



Department of Information Technology

II B. Tech I Semester

SUBJECT: (C201): Mathematical and Statistical Foundations

After going through this course, the student will be able to

S. No.	COURSE OUTCOMES	BT Level
C201.1	Understand probability concepts and apply them to real-world problems	3-Apply
C201.2	Analyze discrete and continuous probability distributions including Binomial, Poisson, and Normal	4-Analyze
C201.3	Apply statistical methods such as hypothesis testing and estimation	3-Apply
C201.4	Use correlation and regression techniques for data analysis	3-Apply
C201.5	Implement statistical algorithms using computational tools and interpret results	4-Analyze

CO-PO MAPPING

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
C201.1	3	3	3	3	3							3	3	
C201.2	3	3	3	3	3							3	3	3
C201.3	3	3										3	2	
C201.4	3	3	2	2								3	2	
C201.5	3	3	2	2								3	3	3
Average	3	3	2.5	2.5	3							3	2.6	3



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SUBJECT: JAVA PROGRAMMING (C202)

After going through this course, the student will be able to

S. No.	COURSE OUTCOMES	BT Level
C202.1	Understand object-oriented principles and Java language fundamentals	2-Understand
C202.2	Apply inheritance, polymorphism, and exception handling in Java programs	3-Apply
C202.3	Develop GUI applications using AWT and Swing	6-Create
C202.4	Implement multithreading and file I/O operations	3-Apply
C202.5	Demonstrate teamwork, debugging, and communication skills in Java-based projects	3-Apply

CO-PO MAPPING

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
C202.1	3	3	2									2	2	
C202.2	3	3	2		2							3	2	
C202.3	3	3	3		2							3	3	
C202.4	3	3	3		2							3	3	
C202.5	3	2	3		3							3	3	
Average	3	2.8	2.6		2.25							2.8	2.6	



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SUBJECT: Computer Organization and Microprocessor (C203)

After going through this course, the student will be able to

S. No.	COURSE OUTCOMES	BT Level
C203.1	Understand the basic structure and operation of digital computers	2-Understand
C203.2	Analyze instruction sets and their impact on processor design	4-Analyze
C203.3	Design and evaluate arithmetic and logic units	6-Create
C203.4	Explore control unit design including microprogramming and hardwired control	4-Analyze
C203.5	Understand memory organization, I/O systems, and multiprocessor architectures	2-Understand

CO-PO MAPPING

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
C203.1	3	2	2	2	3						2	2	3	2
C203.2	3	3	3	2	2						2	2	3	2
C203.3	3	3	3	3	2						2	3	3	2
C203.4	3	3	3	3	3						2	3	3	3
C203.5	3	3	3	3	3						3	3	3	2
Average	3	2.8	2.8	2.6	2.6						2.2	2.6	3	2.2



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SUBJECT: OPERATING SYSTEMS (C204)

After going through this course, the student will be able to

S. No.	COURSE OUTCOMES	BT Level
C204.1	Understand the structure and functions of operating systems	2 – Understand
C204.2	Analyze process management and CPU scheduling algorithms	4 – Analyze
C204.3	Apply synchronization techniques and deadlock handling methods	3 – Apply
C204.4	Evaluate memory management strategies and virtual memory concepts	5 – Evaluate
C204.5	Understand file systems, I/O systems, and protection mechanisms	2 – Understand

CO-PO MAPPING

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
C204.1	2	2	2	1	1			3	2	3		2	2	1
C204.2	3	3	3	2	2			2	3	2		3	3	2
C204.3	3	3	3	3	2			1	2	2		3	2	2
C204.4	2	3	3	2	2			2	2	1		3	3	2
C204.5	3	3	3	3	3			2	2	2		3	3	3
Average	2.6	2.8	2.8	2.2	2			2	2.2	2.0		2.8	2.6	2



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SUBJECT: Introduction to IoT (C205)

After going through this course, the student will be able to

S. No.	COURSE OUTCOMES	BT Level
C205.1	Understand IoT architecture, enabling technologies, and communication protocols	2 – Understand
C205.2	Analyze sensor networks, embedded systems, and data acquisition techniques	4-Analyze
C205.3	Apply cloud integration and data analytics in IoT systems	3 – Apply
C205.4	Design IoT applications for smart cities, healthcare, and industrial automation	6-Create
C205.5	Demonstrate teamwork, documentation, and ethical responsibility in IoT projects	2 – Understand

CO-PO MAPPING

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
C205.1	3	2	3									2	3	3
C205.2	3	3	2									3	3	2
C205.3	3	3	2									3	3	
C205.4	3	3	2									3	3	
C205.5	2	3	3									2	2	3
Average	2.8	2.8	2.4									2.6	2.8	2.7



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SUBJECT: C206: Computational Mathematics Lab

After going through this course, the student will be able to

S. No.	COURSE OUTCOMES	BT Level
C206.1	Demonstrate the concepts of linearity and linear systems, which lie at the core level of many engineering concepts and to study eigen value problem.	2 – Understand
C206.2	Demonstrate the concept of diagonalization and reduction of quadratic forms to canonical forms.	2 – Understand
C206.3	Introduce the concept of Laplace transform and to obtain the skill of solving initial value problems using Laplace transforms.	3 – Apply
C206.4	Demonstrate the skill of decomposing a periodic and non-periodic function into fundamental components using Fourier series.	4-Analyze
C206.5	Acquire the knowledge of the PDE and the skill of finding analytical solutions of such equations.	3 – Apply

CO-PO MAPPING

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
C206.1		2		1	3				2					2
C206.2		3		2	2				2			3		3
C206.3		3		3	2				2			3	3	3
C206.4		3		3	3				3			3	3	3
C206.5		3		3	3				3				3	3
Average		2.8		2.4	2.6				2.4			3	3	2.8



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SUBJECT: JAVA PROGRAMMING LAB (C207)

After going through this course, the student will be able to

S. No.	COURSE OUTCOMES	BT Level
C207.1	Apply object-oriented programming concepts using Java	2-Understand
C207.2	Implement inheritance, polymorphism, and exception handling	4-Analyze
C207.3	Develop GUI applications using AWT and Swing	3-Apply
C207.4	Use multithreading and file I/O for concurrent and persistent applications	6-Create
C207.5	Demonstrate teamwork, debugging, and documentation skills in Java projects	3-Apply

CO-PO MAPPING

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
C207.1	3	2	2	1	3				2					3
C207.2	3	3	3	2	2				2			3		
C207.3	3	3	3	3	2				2			3	3	
C207.4	3	3	3	3	3				3			3	3	3
C207.5	3	3	3	3	3				3			3	3	
Average	3	2.8	2.8	2.4	2.6				2.4			3	3	3



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SUBJECT: OPERATING SYSTEMS LAB (C208)

After going through this course, the student will be able to

S. No.	COURSE OUTCOMES	BT Level
C208.1	Understand basic UNIX/Linux commands and shell scripting	2-Understand
C208.2	Implement process management techniques such as scheduling and synchronization	3-Apply
C208.3	Apply memory management and file system operations using system calls	3-Apply
C208.4	Develop shell scripts for automation and system administration tasks	6-Create
C208.5	Demonstrate teamwork, debugging, and documentation skills in lab assignments	3-Apply

CO-PO MAPPING

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
C208.1	3	2	2						2			2	2	2
C208.2	3	3	3						2			3	3	2
C208.3	3	3	3						2			3	3	3
C208.4	3	3	3						2			3	3	2
C208.5	3	3	3						2			3	3	3
Average	3	2.8	2.8						2			2.8	2.8	2.4



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SUBJECT: Internet of Things Lab (209)

After going through this course, the student will be able to

S. No.	COURSE OUTCOMES	BT Level
C209.1	Understand to configure Raspberry Pi	2-Understand
C209.2	Design and implement various embedded system.	6-Create
C209.3	Implement communication protocol.	3-Apply
C209.4	Implement MQ Telemetry Transport protocol	3-Apply
C209.5	Develop program using Python Scripting Language which is used in many IoT devices	6-Create

CO-PO MAPPING

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
C209.1	3	2	3	2	3							2	3	2
C209.2		3	2	2	2							3	3	
C209.3	2	3	2	2	2							3	3	2
C209.4	3	3	2	2	3							3	3	3
C209.5	3	2	3	3	2							2	2	2
Average	2.75	2.6	2.4	2.2	2.4							2.6	2.8	2.25



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SUBJECT: DATA VISUALIZATION - R PROGRAMMING/ POWER BI (C210)

After going through this course, the student will be able to

S. No.	COURSE OUTCOMES	BT Level
C210.1	Understand the fundamentals of data visualization and the role of tools like R and Power BI.	2-Understand
C210.2	Apply R programming techniques to manipulate, analyze, and visualize datasets.	3-Apply
C210.3	Create interactive dashboards and reports using Power BI for business and engineering applications.	6-Create
C210.4	Interpret visual data representations to support decision-making and communicate insights effectively.	4-Analyze
C210.5	Demonstrate teamwork, documentation, and ethical responsibility in data visualization projects.	3-Apply

CO-PO MAPPING

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
C210.1	3		2	2								2	3	
C210.2	3	3	3	2	2							3	2	2
C210.3	3	2	2	2	2							3	2	2
C210.4	2	2	2	2	2							2	3	2
C210.5	3	2	2	1	2									3
Average	2.8	2.25	2.2	1.8	2							2.5	2.5	2.25