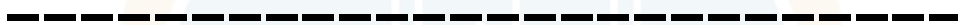




FACULTY OF SCIENCE



COURSE STRUCTURE (Choice Based Credit System)

MASTER OF SCIENCE (INFORMATION TECHNOLOGY)

UNIVERSITY
Aegis: Charutar Vidya Mandal (Estd.1945)

Effective from Academic Year: 2024-25



CVM
UNIVERSITY

Aegis: Charutar Vidya Mandal (Estd.1945)

Programme Structure Summary

SEMESTER 1											
Course Group	Course Name	Cr	Teaching Scheme				INT(T) Max./ Passing	EXT(T) Max./ Passing	INT(P) Max./ Passing	EXT(P) Max./ Passing	Grand Total Max./ Passing
			T	P	Tu	Cont. Hrs					
Core	Java – Beginner to Professional	4	4	-	-	4	50/20	50/20	-	-	100/40
	Python – Beginner to Professional	4	4	-	-	4	50/20	50/20	-	-	100/40
	Computer Network	4	4	-	-	4	50/20	50/20	-	-	100/40
	Practical based on Java – Beginner to Professional	3	-	6	-	6	-	-	50/20	50/20	100/40
	Practical based on Python – Beginner to Professional	3	-	6	-	6	-	-	50/20	50/20	100/40
Elective (Any One)	Web Programming Concepts – Beginner to Professional	4	4	-	-	4	50/20	50/20	-	-	100/40
	Practical based on Web Programming Concepts – Beginner to Professional	3	-	6	-	6	-	-	50/20	50/20	100/40
	R Programming	4	4	-	-	4	50/20	50/20	-	-	100/40
	Practical based on R Programming	3	-	6	-	6	-	-	50/20	50/20	100/40

SEMESTER 2											
Course Group	Course Name	Cr	Teaching Scheme				INT(T) Max./ Passing	EXT(T) Max./ Passing	INT(P) Max./ Passing	EXT(P) Max./ Passing	Grand Total Max./ Passing
			T	P	Tu	Cont. Hrs					
Core	Databases – Beginner to Professional	4	4	-	-	4	50/20	50/20	-	-	100/40
	.NET Core Framework	4	4	-	-	4	50/20	50/20	-	-	100/40
	Data Mining Techniques & Artificial intelligence	4	4	-	-	4	50/20	50/20	-	-	100/40
	Practical based on Databases – Beginner to Professional	3	-	6	-	6	-	-	50/20	50/20	100/40
	Practical based on .NET Core Framework	3	-	6	-	6	-	-	50/20	50/20	100/40
Elective (Any One)	Python Framework	4	4	-	-	4	50/20	50/20	-	-	100/40
	Practical based on Python Framework	3	-	6	-	6	-	-	50/20	50/20	100/40
	Internet of Things (IoT)	4	4	-	-	4	50/20	50/20	-	-	100/40
	Practical based on Internet of Things (IoT)	3	-	6	-	6	-	-	50/20	50/20	100/40



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SEMESTER 3											
Course Group	Course Name	Cr	Teaching Scheme				INT(T) Max./ Passing	EXT(T) Max./ Passing	INT(P) Max./ Passing	EXT(P) Max./ Passing	Grand Total Max./ Passing
			T	P	Tu	Cont. Hrs					
Core Courses	Mobile Application Development	4	4	-	-	4	50/20	50/20	-	-	100/40
	Advanced Data Structure	4	4	-	-	4	50/20	50/20	-	-	100/40
	Practical Based on Mobile Application Development	3	-	6	-	6	-	-	50/20	50/20	100/40
	Practical Based on Advanced Data Structure	3	-	6	-	6	-	-	50/20	50/20	100/40
Elective Courses – I (Any Two)	Data Science using Machine Learning	4	4	-	-	4	50/20	50/20	-	-	100/40
	Practical Based on Data Science using Machine Learning	3	-	6	-	6	-	-	50/20	50/20	100/40
	R Programming	4	4	-	-	4	50/20	50/20	-	-	100/40
	Practical Based on R Programming	3	-	6	-	6	-	-	50/20	50/20	100/40
	Digital Image Processing	4	4	-	-	4	50/20	50/20	-	-	100/40
	Practical Based on Digital Image Processing	3	-	6	-	6	-	-	50/20	50/20	100/40
Elective Courses– II (Any One)	Cloud Computing	4	4	-	-	4	50/20	50/20	-	-	100/40
	Natural Language Processing	4	4	-	-	4	50/20	50/20	-	-	100/40
	Cyber Security	4	4	-	-	4	50/20	50/20	-	-	100/40
	Big Data Analytics	4	4	-	-	4	50/20	50/20	-	-	100/40

T = Theory, P = Practical, Tu = Tutorial

Note: Sessions of Bridge Course will be conducted if required. Bridge Course does not have any credit and no weightage in Result Score Card.

SEMESTER 4															
Course Group	Course Name	Cr	Teaching Scheme				Assessment /Evaluation Type		External Exam Duration (Hrs.)		INT(T) Max./ Passing	EXT(T) Max./ Passing	INT(P) Max./ Passing	EXT(P) Max./ Passing	Grand Total Max./ Passing
			T	P	Tu	Cont. Hrs	T	P	T	P					
Core Courses	Project Work	25	-	-	-	-	-	-	-	-	-	-	350/140	350/140	700/280

T = Theory, P = Practical, Tu = Tutorial



CVM
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Aegis: Charutar Vidya Mandal (Estd.1945)

Master of Science (Information Technology)

PROGRAM OUTCOMES (POs)

1. **Advanced IT Knowledge:**
Apply comprehensive knowledge of information technology theories, principles, and emerging trends to solve complex computing problems in various domains.
2. **Problem Solving and Critical Thinking:**
Analyze, design, and develop effective and efficient solutions for real-world problems using appropriate IT tools and methodologies.
3. **Research and Innovation:**
Conduct independent research and contribute to innovation in IT by applying scientific inquiry, data analysis, and critical evaluation of current technologies.
4. **Technical Proficiency:**
Demonstrate expertise in programming, software/web/mobile application development, data mining and artificial intelligence, machine learning, natural language processing, cloud computing, and other specialized areas of IT.
5. **Lifelong Learning and Adaptability:**
Recognize the need for continuous learning and demonstrate the ability to adapt to emerging tools, technologies, and industry practices and pursue research in IT area.
6. **Project Management and Teamwork:**
Get industrial exposure through the 4.5 months Industrial Internship in IT industry and can manage IT projects effectively by planning, executing, and leading interdisciplinary teams while adhering to time, cost, and quality constraints.
7. **Communication and Documentation:**
Communicate effectively through technical project reports, presentations, and documentation with diverse audiences, including stakeholders, clients, and peers.
8. **Lifelong Learning and Career Development**
Engage in independent learning and professional development to adapt to evolving IT trends, tools, and challenges in a dynamic global environment and make them employable according to current demand of IT Industry.

PROGRAM SPECIFIC OUTCOMES (PSOs)

1. **Specialized IT Solution Development**
Students will be able to design, develop, and deploy advanced IT solutions in specialized domains such as software development, web/mobile application development, data science/data analytics, machine learning, cloud computing, cyber security, data mining and artificial intelligence using current tools and technologies.
2. **Applied Research and Innovation in IT**
Students will be capable of conducting applied research and innovation in the field of Information Technology, contributing to the development of new methodologies, systems, or products that address real-world challenges in industry or academia.