

Department: Computer Science

B.Sc. Major

Program Specific Outcomes (PSO)

PSO Code	Description
PSO1	Apply fundamental concepts of programming, digital systems, and discrete mathematics to solve real-world problems.
PSO2	Design and develop efficient, reliable, and optimized software solutions using C, Java, Python, and web technologies.
PSO3	Demonstrate critical thinking, problem-solving, and analytical skills necessary for understanding core computer science domains.
PSO4	Employ appropriate tools and technologies for cybersecurity, data security, and web development.
PSO5	Exhibit professional ethics, effective communication, and project management skills to work in teams and industries.

Course Outcomes (COs)

Semester	Course Code	Course Title	Course Outcome (CO)
I (Major)	COMSMAJ101	Digital Design and Analysis	CO1: Explain digital logic fundamentals, number systems, and logic families. CO2: Analyze and design combinational and sequential circuits. CO3: Solve problems related to digital circuit design and hazard detection.
	COMSMAJ101L	Digital Design and Analysis (Lab)	CO1: Design and implement digital circuits using basic and universal gates. CO2: Develop practical understanding through simulations and hardware experiments.
	COMSMAJ102	Programming in C	CO1: Understand C syntax, semantics, and structure for solving computational problems. CO2: Develop modular programs using functions, arrays, structures, and file operations.

	COMSMAJ102L	Programming in C (Lab)	CO1: Implement programs solving mathematical and logical problems using C. CO2: Debug and test programs for correctness and efficiency.
I (SEC)	POOASEC105	Basic Programming in Python	CO1: Understand basic programming constructs and data structures in Python. CO2: Solve problems using Python programming and apply modular programming concepts.
	POOASEC105L	Basic Programming in Python (Lab)	CO1: Implement Python programs using control structures, functions, arrays, and strings. CO2: Develop solutions for real-world problems using Python scripting.
	POOASEC106	MS PowerPoint	CO1: Create and manage effective presentations with visuals, transitions, and animations. CO2: Apply formatting techniques to enhance audience engagement.
	POOASEC106L	MS PowerPoint (Lab)	CO1: Design professional presentations using advanced MS PowerPoint features like Master Slides and Animations.
II (Major)	COMSMAJ203	Discrete Structures	CO1: Apply discrete mathematical principles such as logic, sets, functions, relations, and graph theory to solve problems. CO2: Analyze and model computational problems using combinatorics and recurrence relations.
	COMSMAJ203T	Discrete Structures (Tutorial)	CO1: Practice and strengthen problem-solving skills through additional exercises in discrete structures.
	COMSMAJ204	Object Oriented Programming using Java	CO1: Understand and apply object-oriented principles using Java. CO2: Develop applications with concepts like inheritance, polymorphism, multithreading, and event handling.
	COMSMAJ204L	Object Oriented Programming using Java (Lab)	CO1: Implement object-oriented programs in Java for real-world scenarios. CO2: Debug, optimize and manage Java-based software projects.

II (SEC)	POOBSEC218	Cyber Security	CO1: Understand cybersecurity principles, threats, and vulnerabilities. CO2: Apply protective measures for devices, data, and networks.
	POOBSEC218L	Cyber Security (Lab)	CO1: Perform practical activities like securing networks, analyzing malware, and studying ransomware cases.
	POOBSEC219	HTML Programming	CO1: Understand and implement basic and intermediate HTML techniques to develop static web pages. CO2: Create structured, visually appealing, and functional web content.
	POOBSEC219L	HTML Programming (Lab)	CO1: Create web pages with HTML for different use cases like personal CVs, tables, and forms.

B. Sc. (Minor / MDC)

Program Specific Outcomes (PSO)

PSO Code	Program Specific Outcome
PSO1	Understand the fundamental concepts of computer systems, peripherals, and software environments.
PSO2	Develop structured programs using C language with logical, problem-solving, and algorithmic skills.
PSO3	Apply knowledge of basic programming and system management for troubleshooting and optimizing system performance.
PSO4	Communicate technical information effectively and adapt to evolving technologies and software tools.
PSO5	Demonstrate teamwork, project execution ability, and lifelong learning skills suitable for IT and related industries.

Course Outcomes (CO)

Semester	Course Code	Course Title	Course Outcomes (CO)
I	COMSDSC101	Computer Fundamentals	CO1: Understand basic computer architecture, generations, and the role of hardware and software. CO2: Explain and use peripheral devices and storage units effectively. CO3: Apply basic programming concepts like algorithms, flowcharts, and pseudo codes. CO4: Demonstrate understanding of system software, application software, and data management concepts.

	COMSDSC101T	Computer Fundamentals (Tutorial)	CO1: Practice problem-solving tasks and activities related to basic computer science concepts and system functionalities.
II	COMSDSC202	Programming Fundamentals Using C	CO1: Develop simple C programs using control flow, operators, functions, arrays, strings, structures, and pointers. CO2: Understand and apply structured programming techniques for solving real-world problems. CO3: Analyze program execution with algorithmic thinking and debugging skills.
	COMSDSC202L	Programming Fundamentals Using C (Lab)	CO1: Implement and debug C programs for mathematical and logical problems. CO2: Develop proficiency in handling I/O operations, control structures, and array manipulations in C.