM

3* HIGH

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Data Mining

Subject Code : CS702PC

Year/Sem : IV-I

Regulation : R18

CO1	Able to analyze preprocessing of data and apply mining techniques on it.
CO2	Able to identify the association rules in large data set.
CO3	Able to differentiate classification techniques and apply them on large data set.
CO4	Able to differentiate clustering algorithms and apply them on large data set.
CO5	Able to classify web pages, extracting knowledge from web.

Course
Coordinator

Program
Coordinator

HOD

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Data Mining

Subject Code : CS702PC

Year/Sem : IV-I

Regulation : R18

Mapping Matrix of CO's and PO's:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12	PSO1	PSO2
CO1	3	3	3	3	3					3		2		
CO2	3	3	3	3	3					3		2		
CO3	3	3	3	3	3					3		2		
CO4	3	3	3	3	3					3		2		
CO5	3	3	3	3	3					3		2		

Note: 1* LOW

2* MEDIUM

3* HIGH

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Cloud Computing

Subject Code : CS714PE

Year/Sem : IV-I

Regulation : R18

CO1	Able to explain and examine various computing paradigms
CO2	Able to define cloud computing and explain fundamental concepts of cloud
CO3	Able to describe cloud architecture, deployment and management
CO4	Able to explain the basics of cloud computing stack and cloud service models
CO5	Able to Identify various cloud service providers , their services and tools

Course
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Program
Coordinator

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Cloud Computing

Subject Code : CS714PE

Year/Sem : IV-I

Regulation : R18

Mapping Matrix of CO's and PO's:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12	PSO1	PSO2
CO1	2	1	1	1										
CO2	2	2	1	1										
CO3	2	2	2	1										
CO4	2	2	1	1										
CO5	2	2	2	2	1									

Note: 1* LOW

2* MEDIUM

3* HIGH

Course
Coordinator

Program
Coordinator

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Software Process & Project Management

Subject Code : CS725PE

Year/Sem : IV-I

Regulation : R18

CO1	Able to Explain Conventional Software Management Process to Develop Software
CO2	Able to Identify factors for Improving Software Economics
CO3	Ability to find the Relationships among Different Life Cycle Phases
CO4	Compare and Differentiate Organization Structure and Project Structure
CO5	Able to Predict Metrics and forecasting guidelines for Project Cost Schedule and Quality Control

Course
Coordinator

Program
Coordinator

HOD

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Software Process & Project Management

Subject Code : CS725PE

Year/Sem : IV-I

Regulation : R18

Mapping Matrix of CO's and PO's:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12	PSO1	PSO2
CO1	3	3	2	2					2					2
CO2	3	2			2						3	2		2
CO3	3	3	3	3								2		3
CO4	3	3	2	2										3
CO5	3	3	3	3							3	2	2	3

Note: 1* LOW

2* MEDIUM

3* HIGH

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Principles of Entrepreneurship

Subject Code : MT701OE

Year/Sem : IV-I

Regulation : R18

CO1	Able to learn the importance of business and various sources of business plans and
CO2	Acquire the knowledge on basics of accounting and e-business and commerce
CO3	Understand the availability and importance of various institutions related to business
CO4	Getting knowledge on various production techniques and marketing functions
CO5	Aware of various acts related to industries

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Principles of Entrepreneurship

Subject Code : MT701OE

Year/Sem : IV-I

Regulation : R18

Mapping Matrix of CO's and PO's:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12	PSO1	PSO2
CO1														
CO2														
CO3														
CO4														
CO5														

Note: 1* LOW

2* MEDIUM

3* HIGH

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Cryptography & Network Security Lab

Subject Code : CS703PC

Year/Sem : IV-I

Regulation : R18

CO1	Use C language to develop simple XOR operation for encryption of data
CO2	Make use of C/Java to implement Symmetric cryptography
CO3	Choose C/Java to develop Asymmetric cryptography
CO4	Implement Diffie-Hellman Key exchange using HTML and Javascript
CO5	Develop java programs on MD-5 and SHA-1 algorithms

Course
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Program
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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Cryptography & Network Security Lab

Subject Code : CS703PC

Year/Sem : IV-I

Regulation : R18

Mapping Matrix of CO's and PO's:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12	PSO1	PSO2
CO1	3	3	3	1	1	-	-	-	-	-	-	-	3	-
CO2	3	3	3	1	3	-	-	-	-	-	-	2	3	-
CO3	3	3	3	1	3	-	-	-	-	-	-	2	3	-
CO4	3	3	3	1	1	-	-	-	-	-	-	-	3	-
CO5	3	3	3	1	3	-	-	-	-	-	-	-	3	-

Note: 1* LOW

2* MEDIUM

3* HIGH

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Industrial Oriented Mini Project/ Summer Internship

Subject Code : CS704PC

Year/Sem : IV-I

Regulation : R18

CO1	Graduates will be able to identify and define problems in the area of Computer science
CO2	Graduates will be able to explain and illustrate their practical skills needed to understand and modify problems related to programming and designing.
CO3	Graduates will get a chance to apply current technologies and develop applications for the problems.
CO4	Graduates will get opportunities to practice as teams on multidisciplinary projects with effective writing and communication skills.
CO5	Able to apply the engineering and management principles to achieve the goal of the project

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Industrial Oriented Mini Project/ Summer Internship

Subject Code : CS704PC

Year/Sem : IV-I

Regulation : R18

Mapping Matrix of CO's and PO's:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12	PSO1	PSO2
CO1	2	3											3	3
CO2			3										2	2
CO3	2				3	3							3	3
CO4									3	3	2		1	1
CO5	3									3			2	

Note: 1* LOW

2* MEDIUM

3* HIGH

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Seminar

Subject Code : CS705PC

Year/Sem : IV-I

Regulation : R18

CO1	The students will be able to recall existing technologies in the area of computer science
CO2	The students will be able to describe, compare and evaluate different technologies
CO3	The students will be able to decide the area of interest
CO4	The students will be able to develop their communication skills
CO5	The students will be able to write technical reports.

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Name of the Subject : Seminar

Subject Code : CS705PC

Year/Sem : IV-I

Regulation : R18

Mapping Matrix of CO's and PO's:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12	PSO1	PSO2
CO1		1		2	3									
CO2		2		3	1									
CO3				3										
CO4										3				
CO5										3				

Note: 1* LOW

2* MEDIUM

3* HIGH

Course
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Program
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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Project Stage - I

Subject Code : CS706PC

Year/Sem : IV-I

Regulation : R18

CO1	Graduates will be able to identify and define problems in the area of Computer science
CO2	Graduates will be able to explain and illustrate their practical skills needed to understand and modify problems related to programming and designing.
CO3	Graduates will get a chance to apply current technologies and develop applications for the problems.
CO4	Graduates will get opportunities to practice as teams on multidisciplinary projects with effective writing and communication skills.
CO5	Able to apply the engineering and management principles to achieve the goal of the project

Course
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Program
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Name of the Subject : Project Stage - I

Subject Code : CS706PC

Year/Sem : IV-I

Regulation : R18

Mapping Matrix of CO's and PO's:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12	PSO1	PSO2
CO1	2	3											3	3
CO2			3										2	2
CO3	2				3	3							3	3
CO4									3	3	2		1	1
CO5	3									3			2	

Note: 1* LOW

2* MEDIUM

3* HIGH

Course
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Program
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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Organizational Behaviour

Subject Code : SM801MS

Year/Sem : IV-II

Regulation : R18

CO1	Able to learn the importance and the foundations of Organizational Behaviour, importance of perception and understand perceptual barriers
CO2	Gain the knowledge on individual differences like: personality, attitude, motivation and Emotional intelligence
CO3	Understand the importance of communication to work as team, effective decision making, stress management and conflict resolving techniques
CO4	Have knowledge on power and politics, group dynamics, and teams in modern work place
CO5	Aware of goal setting, QWL, learning theories to modify the behavior and leadership theories

Course
Coordinator

Program
Coordinator

HOD

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Organizational Behaviour

Subject Code : SM801MS

Year/Sem : IV-II

Regulation : R18

Mapping Matrix of CO's and PO's:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12	PSO1	PSO2
CO1	3	2	2	2	1	3	3	3	3	3	2	1		
CO2	3	2	2	2	1	2	3	3	3	2	2	1		
CO3	3	3	3	1	1	2	2	3	3	3	2	1		
CO4	3	2	3	2	1	2	1	3	3	2	2	1		
CO5	3	3	2	2	1	2	2	3	3	2	2	1		

Note: 1* LOW

2* MEDIUM

3* HIGH

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SCHOOL OF ENGINEERING

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Neural Networks & Deep Learning

Subject Code : CS813PE

Year/Sem : IV-II

Regulation : R18

CO1	Ability to understand the concepts of Neural Network
CO2	Ability to Examine different Neural Network Architectures and Learning Rules.
CO3	Ability to understand the basics concepts of deep Learning
CO4	Ability to use an efficient algorithm for Deep Models
CO5	Ability to apply optimization strategies for large scale applications

Course
Coordinator

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Coordinator

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Neural Networks & Deep Learning

Subject Code : CS813PE

Year/Sem : IV-II

Regulation : R18

Mapping Matrix of CO's and PO's:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12	PSO1	PSO2
CO1	2													
CO2	2	2	1	2	2									
CO3	2													
CO4	1	2	2	3								1		
CO5	1	2	2	2	2							1		

Note: 1* LOW

2* MEDIUM

3* HIGH

Course
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SCHOOL OF ENGINEERING

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Fundamentals of Robotics

Subject Code : MT800OE

Year/Sem : IV-II

Regulation : R18

CO1	
CO2	
CO3	
CO4	
CO5	

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Fundamentals of Robotics

Subject Code : MT800OE

Year/Sem : IV-II

Regulation : R18

Mapping Matrix of CO's and PO's:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12	PSO1	PSO2
CO1														
CO2														
CO3														
CO4														
CO5														

Note: 1* LOW

2* MEDIUM

3* HIGH

Course
Coordinator

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SCHOOL OF ENGINEERING

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Project Stage - II

Subject Code : CS802PC

Year/Sem : IV-II

Regulation : R18

CO1	
CO2	
CO3	
CO4	
CO5	

Course
Coordinator

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Subject : Project Stage - II

Subject Code : CS802PC

Year/Sem : IV-II

Regulation : R18

Mapping Matrix of CO's and PO's:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12	PSO1	PSO2
CO1														
CO2														
CO3														
CO4														
CO5														

Note: 1* LOW

2* MEDIUM

3* HIGH

Course
Coordinator

Program
Coordinator

HOD

UGC AUTONOMOUS INSTITUTION

School of Management Sciences

Name of the Subject: **Management and Organizational Behavior**

Subject Code: **22MBA01**

Year/Sem : **I Year/I Sem**

Regulation : **R22**

CO1	Gain understanding of the Concepts of Management, its Evolution, Functions and the Theories contributed by various Management Thinkers
CO2	Learn the process of planning, goal setting and the process of decision making with the help of various models.
CO3	Learn the processes of Organizing and Controlling with the help of various Organizational Structures
CO4	Appreciate the relevance of Individual and group behavior in an organization and the role of Culture and dynamics
CO5	Identify different Leadership Styles, Skills and the Theories of Motivation

Mapping Matrix of CO's and PO's

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	2		2		1	1	2	3	3		
CO2	2	1	1			1	1	1	1	3	
CO3	1	2		1		1	1				1
CO4	2	2	1	3	2	1		2		1	1
CO5	2			2	1	1	1	1		1	1



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UGC AUTONOMOUS INSTITUTION

School of Management Sciences

Name of the Subject: Business Economics

Subject Code: 22MBA02A

Year/Sem : I Year/I Sem

Regulation: R22

Course Objectives

1. To provide an understanding of the basic concepts associated with Business Economics.
2. To impart the knowledge of various aspects of Demand and Supply
3. To highlight the importance of Production and Cost concepts in a Firm.
4. To elaborate on the nature of various Market Structures
5. To enable the understanding of various Pricing Strategies

Course Outcomes

1. Understand the Concepts and Principles of Business Economics.
2. Learn various concepts and practical applications of Demand and Supply viz. Laws, Types, Elasticity, Forecasting and Equilibrium
3. Learn concepts and applications related to Production and Cost of a firm.
4. Learn the features of various Market Structures along with the Decision-making with regards to Price and Output in Short and Long Terms
5. Understand the concepts of Pricing Practices, Theory of Firm and Managerial & Behavioral Theories of a Firm

Mapping Matrix of CO's and PO's

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	1	3	2			1			2		
CO2	2	1		2			1	1			
CO3	1	1					2		1	1	2
CO4	1	1				1			1		
CO5	2		1	1	1	1					

School of Management Sciences

Name of the Subject: Financial Reporting & Analysis

Subject Code: 22MBA03

Year/Sem : MBA I YR I SEM A.Y:2022-23

Regulation : R22

CO1	Understand the Concepts and Principles of Accounting.
CO2	Understand the Accounting Process in detail.
CO3	Learn various aspects in depreciation, Inventory and Goodwill.
CO4	Analyze the Working Capital and Flow of Funds and Cash into the Business
CO5	Prepare, analyze and Interpret Financial Statements.

Mapping Matrix of CO's and PO's

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	1	1	1					1					1
CO 2	3	3	2	2		2					1	2	
CO 3	2	3	3			2		1	1			2	
CO 4	3	2	2			2		1	2	2			
CO 5	2	3	1	1	1	2	1		1		2		1

(Autonomous Institution)

SCHOOL OF MANAGEMENT SCIENCES

Course Name: Research Methodology and Statistical Analysis

Year/ Semester: I/I

Regulation: R22

Course Outcomes (After the completion of the course, the student is able to):

CO.1	Gain a conceptual overview of Research and the relevant concepts to Research.
CO.2	Learn the different types of Research Designs, Data Collection Tools and Procedures.
CO.3	Use different methods of representing data through Graphs and Tables; gain an overview of Statistics and relevant concepts and conduct Small Sample Tests.
CO.4	Learn to solve mathematical problems related to ANOVA (One-way and Two-way), Correlation and Regression.
CO.5	Learn the application of Time Series and Index Numbers; appreciate the need for preparing and presenting a structured Research Report.

CO-PO Mapping:

CO/PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO1	PSO2	PSO3
CO.1	3	3	3	-	3	-	-	2	2	2	1
CO.2	1	2	2	-	1	-	-	2	2	2	2
CO.3	3	3	3	-	-	1	1	-	1	-	1
CO.4	2	3	3	1	1	2	-	-	2	-	2
CO.5	2	3	3	1	2	1	1	-	1	-	-



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UGC AUTONOMOUS INSTITUTION

School of Management Sciences

Name of the Subject: LEGAL AND BUSINESS ENVIRONMENT

Subject Code: 22MBA05

Year/Sem : I Year/I Sem

Regulation: R22

Objectives

To educate on the Legal and Regulatory Framework for doing business in India

To educate various aspects in Law of Contract

To explain about Negotiable Instruments and Rbi guidelines on Digital Transactions

To enlighten students the significance of Monetary, Fiscal Policy, Union Budget

To impart knowledge of different Business Regulations and Environment Laws

Course Outcome

Understand the Business Laws related to incorporation of a company

Learn the Law of Contract & Sale of Goods

Learn the salient fetures of Negotiable instruments Act 1881

Learn the Reforms Undertaken by the Government with respect to th challenging business environments

Gain insights of the Regulatory framework in India.

Mapping Matrix of CO's-PO's

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	3				2	3			2	3	
CO2	3					3			2	3	
CO3	2					3			2	3	
CO4			2			3	2		3		
CO5	3					3	2		1	3	2

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School of Management Sciences

Name of the Subject: **Business Ethics and Corporate Governance**

Subject Code: **22MBA06A**

Year/Sem : **I Year/I Sem**

Regulation : **R22**

CO1	Understand the Need for Business Ethics and Corporate Governance in India
CO2	Apply Knowledge of Established Methodologies of Solving Professional Ethical Issues
CO3	Learn Codes and Committees in Corporate Governance
CO4	Understand the Role of Board in Corporate Governance
CO5	Assess the Stakeholder Perspective of Corporate Governance

Mapping Matrix of CO's and PO's

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	2	3	1		3	2	2		2	2	3
CO2	2			2	3	1	2		2	2	3
CO3	3		2	1	2	3		2	1	1	3
CO4	2	2	2	1	3	2		2	3	1	2
CO5		1	2		2		2		2	1	1

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School of Management Sciences

SUBJECT CODE: 22MBA07

SUBJECT: BUSINESS COMMUNICATION LAB

SEMESTER: I-I

Course Objectives:

- To demonstrate the importance various modes of communication and their applications in business.
- To develop Business Writing skills with practice of writing letters and improving the readability of written communication.
- To highlight the importance of writing business reports and proposals.
- To impart knowledge and skills necessary for development of verbal (speech & presentation) and non-verbal (body language) skills.
- To orient on the contemporary aspects in communication.

Course Outcomes: Students will be able to

- Appreciate the importance and influence of Business Communication and learn its applications for the purpose of self-development.
- Learn by practice of writing a variety of formal and informal letters & e-mails and reports and improve the readability of written documents
- Identify the intricacies of writing Business Reports and Proposals
- Develop verbal (oral) skills by giving presentations and participating in group discussions; appreciate the impact of body language in the process of communication
- Polish their etiquette, improve telephonic skills and appreciate the need for culture in maintenance of public relations.

Mapping matrix of CO's and PO's

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	3	2	-	-	2	2	3	3	3	2	1
CO2	3	-	-	-	2	2	2	3	2	3	1
CO3	3	-	-	-	2	2	2	3	3	2	1
CO4	3	-	-	-	2	2	2	3	3	2	1
CO5	1	3	-	-	2	2	2	2	2	2	2

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SCHOOL OF MANAGEMENT SCIENCES

Course Name: Statistical Data Analysis Lab

Year/ Semester: I/II

Course Code: 22MBA08

A.Y: 2022-23

Course Outcomes (After the completion of the course, the student is able to):

CO.1	Understand the importance of the main functions of MS- Excel /SPSS
CO.2	Practice advance Excel Tools for conduction of Data Analysis
CO.3	Evaluate Data Analysis using Pivot Tables and Pivot Charts
CO.4	Analyze the Data using Descriptive Statistics
CO.5	Conduct various Parametric and Non-parametric Tests using MS Excel / SPSS□

CO-PO Mapping:

CO/PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO1	PSO2	PSO3
CO.1	3	3	3	-	-	1	1	1	3	1	2
CO.2	2	2	2	-	-	1	1	1	3	1	2
CO.3	3	3	3	-	-	1	1	1	3	1	2
CO.4	2	1	-	-	2	2	-	2	3	-	1
CO.5	-	-	1	2	-	-	-	-	-	1	-

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School of Management Sciences

Name of the Subject: **Human Resource Management**

Subject Code: **22MBA09**

Year/Sem : **I Year/II Sem**

Regulation : **R22**

CO1	Understand the concepts, role and functions of HRM and appreciate the need of HR to act as a Strategic Business Partner of the Organization.
CO2	Learn the methods of conducting Job Analysis, process of writing Job Descriptions & Specifications and the processes of recruitment and selection.
CO3	Gain an understanding of various concepts and practices of Employee Training & Development and Performance Management & Appraisals.
CO4	Learn the principles and practices of Employee Compensation and Rewards, with the help of Job Evaluation & Broad-banding etc. and the salient features of Workmen Compensation Act and Minimum Wages Act.
CO5	Appreciate the need for effective Employee Relations and learn the salient features of Industrial Disputes Act and Factories Act

Mapping Matrix of CO's and PO's

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	2		1	1	2		1	1	1		1
CO2	2			1	1			1			2
CO3	1		2	2	2			1		3	1
CO4	2				1		1		1		1
CO5	1	3	2	0					2		

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School of Management Sciences

Name of the Subject: **Marketing Management**

Subject Code: **22MBA10**

Year/Sem : **I Year/II Sem**

Regulation : **R22**

CO1	Understand the important concepts and principles of Marketing Management and Marketing Research.
CO2	Learn about the analysis of Market Opportunities and Customer Value with the help of Marketing Mix Elements
CO3	Learn the significance of designing a customer driven strategy through Market Segmentation, Targeting and Positioning
CO4	Assess Global marketing, green marketing strategies for sustainable development
CO5	Gain insights of the key aspects of pricing decisions and the role of communication

Mapping Matrix of CO's and PO's

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1		1	2	1			2				
CO2	3	1			3	2					
CO3	1	3					1		1	3	
CO4	2	2	2	3			2			2	
CO5	2	1			1	1	1	2			1

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SCHOOL OF MANAGEMENT SCIENCES

Course Name: FINANCIAL MANAGEMENT

Year/ Semester: I/II

A.Y: 2022-23

Course Outcomes (After the completion of the course, the student is able to):

CO.1	Understand the concept of time value of money.
CO.2	Learn about the capital budgeting techniques and cost of capital.
CO.3	Learn the significance of Capital structure vs. financial structure.
CO.4	Assess dividend policies of Indian companies, determinants of working capital, analysis of investment in inventory.
CO.5	Understand the Concepts and Applications of Working Capital Management and Management of Current Assets.

CO-PSO Mapping:

CO/PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO1	PSO2	PSO3
CO.1	3	3	3	-	-	-	-	1	2	2	1
CO.2	3	3	3	2	-	1	1	1	2	2	2
CO.3	3	3	3	1	-	1	1	1	2	-	-
CO.4	2	2	2	2	-	1	1	1	2	-	-

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SCHOOL OF MANAGEMENT SCIENCES

Course Name: Quantitative Analysis for Business Decisions

Year/ Semester: I/II

Regulation: R22

Course Outcomes (After the completion of the course, the student is able to):

CO.1	Understand the origin and application of operations research.
CO.2	Learn about the Formulation of Linear Programming Problem for different areas.
CO.3	Appreciate the significance of variations of assignment problem, transportation problem, methods for finding Initial feasible solution.
CO.4	Learn the aspects of Decision Theory and Network Analysis
CO.5	Gain insights of the theoretical principles and practical applications of different queuing models.

CO-PSO Mapping:

CO/PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO1	PSO2	PSO3
CO.1	3	3	3	-	-	-	-	-	3	1	1
CO.2	2	3	3	-	1	-	-	1	3	1	2
CO.3	1	3	3	-	-	1	-	-	2	-	1
CO.4	2	3	3	1	-	-	-	1	2	-	1
CO.5	1	3	3	1	-	1	1	-	2	-	-

School of Management Sciences

Name of the Subject: Entrepreneurship & Design Thinking

Subject Code: 22MBA13

Year/Sem : MBA I YR II SEM

A.Y:2022-23

Regulation : R22

CO1	To understand the Entrepreneurial process and also inspire them to be Entrepreneurs.
CO2	To highlight importance of entrepreneurial motivational behavior, entrepreneurial competencies,entrepreneurial Stress.
CO3	To elucidate on the opportunities and challenges of entrepreneurship
CO4	To clarify students the significance of Principles, process of Design Thinking
CO5	To educate on Development of Prototypes, Testing Ideas and Implementing Design Thinking

Mapping Matrix of CO's and PO's

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	1	1	1					1				1	
CO 2	3	3	2	1		2					1	2	
CO 3	2	3	3			2		1	2			2	
CO 4	3	2	2			1		1	2	2			
CO 5	2	3	1	1	1	2	1		1		2		1

School of Management Sciences

Name of the Subject: LOGISTICS AND SUPPLY CHAIN MANAGEMNET Subject Code: 22MBA14

Year/Sem : I YEAR/II SEM

Regulation : 22

Course Objective:

To provide understanding of the components and processes of supply chain and logistics management as well as the performance driers of supply chain

To impart knowledge on the various functions of logistics management

To educate on designing of the supply chain network

To clarify the significance of establishing global supply chain

To highlight the role of information technology in supply chain

Course Outcome

Understand the cyclical perspective of logistics and supply chain process

Learn about the distribution, transportation, warehousing related issues and challenges in supply chain

Appreciate the significance of network design in the supply chain

Gain knowledge of various models/tools of measuring the Supply Chain Performance

Appreciate the role of coordination and technology in Supply Chain Management.

Mapping Matrix of CO's and PO's

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	1	1	3			3		1	2		
CO2	2	2				1	3	1		2	
CO3	3	1	3					1	1	1	
CO4	1	3	3			2			3		
CO5	2		3			3	3	3	1	2	



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School of Management Sciences

Name of the Subject: Rural Marketing

Subject Code: 22MBA015D

Year/Sem : I Year/II Sem

Regulation: R22

Course Objectives

1. To enable understanding of the importance of Rural Marketing, Rural Environment, Problems in Rural Marketing in India
2. To describe the different rural marketing Strategies to be adopted by the corporate.
3. To elaborate on the rural market brand and channel management aspects.
4. To help understand the factors that influence rural consumers during purchase of products
5. To impart knowledge on various applications and innovation strategies in rural marketing.

Course Outcomes

1. Understand the importance of Indian Rural Economy.
2. Learn various rural marketing strategies
3. Learn challenges of Retail Channel Management
4. Understand the aspects of rural business research.
5. Learn e- rural marketing, CSR, IT for rural development, e- Governance for Rural India.

Mapping Matrix of CO's and PO's

S.No	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	2	1		2			2			1	
CO2	2	1			3	2		1			
CO3	1	3					1		2	3	2
CO4	2	2	2	3			1	1		2	
CO5	1	1			2	1	1	2			3

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School of Management Sciences

Academic Year 2022-23

Name of the Subject: Management Information Systems

Subject Code: 21MBA17

Year/Sem : II Year/I Sem

Regulation : R21

CO1	Creates awareness of MIS concept and its classification.
CO2	Presents an idea of business applications of information systems.
CO3	Analyzes the management of information system.
CO4	Develops the knowledge of information systems building.
CO5	Introduces to cyber crime and IT Act 2000.

Mapping Matrix of CO's and PO's

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	2	2		2			1			1	
CO2					3	2			2		
CO3		3		1					2	3	
CO4	2	2	2	3	2		1	1		2	
CO5	2				2			2	1		

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School of Management Sciences

Name of the Subject: **Data Analytics**

Subject Code: **21MBA18**

Year/Sem : **II Year/I Sem**

Regulation: **R21**

CO1	Able to learn Data Analytics, Big Data and Importance, Applications Data Analytics in Various Fields of Management.
CO2	Understands Population and Sample, how to calculate and apply measures of location (Average) and measures of dispersion -- grouped and ungrouped data cases.
CO3	Able to compute and interpret the results of Regression and Correlation Analysis.
CO4	Understand basic statistical concepts such as Data Mining, Cluster Analysis, and Partitioning Data.
CO5	Able to learn Simulation Concepts, Risk Analysis and Decision Tree Analysis.

Mapping Matrix of CO's and PO's

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	3		2					2			
CO2	2	1								2	
CO3	1	2									
CO4	2	3	3							2	
CO5	2	3	2			1	2	1			

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School of Management Sciences

Name of the Subject: **DIGITAL MARKETING**

Subject Code: **21MBA19M1**

Year/Sem : **II YEAR/I SEM**

Regulation: **R21**

CO1	Student know the concepts of digital marketing
CO2	students know channels of DM
CO3	Student know planning process of DM
CO4	Students know searching marketing, online advertisement
CO5	Students know social media marketing

Mapping Matrix of CO's and PO's

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	1	2	1			1	1	2			
CO2	2		3						2	2	
CO3	3	2	1			2	2	2	1	1	
CO4	1	2				1		1	2		
CO5	3	3	2			2	3	2	2	3	

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School of Management Sciences

Name of the Subject: Consumer Behaviour

Subject Code: 21MBA21M3

Year/Sem : II Year/I Sem

Regulation : R21

CO1	Develops an Understanding of Consumer Behaviour.
CO2	Summarizes Environmental Influences on Consumer Behaviour.
CO3	Assesses Consumer as an Individual.
CO4	Analyzes Consumer Decision Making Processes.
CO5	Interprets Consumerism and Formulates Ethics.

Mapping Matrix of CO's and PO's

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	2		2				1				
CO2	1	2						2	2		
CO3	2	2	2		1		2	2	2		
CO4	1	2				2			1	2	
CO5	2				3						

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School of Management Sciences

Name of the Subject: **Security Analysis and Portfolio Management**

Subject Code: **21MBA19F1**

Year/Sem : **II Year/I Sem**

Regulation: **R21**

CO1	To understand various alternatives available for investment in the changing investment Environment
CO2	To design an optimum portfolio by measuring risk and return
CO3	To value Bond and Equity by applying various models. Designing and managing the bond as well as equity portfolios in the real word.
CO4	To conduct equity research and to understand modern financial instruments to hedge the risk.
CO5	To analyse the impact of various economic variables on portfolio performance and to Measure the portfolio performances by using various models.

Mapping Matrix of CO's and PO's

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	3					2	2	1	3	3	
CO2	2	3	3					2	3	3	
CO3	3	3	3			2	3	2	2	2	
CO4	2				1	2			2	2	
CO5	2			3	3		2	2	2	2	3

UGC AUTONOMOUS INSTITUTION

School of Management Sciences

Name of the Subject: **FINANCIAL INSTITUTIONS MARKETS AND SERVICES**

Subject Code: **21MBA20F2**

Year/Sem : **II YEAR/I SEM**

Regulation: **R21**

CO1	STUDENTS UNDERSTAND FINANCIAL SYSTEM, RECENT DEVELOPMENTS, AND ORGANISATIONS.
CO2	STUDENTS UNDERSTAND BANKING AND NON-BANKING INSTITUTEIONS.
CO3	STUDENTS UNDERSTAND MONEY, PRIMARY, SECONDARY MARKET.
CO4	STUDENT UNDERSTAND FINANCIAL SERVICES.
CO5	STUDENTS UNDERSTAND ADVISARY SERVICES.

Mapping Matrix of CO's and PO's

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	1		2			2			2	1	
CO2	2	2	2			2	2		3		
CO3	2	1	1			2	2		1	2	
CO4	2					2	1		2	3	
CO5	3	1	1			1	3		3		

UGC AUTONOMOUS INSTITUTION

School of Management Sciences

Name of the Subject: **Strategic Management Accounting**

Subject Code: **21MBA21F3**

Year/Sem : **II Year/I Sem**

Regulation: **R21**

CO1	Brief description about Accounting and cost Concepts.
CO2	Describe the different techniques of cost accounting and solving for minimization of cost..
CO3	How marginal Costing techniques will be used for various decision making in the company.
CO4	The management accounting techniques utilization in the reduction of the cost.
CO5	How to prepare different types of Budgets and budgeting reports for various departments.

Mapping Matrix of CO's and PO's

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	2	1		1				1	1		
CO2	3	3	2			1	1	1	2		2
CO3	3	2	3	1	1	1			1	2	
CO4	2	2	2	2	1	2	1			2	
CO5	2	3	3	1		2		1	2		1

UGC AUTONOMOUS INSTITUTION

School of Management Sciences

Name of the Subject: **PERFORMANCE MANAGEMENT SYSTEMS**

Subject Code: **21MBA19H1**

Year/Sem : **II YEAR/I SEM**

Regulation: **R21**

CO1	The students can understand the importance of performance Management, Performance Appraisals, Reward System, and other performance related concepts
CO2	Describe the nature of performance management and outline the core objectives of performance management, Process of Performance Management
CO3	Understanding about performance management and reward system linked with performance
CO4	Able to understand the legal issues involved in designing Reward System and importance of Reward System in managing performance of individuals as wells as team
CO5	Able to understand concepts like Bench Marking, Competency Mapping, Six Sigma, Coaching and Mentoring related to Performance Management

Mapping Matrix of CO's and PO's

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	2	1					1				
CO2	1		3			2					
CO3	2	2				2	3				
CO4	1	3	1								
CO5	2	1				3	2			3	3

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School of Management Sciences

Name of the Subject: Learning and Development

Subject Code: 21MBA20H2

Year/Sem : II Year/I Sem

Regulation : R21

CO1	Develop the knowledge of learning and its importance
CO2	States the strategies for training and steps in designing training
CO3	Evaluate various on and off the job training methods
CO4	Demonstrates the approaches for employee development
CO5	Creates awareness about contemporary issues in training and development

Mapping Matrix of CO's and PO's

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	3							1			
CO2	2	1	1							1	2
CO3	3								1		
CO4	1		1	3	1	1	1			1	
CO5	2			3			1			1	

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School of Management Sciences

Name of the Subject: Management of Industrial Relations

Subject Code: 21MBA21H3

Year/Sem : II Year/ISem

Regulation: R21

CO1	Importance of Industrial Relations, Trade unions unfair labour practices.
CO2	Outline settlement of dispute, right to strike, tripartite and bipartite bodies.
CO3	Organize for collective bargaining, conciliation, arbitration, adjudication.
CO4	Explain wage policy and payment of bonus act 1965.
CO5	Distinguish Factories act 1948 and mines act 1952.

Mapping Matrix of CO's and PO's

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	3	1		2	2		1	1	1		
CO2	1	2	1	1		1					2
CO3	1	2	3	2		1	2	2	1		1
CO4	1				1						
CO5	1				1						

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School of Management Sciences

Name of the Subject: **Summer Internship**

Subject Code: **21MBA22**

Year/Sem : **II Year/ I Sem**

Regulation: **R21**

CO1	Able to acquire practical knowledge by working in any organization.
CO2	To give an opportunity to the students to have practical exposure related to the job they prefer to do after completion of course.
CO3	Understand the organizational dynamics in terms of organizational behavior, culture, competition, future strategies and change initiatives of the organization.

Mapping Matrix of CO's and PO's

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	3	1					1				
CO2	2					2					1
CO3	2			3	1			2		1	

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School of Management Sciences

Name of the Subject: Strategic Management

Subject Code: 21MBA23

Year/Sem : II Year/II Sem

Regulation : R21

CO1	Importance of Strategic Management and Competitiveness-Technology ,Vision, Mission and Objectives
CO2	Formulation of Strategic Actions
CO3	Determine Levels of Diversifications and reasons, Mergers & Acquisitions strategies
CO4	Identifying International Opportunities and international Strategies
CO5	Designing Organizational Structure and controls

Mapping Matrix of CO's and PO's

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	2			1		3	1	2			1
CO2	1	3	1						2		1
CO3	1	1	1		1		1			2	1
CO4	1	1	1		1	1	2	2	1	1	
CO5	1		1	1					1		

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School of Management Sciences

Name of the Subject: **Customer Relationship Management**

Subject Code: **21MBA24M4**

Year/Sem : **II Year/II Sem**

Regulation: **R21**

CO1	Explains the concept of CRM and its importance.
CO2	Supports in building customer relations.
CO3	Classifies the phases of CRM process.
CO4	Outlines the structures of CRM.
CO5	Construct the planning for CRM and its implementation.

Mapping Matrix of CO's and PO's

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	2		2				1				
CO2	1	2						2	2		
CO3	2	2	2		1		2	2	2		
CO4	1	2				2			1	2	
CO5	2				3						

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School of Management Sciences

Name of the Subject: **International Marketing**

Subject Code: **21MBA25M5**

Year/Sem : **II Year/II Sem**

Regulation : **R21**

CO1	Distinguishes international and domestic marketing.
CO2	Examine global markets, EXIM policy , international trade.
CO3	Assessing global market opportunities.
CO4	Developing global market strategies.
CO5	Implementing global marketing strategies.

Mapping Matrix of CO's and PO's

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	1			1		3			2		1
CO2	1	2	1		2	1	3			3	
CO3	1		1		2				2	3	2
CO4	1	1	3		1	1					1
CO5	1		1		1						

UGC AUTONOMOUS INSTITUTION

School of Management Sciences

Name of the Subject: **Services Marketing**

Subject Code: **21MBA26M6**

Year/Sem : **II Year/II Sem**

Regulation: **R21**

CO1	To provide students with a theoretical and practical understanding of current service marketing issues.
CO2	Understand the expectations of customers and know how to translate this knowledge into genuine value for customers.
CO3	Appreciate, modify, and/or extend new theories and concepts pertaining to explaining the characteristics of customers' purchasing and consumption behaviour of services.
CO4	Be able to identify critical issues related to service design, such as identifying and managing customer service experience, expectations, perceptions and outcomes
CO5	Managing the interface among customers, service employees, and firm, apply new approaches to managing customer satisfaction and loyalty

Mapping Matrix of CO's and PO's

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	2								1		
CO2	1			2					2		
CO3	2			2							
CO4	2	2	3								
CO5	3			3							

UGC AUTONOMOUS INSTITUTION

School of Management Sciences

Name of the Subject: **International Financial Management**

Subject Code: **21MBA24F4**

Year/Sem : **II Year/ II Sem**

Regulation: **R21**

CO1	To discuss the additional complexities financial managers, face as they move from a domestic to an international arena
CO2	To understand the structure of international financial markets and the role financial institutions in shaping a smooth and promising business environment. To understand Balance of payment and to analyse various factors affecting balance of payment
CO3	Demonstrate an integrative understanding of the foreign exchange market and the relationships between interest rates, spot and forward rates and expected inflation rates
CO4	Develop strategies to deal with risk relating to exchange rate fluctuations and other types of country risks associated with foreign operations
CO5	To discuss various aspects of international financial management including capital structure, capital budgeting, cost of capital, portfolio management, cash management and foreign direct investment

Mapping Matrix of CO's and PO's

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	3					2	3		3	2	
CO2	3					1	3	2	2	2	
CO3	3	3	3			2	2	1	2	3	
CO4	3	3	3			3	3	2	3	2	
CO5	2	1	1	2	1	2	3	3	1	2	3

UGC AUTONOMOUS INSTITUTION

School of Management Sciences

Name of the Subject: **Strategic Investment and Financing Decisions**

Subject Code: **21MBA25F5**

Year/Sem : **II Year/II Sem**

Regulation: **R21**

CO1	Brief Description about investment, risk and uncertainty.
CO2	Describe about Investment and Disinvestment opportunities in the market.
CO3	Defining the techniques used for the Investment Analysis.
CO4	How to make Strategic Analysis of investment to enhance the organization growth.
CO5	Brief the importance of Mergers and acquisition, guidelines & regulations.

Mapping Matrix of CO's and PO's

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	1	1		2		1			1		
CO2	2	2	2	2			1	1	2		1
CO3	2	3	2	1	1			1	2	2	
CO4	3	2	3	2	1	1		1	1		2
CO5	2	3	3	2	1	2	1	2	1	2	

UGC AUTONOMOUS INSTITUTION

School of Management Sciences

Name of the Subject: Risk Management & Financial Derivatives

Subject Code: 21MBA26F6

Year/Sem : II YEAR/II SEM

Regulation: R21

CO1	Student knows types scope, models of risk
CO2	Student know VaR, CaR analysis
CO3	Student know pricing of currency, commodity forward contract
CO4	Students know options, binomial, black-Scholes model
CO5	Student knows pricing, valuing of currency swap, equity swap, swaptions

Mapping Matrix of CO's and PO's

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	2	3	2			2	2	1	3	3	
CO2	1	3	2			2	1	2	2	2	
CO3	3	2	1			1		2	2	1	
CO4	1	1	3			2	3	2	2	2	
CO5	2	3	3			1	1	1	1	2	

UGC AUTONOMOUS INSTITUTION

School of Management Sciences

Name of the Subject: **International Human Resource Management**

Subject Code: **21MBA24H4**

Year/Sem : **II Year/II Sem**

Regulation: **R21**

CO1	Outlines the importance and perspectives , overview of IHRM.
CO2	Elaborates the key role of IHRM in successful MNC strategy.
CO3	Summaries the global human resource planning.
CO4	Observes the significance of global work force training and development in IHRM.
CO5	Appraises the performance of global workforce and its management.

Mapping Matrix of CO's and PO's

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	1			1			1				
CO2	1	2	1	1		2	2		2	1	
CO3	1			2	2	1		2	1	2	1
CO4	2		3		2	1			1		1
CO5	1	2	2		2		2	1	1		1

UGC AUTONOMOUS INSTITUTION

School of Management Sciences

Name of the Subject: Leadership and Change Management

Subject Code: 21MBA25H5

Year/Sem : II Year/II Sem

Regulation : R21

CO1	Ability to use theories in the practice of leadership.
CO2	Able to understand the Contingency Leadership and its styles, Strengths and applications.
CO3	Understand Transformational Leadership and its implementation and strengths.
CO4	Understand the importance of changes in Organizational design, Culture.
CO5	Able to understand Technological change, importance of Employee Relations.

Mapping Matrix of CO's and PO's

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	2			2				1			
CO2	2	2		2	1		1			1	1
CO3	1			1					2		
CO4	1		1		1			2			
CO5	1				1			1		1	

UGC AUTONOMOUS INSTITUTION

School of Management Sciences

Name of the Subject: Talent and Knowledge Management

Subject Code: 21MBA26H6

Year/Sem : II Year/II Sem

Regulation: R21

CO1	Understand the importance of Talent Management
CO2	Explain various Talent Management Strategies to Solve Talent Management Problems
CO3	Design Case Studies to Analyze the Knowledge Management System
CO4	Describe Various types of Knowledge in Knowledge System
CO5	Evaluate the Knowledge Management Assessment and Solutions through Case Studies

Mapping Matrix of CO's and PO's

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	3			3	2	3			3		
CO2		3			2	3		3	3		
CO3	3	3	3		2		3			3	
CO4				2	2		3		3		
CO5	3		3		2	3	3	3		3	

PO Attainment

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	-	-	-	-	-	-	2.2	2.2	2.2	2.2	2.2	-
C102	1.3	1.3	-	1.3	1.3	-	-	-	-	-	-	1.3
C103	2.8	2.8	2.8	-	-	-	-	-	-	-	-	-
C104	0.4	0.4	-	0.4	-	-	-	-	-	-	-	0.2
C105	0.5	-	0.5	-	-	-	0.5	-	-	-	-	-
C106	1.6	1.6	1.6	1.6	1.8	-	-	-	-	-	-	1.6
C107	3	3	2.9	-	2.9	3	-	-	2.9	2.9	-	2.9
C108	2.9	2.9	2.9	2.9	2.9	-	-	-	-	-	-	2.9
C109	2.9	2.9	2.9	2.9	-	-	2.9	-	-	-	-	2.9
C110	-	-	-	-	-	-	3	3	3	3	3	-
C111	2.9	2.9	2.9	2.9	2.9	-	-	-	-	-	-	-
C201	-	-	2.8	-	-	2.8	2.8	2.8	-	-	-	2.8
C202	1.2	1.2		1.2	1.2							1.2
C203	2.2	2.2	2.2	2.2	2.3	-	-	-	-	-	-	2.2
C204	0.5	0.5	-	-	-	-	-	-	-	-	-	-
C205	1.3	1.3	-	-	-	-	-	-	-	-	-	-
C206	2.8	2.8	2.8	2.8	-	-	-	-	-	-	-	2.7
C207	2.9	2.9	2.9	2.9	-	-	-	-	2.9	2.9	-	2.9
C208	2.9	2.9	2.9	2.9	-	-	-	-	-	-	-	-
C209	2.8	2.8	-	-	-	-	-	-	-	-	-	-
C210	1.2	1.2	1.2	-	-	-	-	-	-	-	-	-
C211	0.6	0.6	0.8	0.7	-	0.6	0.5	-	-	-	-	-
C212	1.9	1.9	1.9	2	-	1.8	2	-	-	-	-	-
C213	3	3	-	-	-	3	-	-	-	-	-	-
C214	0.5	0.9	0.9	0.9	-	-	-	-	-	-	-	0.9
C215	2.7	2.7	-	-	2.7	-	-	-	-	-	-	-
C216	2.9	2.9	-	2.9	-	2.9	-	-	-	-	-	-
C217	2.1	-	-	2.1	-	2.1	2.1	-	-	-	-	-
C218	2.9	2.9	-	2.9	2.9	-	-	-	-	-	-	-
C219	1.9	1.9	1.9	-	-	-	-	-	-	-	-	-
C301	2.9	2.9	-	-	-	-	-	-	-	-	-	-
C302	2.7	2.7	-	2.7		2.7	-	-	-	-	-	-
C303	0.4	0.4	-	0.4	-	0.4	-	-	-	-	-	-
C304	2.9	2.9	-	2.9	-	-	-	-	-	-	-	-
C305	2.9	2.9	-	2.9	-	2.9	2.9	-	-	-	-	-
C306	2.9	2.9	-	-	-	2.9	3	-	-	-	-	-
C307	1.5	1.5	-	1.5	1.5	-	-	-	-	-	-	-

C308	0.6	0.6	-	0.7	-	0.6	-	-	-	-	-	-
C309	2.8	2.8	2.8	2.8	-	-	-	-	-	-	-	-
C310	1.1	1.1	1.2	1.1	-	1.1	-	-	-	-	-	-
C311	0.7	-	-	-	-	-	0.7	0.7	0.7	-	-	0.7
C312	2.9	2.9	-	2.9	-	2.9	-	-	-	-	-	-
C313	-	-	-	-	-	-	2.8	2.8	2.8	2.8	-	-
C314	2	2	2	2	2	2	-	-	-	-	-	-
C315	1.4	1.4	-	1.5	-	1.4	1.4	-	-	-	-	-
C316	2.2	2.2	2.2	-	2.2	-	-	-	-	-	-	2.2
C317	1.5	1.5	-	1.5	-	-	-	-	-	-	-	-
C318	0.4	0.4	0.4	0.4	-	0.5	0.4	-	-	-	-	-
C319	2.9		2.9		2.9	-	-	-	-	-	-	-
C320	2.8	2.8	2.8	2.8	2.8	-	-	-	-	-	-	2.8
C321	2.8	2.7	-	2.9	-	-	-	-	-	-	-	-
C401	2.9	2.9	-	-	2.9	-	-	-	-	-	-	-
C402	2.9	3	2.9	-	-	-	-	-	-	-	-	-
C403	2.3	2.3	-	-	-	2.3	2.3	-	-	-	-	-
C404	3	3	3		3				3		3	3
C405	-	-	2.7	-	-	2.7	-	2.7	-	2.7	-	2.7
C406	2.9	2.9	2.9	-	2.9	-	-	-	2.9	-	2.9	2.9
C407	3	-	-	-	--	-	3	-	-	3	-	3
C408	-	1.1	1.1	1.2	1.1		-	-	-	-	-	-
C409	-	-	1.5	1.5	-	1.5	1.5	-	-	-	-	-
C410	-	-	-	2.9	2.9	-	-	-	-	-	-	-
C411	2.9	2.9	2.9	2.9	-	-	-	-	2.9	2.9	-	2.9
C412	-	2.8	-	-	2.8	2.8	2.8	-	-	-	2.8	-
Avg PO	2.1	2.2	2.2	2.0	2.4	2.0	2.0	2.4	2.6	2.8	2.8	2.2

Subject code	Subject Name	CO1	CO2	CO3	CO4	CO5
C101	English	2.1	2.1	2.2	2.3	2.3
C102	Mathematics-1	1.3	1.3	1.4	1.3	1.3
C103	Engineering Mechanics	2.9	2.8	2.8	2.9	2.6
C104	Engineering Physics	0.5	0.4	0.4	0.5	0.5
C105	Engineering Chemistry	0.6	0.5	0.5	0.4	0.3
C106	Computer Programming	2.9	2.8	2.8	2.9	3.0
C107	Engineering Drawing	3.0	3.0	3.0	2.8	2.9
C108	Computer Programming Lab	2.9	2.9	2.9	2.9	2.9
C109	Engineering Physics & Engineering Chemistry Lab	3.0	3.0	3.0	3.0	3.0
C110	Engineering Language Communication Skills Lab	3.0	3.0	3.0	3.0	3.0
C111	IT Workshop/ Engineering Workshop	2.9	2.9	2.9	2.9	2.9
C201	Probability and Statistics & Complex Variables	2.9	2.8	2.8	2.8	2.9
C202	Mechanics of Solids	1.4	1.2	1.3	1.1	1.3
C203	Material Science and Metallurgy	2.2	2.1	2.1	2.3	2.3
C204	Production Technology	0.5	0.7	0.4	0.5	0.6
C205	Thermodynamics	1.3	1.3	1.3	1.4	1.3
C206	Production Technology Lab	2.7	2.7	2.8	3.0	2.9
C207	Machine Drawing Practice	2.9	2.9	2.9	2.9	2.9
C208	Material Science and Mechanics of Solids Lab	2.9	2.9	2.9	2.9	2.9
C209	Constitution of India	2.6	2.5	2.8	3.0	3.0
C210	Basic Electrical and Electronics Engineering	1.1	1.0	1.1	1.2	1.2
C211	Kinematics of Machinery	0.6	0.4	0.5	0.8	0.6
C212	Thermal Engineering - I	1.9	1.7	1.9	2.0	1.9
C213	Fluid Mechanics and Hydraulic Machines	3.0	2.9	3.0	3.0	3.0
C214	Instrumentation and Control Systems	0.8	0.9	0.8	0.9	1.0
C215	Basic Electrical and Electronics Engineering Lab	2.7	2.7	2.7	2.7	2.7
C216	Fluid Mechanics and Hydraulic Machines Lab	2.8	2.8	2.8	2.8	2.9
C217	Instrumentation and Control Systems Lab	3.0	3.0	3.0	3.0	3.0
C218	Gender Sensitization Lab	3.0	3.0	3.0	3.0	3.0

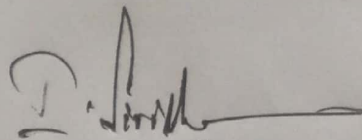
C219	Cyber security	3.0	3.0	3.0	3.0	3.0
C301	Dynamics of Machinery	2.4	2.2	2.0	2.1	2.1
C302	Design of Machine Members-I	2.9	2.9	2.9	3.0	2.9
C303	Metrology & Machine Tools	1.9	1.9	1.8	1.9	2.0
C304	Business Economics & Financial Analysis	2.9	2.8	2.8	2.9	3.0
C305	Thermal Engineering-II	2.6	2.5	2.5	2.8	2.8
C306	Operations Research	0.5	0.5	0.4	0.5	0.3
C307	Intellectual Property Rights	2.9	2.8	2.8	2.8	2.8
C308	Thermal Engineering Lab	2.9	2.9	2.9	2.9	2.9
C309	Metrology & Machine Tools Lab	2.8	3.0	3.0	2.9	2.9
C310	Kinematics & Dynamics Lab	2.0	1.4	1.5	1.5	1.5
C311	Design of Machine Members-II	0.6	0.6	0.5	0.8	0.8
C312	Heat Transfer	2.8	2.7	2.6	3.0	2.9
C313	CAD & CAM	1.1	1.0	1.1	1.0	1.2
C314	Unconventional machining process	0.8	0.8	0.8	0.8	0.8
C315	Entrepreneurship	2.9	2.9	2.9	2.9	2.9
C316	Finite Element Methods	2.8	2.8	2.8	2.8	2.8
C317	Heat Transfer Lab	2.7	2.7	2.8	3.0	2.9
C318	CAD & CAM Lab	2.9	2.9	2.9	2.4	2.4
C319	Advanced Communication Skills lab	2.9	2.9	2.9	3.0	3.0
C320	Environmental Science	3.0	3.0	3.0	3.0	3.0
C321	Artificial intelligence	3.0	3.0	3.0	3.0	3.0
C401	Refrigeration & Air Conditioning	2.1	2.1	2.0	1.9	2.1
C402	Automation in Manufacturing	1.3	1.3	1.5	1.4	1.5
C403	Renewable Energy Sources	2.2	2.2	2.2	2.3	2.3
C404	Fluid Power Systems	1.5	1.4	1.5	1.5	1.5
C405	Python programming	0.5	0.6	0.5	0.4	0.5
C406	Industrial oriented minis project/summer internship	2.9	2.9	2.9	3.0	3.0
C407	Seminar	2.9	2.9	2.8	2.8	2.9
C408	Project Stage - I	2.9	2.9	2.9	2.4	2.4
C409	Industrial robotics	3.0	2.9	3.0	2.9	3.0
C410	production and operation management	3.0	3.0	3.0	3.0	3.0
C411	Green fuel technology	2.3	2.3	2.2	2.3	2.3
C412	Project Stage - II	3.0	3.0	3.0	3.0	-
Average CO		2.3	2.2	2.2	2.3	2.3

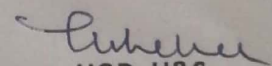
ENGLISH COURSE OUTCOMES (R22)

CO-1	Demonstrate effective English communication skills through listening, speaking, reading and writing
CO-2	Interpret the subject by using technical vocabulary/terms and engineering jargon on all practical and professional occasions
CO-3	Plan and organize contents/ideas in writing paragraphs, technical reports, letters and business correspondence suitable for all specialized situations
CO-4	Develops listening and reading comprehension techniques to communicate confidently and respond appropriately in all the skilled and social settings.
CO-5	Strengthen the basic proficiency in English by using correct grammar

MAPPING

Course Outcomes	Program Outcomes											
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO-1							2	2	3	3		2
CO-2							2	2	3	3		2
CO-3							2	2	3	3		2
CO-4							2	2	3	3		2
CO-5							2	2	3	3		2


 Course Coordinator


 HOD, H&S

ENGINEERING CHEMISTRY COURSE OUTCOMES(R22)

CO 1	Acquire the knowledge of crystal field and molecular orbital theory and can explain the stability and magnetic properties of complexes.
CO 2	Interpret various parameters of water and explain the problems caused by hard water in the industry.
CO 3	Apply the knowledge of electrochemical processes in the working of a battery, process of corrosion and its control methods.
CO 4	Impart the knowledge on various types of fuels and their applications.
CO 5	Anticipate the applications of engineering materials and their utility in order to become good engineers and entrepreneurs.

Relationship of Course Outcomes to Programme Outcomes:

Course Outcomes (CO)	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	-	1	-	-	-	1	1	-	-	-	1
CO2	3	-	1	-	-	-	2	1	-	-	-	1
CO3	3	-	2	-	-	-	1	1	-	-	-	1
CO4	3	-	1	-	-	-	1	1	-	-	-	1
CO5	2	-	1	-	-	-	2	1	-	-	-	1

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 Course Coordinator

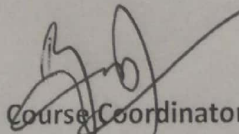
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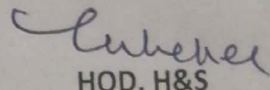
Matrices & Calculus (R22)

Course Outcomes	
C01	Determine the Rank, Echelon form and analyze the solution of system of equations for consistency and inconsistency.
CO2	Find the Eigen values and vectors of a matrix and reduce the quadratic form to canonical form by orthogonal transformation.
CO3	Interpret the applicability of mean value theorems. Apply the definite integrals to evaluate the areas and volumes of revolution of the curves.
CO4	Analyze the problems related to partial differentials and relate its applications to engineering subjects.
CO5	Evaluate the multiple integrals and apply the concepts to find areas and volumes.

CO-PO Mapping

Program outcomes/course outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2										1
CO2	3	2										1
CO3	3	2										1
CO4	3	2										1
CO5	3	2										1


 Course Coordinator


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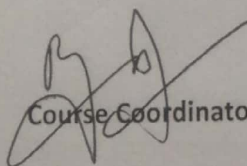


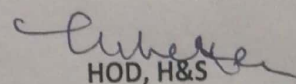
Ordinary Differential Equations and Vector Calculus (R22)

Course Outcomes	
CO1	Evaluate the first order and first degree differential equations and apply this concept to solve the problems on Trajectories, Newton's law of cooling and etc.
CO2	Solve higher order differential equations by using various methods.
CO3	Find Laplace Transforms of various functions and Apply the concepts of Laplace transforms to solve the differential equations.
CO4	Find the physical quantities involved in engineering field related to the vector valued functions.
CO5	Evaluate the line, surface and volume integrals and converting them from one to another

CO-PO Mapping

Program outcomes/co urse outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2										1
CO2	3	2										1
CO3	3	2										1
CO4	3	2										1
CO5	3	2										1


Course Coordinator


HOD, H&S



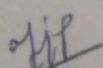
NALLA NARASIMHA REDDY
Education Society's Group of Institutions - Integrated Campus
(UGC AUTONOMOUS INSTITUTION)

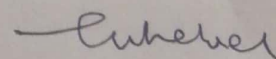


APPLIED PHYSICS COURSE OUTCOMES(R22)

CO1	Understand physical world from fundamental point of view by the concepts of Quantum mechanics
CO2	Identify the role of semiconductor devices in science and engineering Applications.
CO3	Explore the fundamental properties of dielectric, magnetic materials and Superconductors for their applications
CO4	Applying the knowledge of Nanomaterials in various fields.
CO5	Understand various aspects of Lasers and Optical fiber and their applications in diverse fields.

Course Outcomes	Relationship of Course outcomes(CO) to Program Outcomes (PO)													
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	2	1					1				1		
CO2	3	2	1					1				1		
CO3	3	2	1					1				1		
CO4	3	2	1					1				1		
CO5	3	2	1					1				1		


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