



VIGNAN'S INSTITUTE OF MANAGEMENT AND TECHNOLOGY FOR WOMEN

[Sponsored by Lavu Educational Society, Affiliated to JNTUH & Approved by AICTE, New Delhi]
Kondapur (V), Ghatkesar (M), Medchal - Malkajgiri (D) - 501 301. Phone: 96529 10002/3



COMPUTER SCIENCE & ENGINEERING (DATA SCIENCE)

VR24 – II B.Tech II Semester : Course Outcomes & CO-PO/PSO Mapping

DISCRETE MATHEMATICS

COURSE OUTCOME:

CO.No.	COURSE OUTCOMES	BT Level
DS401PC.1	Ability to understand and construct precise mathematical proofs and construct precise mathematical proofs .	3
DS401PC.2	Ability to analyze and solve counting problems on finite and discrete structures.	4
DS401PC.3	Ability to describe and manipulate sequences.	3
DS401PC.4	Describe and manipulate sequences.	3
DS401PC.5	Ability to apply graph theory in solving computing problems.	3

MAPPING:

CO.No	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
DS401PC.1	3	3	2	1	1	-	-	-	-	-	1	2	2	1
DS401PC.2	3	3	3	2	2	-	-	-	1	-	1	3	2	1
DS401PC.3	3	3	3	3	2	1	-	1	1	-	2	3	2	2
DS401PC.4	3	3	3	3	3	1	1	2	1	1	2	3	3	2
DS401PC.5	3	3	3	3	3	1	1	2	2	1	2	3	3	2
Average	3	3	2.8	2.4	2.2	1	1	1.667	1.25	1	1.6	2.8	2.4	1.6



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BUSINESS ECONOMICS AND FINANCIAL ANALYSIS

COURSE OUTCOME:

CO.No.	COURSE OUTCOMES	BT Level
SM402MS.1	Various Forms of Business and the impact of economic variables on the Business.	2
SM402MS.2	Problem-solving skills by applying demand and supply theories to real-world situations.	3
SM402MS.3	How production, costs and market structures influence pricing decisions and business profitability.	4
SM402MS.4	To prepare, analyze, and interpret financial statements.	4
SM402MS.5	To analyze financial position by analyzing the Financial Statements of a Company	4

MAPPING:

CO.No	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
SM402MS.1	1	1	1	1	1	2	2	1	2	2	2	1	1	2
SM402MS.2	2	2	2	2	1	2	2	2	2	2	2	2	1	2
SM402MS.3	2	1	2	2	1	2	2	2	2	2	3	2	1	3
SM402MS.4	2	2	2	3	2	2	2	2	2	2	3	2	1	3
SM402MS.5	2	2	2	3	3	3	3	3	3	3	3	3	1	3
Average	1.8	1.6	1.8	2.2	1.6	2.2	2.2	2	2.2	2.2	2.6	2	1	2.6



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OPERATING SYSTEMS

COURSE OUTCOME:

CO.No.	COURSE OUTCOMES	BT Level
DS403PC.1	Will be able to control access to a computer and the files that may be shared.	3
DS403PC.2	Demonstrate the knowledge of the components of computers and their respective roles in computing.	2
DS403PC.3	Ability to recognize and resolve user problems with standard operating environments.	4
DS403PC.4	Gain practical knowledge of how programming languages, operating systems, and architectures interact and how to use each effectively.	3
DS403PC.5	Will be able to control access to File System Interface and Operations	3

MAPPING:

CO.No	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
DS403PC.1	3	2	2	1	1	-	-	-	-	-	1	2	3	1
DS403PC.2	3	3	3	2	2	-	-	1	-	-	2	3	3	2
DS403PC.3	3	3	3	3	2	1	-	1	1	-	2	3	3	2
DS403PC.4	3	3	3	2	2	1	-	1	1	-	2	3	3	2
DS403PC.5	3	3	3	3	3	2	2	2	2	2	3	3	3	3
Average	3	2.8	2.8	2.2	2	1.333	2	1.25	1.333	2	2	2.8	3	2



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DATABASE MANAGEMENT SYSTEMS

COURSE OUTCOME:

CO.No.	COURSE OUTCOMES	BT Level
DS404PC.1	Gain knowledge of fundamentals of DBMS, database design and normal forms.	2
DS404PC.2	Master the basics of SQL for retrieval and management of data.	3
DS404PC.3	Be acquainted with the basics of transaction processing and concurrency control.	2
DS404PC.4	Familiarity with database storage structures and access techniques.	2
DS404PC.5	Analyze and implement transaction processing concurrency control and database recovery protocols in database.	4

MAPPING:

CO.No	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
DS404PC.1	3	2	2	1	1	-	-	-	-	-	1	2	2	1
DS404PC.2	3	3	3	2	2	-	-	1	1	-	2	3	2	2
DS404PC.3	3	3	3	2	2	1	-	1	1	1	2	3	3	2
DS404PC.4	3	3	3	3	2	1	1	2	1	1	2	3	3	3
DS404PC.5	3	3	3	3	3	2	2	2	2	2	3	3	3	3
Average	3	2.8	2.8	2.2	2	1.333	1.5	1.5	1.25	1.333	2	2.8	2.6	2.2



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SOFTWARE ENGINEERING

COURSE OUTCOME:

CO.No.	COURSE OUTCOMES	BT Level
DS405PC.1	Ability to translate end-user requirements into system and software requirements, using e.g., UML, and structure the requirements in a Software Requirements Document (SRD) .	3
DS405PC.2	Identify and apply appropriate software architectures and patterns to carry out high level design of a system and be able to critically compare alternative choices.	4
DS405PC.3	Will have experience and/or awareness of testing problems and will be able to develop a simple testing report.	3
DS405PC.4	Ability to recognize and understand the adopt the design models such as waterfall model, Spiral model.	2
DS405PC.5	Will able to understand the concepts such as quality management with Industrial Standards.	2

MAPPING:

CO.No	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
DS405PC.1	3	2	2	2	1	0	0	1	1	0	1	3	2	1
DS405PC.2	3	3	3	2	2	0	0	1	1	0	1	3	2	1
DS405PC.3	3	2	2	2	1	0	0	1	1	0	1	3	3	1
DS405PC.4	2	2	2	2	2	0	0	1	1	0	1	2	3	1
DS405PC.5	1	1	1	1	1	1	2	2	2	1	2	1	1	3
Average	2.4	2	2	1.8	1.4	0.2	0.4	1.2	1.2	0.2	1.2	2.4	2.2	1.4



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OPERATING SYSTEMS LAB

COURSE OUTCOME:

CO.No.	COURSE OUTCOMES	BT Level
DS405PC.1	Simulate and implement operating system concepts such as scheduling, deadlock management.	3
DS405PC.2	Simulate the memory management techniques.	3
DS405PC.3	Able to implement C programs using Unix system calls.	3
DS405PC.4	Able to Implement the Producer – Consumer problem using semaphores using UNIX/LINUX system calls.	3
DS405PC.5	Ability to Simulate and Implement OS Concept for Page Replacement Policies Such as FCFS, LRU & Optimal.	3

MAPPING:

CO.No	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
DS405PC.1	3	2	2	2	1	-	-	1	1	-	2	2	3	2
DS405PC.2	3	3	3	3	2	1	-	2	2	1	2	3	3	2
DS405PC.3	3	3	3	3	3	1	1	2	2	1	3	3	3	3
DS405PC.4	3	3	3	3	3	1	1	2	2	1	3	3	3	2
DS405PC.5	3	3	3	3	3	1	1	2	2	1	3	3	3	3
Average	3	2.8	2.8	2.8	2.4	1	1	1.8	1.8	1	2.6	2.8	3	2.4



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DATABASE MANAGEMENT SYSTEMS LAB

COURSE OUTCOME:

CO.No.	COURSE OUTCOMES	BT Level
DS407PC.1	Design database schema for a given application and apply normalization.	4
DS407PC.2	Acquire skills in using SQL commands for data definition and data manipulation.	3
DS407PC.3	Develop solutions for database applications using procedures, cursors and triggers.	3
DS407PC.4	Develop query using various operators in different clauses	3
DS407PC.5	Implement data integrity constraints.	3

MAPPING:

CO.No	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
DS407PC.1	3	2	2	2	1	-	-	1	1	1	2	3	2	2
DS407PC.2	3	3	3	3	2	1	-	2	2	1	2	3	2	2
DS407PC.3	3	3	3	3	2	1	1	2	2	1	3	3	3	2
DS407PC.4	3	3	3	3	3	1	2	2	2	1	3	3	3	3
DS407PC.5	3	3	3	3	3	2	2	3	3	2	3	3	3	3
Average	3	2.8	2.8	2.8	2.2	1.25	1.667	2	2	1.2	2.6	3	2.6	2.4



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NODE JS/ REACT JS/ DJANGO

COURSE OUTCOME:

CO.No.	COURSE OUTCOMES	BT Level
DS409PC.1	Build a custom website with HTML, CSS, and Bootstrap and little JavaScript.	3
DS409PC.2	Demonstrate Advanced features of JavaScript and learn about JDBC	3
DS409PC.3	Develop Server – side implementation using Java technologies	3
DS409PC.4	Develop the server – side implementation using Node JS.	3
DS409PC.5	Design a Single Page Application using React.	4

MAPPING:

CO.No	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
DS409PC.1	3	2	2	2	1	0	0	1	1	0	1	3	2	1
DS409PC.2	3	3	3	2	2	0	0	1	1	0	1	3	2	1
DS409PC.3	3	2	2	2	1	0	0	1	1	0	1	3	3	1
DS409PC.4	2	2	2	2	2	0	0	1	1	0	1	2	3	1
DS409PC.5	1	1	1	1	1	1	2	2	2	1	2	1	1	3
Average	2.4	2	2	1.8	1.4	0.2	0.4	1.2	1.2	0.2	1.2	2.4	2.2	1.4



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CONSTITUTION OF INDIA

COURSE OUTCOME:

CO.No.	COURSE OUTCOMES	BT Level
MC410.1	Discuss the growth of the demand for civil rights in India for the bulk of Indians before the arrival of Gandhi in Indian politics.	
MC410.2	Discuss the intellectual origins of the framework of argument that informed the conceptualization of social reforms leading to revolution in India.	
MC410.3	Discuss the circumstances surrounding the foundation of the Congress Socialist Party [CSP] under the leadership of Jawaharlal Nehru and the eventual failure of the proposal of direct elections through adult suffrage in the Indian Constitution.	
MC410.4	Discuss the passage of the Hindu Code Bill of 1956.	

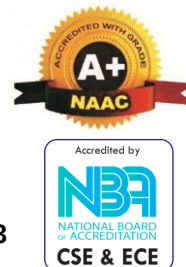
MAPPING:

CO.No	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
DS409PC.1	-	-	-	-	-	2	2	1	2	2	2	-	-	3
DS409PC.2	-	-	-	-	1	3	3	2	3	3	3	1	-	3
DS409PC.3	-	-	-	1	1	2	3	2	2	2	3	1	-	3
DS409PC.4	-	-	-	1	1	3	3	3	3	3	3	1	-	3
DS409PC.5	1	1	1	1	2	3	3	3	3	3	3	2	-	3
Average	1	1	1	1	1.25	2.6	2.8	2.2	2.6	2.6	2.8	1.25	-	3



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Real-time Research Project/ Societal Related Project

COURSE OUTCOME:

CO.No.	COURSE OUTCOMES	BT Level
DS408PC.1	Analyze real-world problems and societal challenges to identify appropriate computing solutions through systematic research and requirement analysis aligned with software development life cycle principles.	4
DS408PC.2	Design and develop innovative software systems or research solutions that address contemporary societal issues by applying appropriate algorithms, technologies, and methodologies.	6
DS408PC.3	Implement and validate real-time project solutions using current software development tools, platforms, and industry-standard practices while ensuring system functionality and reliability.	5
DS408PC.4	Evaluate the social, ethical, environmental, and economic impact of proposed computing solutions on society and demonstrate professional responsibility in project execution.	5
DS408PC.5	Document, present, and defend project outcomes through comprehensive technical reports, presentations, and demonstrations while exhibiting effective communication and teamwork skills.	5

MAPPING:

CO.No	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
DS408PC.1	3	3	3	-	-	2	1	2	2	2	2	3	2	2
DS408PC.2	3	3	3	2	2	2	2	2	2	2	2	3	3	2
DS408PC.3	3	3	3	3	3	1	2	3	2	3	2	3	3	2
DS408PC.4	2	2	2	2	2	3	3	2	2	2	2	2	2	3
DS408PC.5	2	2	2	1	1	2	2	3	3	2	2	3	2	3
Average	2.6	2.6	2.6	2	2	2	2	2.4	2.2	2.2	2	2.8	2.4	2.4