GOVERNMENT COLLEGE ROPAR

(Affiliated To Punjabi University, Patiala)

PROGRAMME OUTCOMES

Post Graduate Programme Outcomes-

M.SC IT(LT) at Government College Ropar are outcome-based, with the following expected outcomes:

PO1	**Critical Thinking and Problem-Solving Skills:**Learners will gain advanced critical thinking and problem-solving abilities. They will be able to analyze complicated topics, assess evidence, examine many points of view, and develop novel solutions.
PO2	**Advanced Knowledge and Expertise:** Graduate programs aim to provide students with a deep understanding of their chosen field or specialization. Graduates will have acquired advanced knowledge, theories, methodologies, and skills specific to their area of study.
PO3	**Research and Scholarly Abilities:** Graduates will have the ability to design and conduct independent research, critically analyze existing literature, and contribute to the advancement of knowledge in their field.
PO4	**Effective Communication:**Focusing on developing strong communication skills. Students will be able to articulate complex ideas and research findings clearly and effectively, both in written and oral forms, to both specialized and non-specialized audiences.
PO5	**Cross-Disciplinary Knowledge:** Depending on the program, graduates may acquire cross-disciplinary knowledge, enabling them to integrate and apply concepts and methodologies from multiple fields to address complex problems and contribute to interdisciplinary collaboration.
PO6	**Professional Ethics and Responsibility:**emphasizing professional ethics, integrity, and social responsibility. Graduates will be equipped with ethical decision-making skills and an understanding of the social and ethical implications of their work.
PO7	**Professional and Career Development:**Providing students with opportunities for professional development, including internships, industry collaborations, and networking events.
PO8	**Adaptability and Lifelong Learning:** Programs aim to cultivate a growth mindset and a commitment to lifelong learning. Graduates will be prepared to adapt to new challenges, acquire new knowledge, and continuously develop their skills throughout their careers.

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PROGRAMME SPECIFICOUTCOMES
M.SC.IT (Lateral Entry)

The M.SC.IT (LT) Government College Ropar is outcome-based, with the following PSOs required.

PSO1	**Proficiency in Computer Science**: Students will gain in-depth knowledge of computer science, including languages. They will understand the fundamental principles, laws, and theories governing these subjects and be able to apply them in practical applications.
PSO2	**Solid Foundation in Mathematics:** Graduates will have a strong understanding of mathematical concepts, including calculus, algebra, statistics, and numerical methods, providing them with a solid foundation for further study or careers in fields such as mathematics or computer science.
PSO3	**Lab Techniques and Project Work:** Learners will have practical experience in computerlabs, experimental design, data collection, analysis, and interpretation.
PSO4	**Research Methodology:** Graduates will have a good understanding of research methodologies and be able to design , analyze data, and draw meaningful conclusions.
PSO5	**Problem-Solving and Critical Thinking:** Graduates will be able to analyze complex problems, think critically, and apply logical reasoning.
PSO6	**EffectiveCommunication** :Effective communication is essential in the field of computer science, as it enables clear understanding, collaboration, and successful completion of projects. Here are some key aspects of effective communication in computer science:

M.SC.IT(LT) SEM III		
Course Name	**Course Outcomes**	
Web Technology	CO1	HTML (Hypertext Markup Language) and CSS (Cascading Style Sheets), which are the foundational technologies for creating web pages and designing their visual appearance.
	CO2	Web pages often require dynamic content and interactivity.
Software Engineering	CO1	Software engineering involves implementing software solutions using programming languages and development tools
	CO2	Software engineering involves managing software projects, including planning, organizing, and controlling project activities
Java Programming	CO1	Java programming language syntax, including variables, data types, operators, control flow statements, classes, objects, methods, and exception handling.
	CO2	Java is an object-oriented programming (OOP) language, and studying Java programming will enable you to develop applications using OOP principles.
	CO3	Java provides robust exception handling mechanisms. Students will also understand best practices for exception handling and logging.
Computer Networks	CO1	Students will gain a solid understanding of the fundamental concepts and principles of computer networks.
	CO2	Students learn about firewalls, encryption, authentication, access control, and network security protocols.

M.SC.IT(LT) SEM IV		
Course Name	**Course Outcomes**	
Computer Graphics	CO1	Students will gain a solid understanding of fundamental computer graphics principles, including raster graphics, vector graphics, image representation, color models, and rendering techniques.
	CO2	This includes knowledge of graphics APIs, shader programming, and rendering pipelines
LINUX Administration	CO1	Students will gain a solid understanding of the Linux operating system, including its architecture, file system structure, command-line interface, and user management.
	CO2	Linux administration heavily relies on command-line tools and utilities.
Research Methodology	CO1	Students will gain a solid understanding of the research process, including the various steps involved in conducting research..
	CO2	Literature reviews are essential for understanding existing research and identifying research gaps.
Artificial Intelligence	CO1	Students will gain a solid understanding of fundamental AI concepts, including machine learning, neural networks, natural language processing, computer vision, and robotics..