माधव प्रौद्योगिकी एवं विज्ञान संस्थान, ग्वालियर (म.प्र.), भारत
MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR (M.P.), INDIA

Deemed University

(Declared under Distinct Category by Ministry of Education, Government of India)

NAAC ACCREDITED WITH A++ GRADE

COMPUTER SCIENCE AND BUSINESS SYSTEMS (CSBS)

COURSE STRUCTURE

(Tentative)

I SEMESTER	II SEMESTER	III SEMESTER	IV SEMESTER	V SEMESTER	VI SEMESTER	VII SEMESTER	VIII SEMESTER
Introduction to Computer Science and Business Systems	Data Structures	Statistics and Numerical Methods	Linear Algebra and Optimization	Formal Language and Automata Theory	Business Intelligence & Analytics	Departmental Elective# (DE-3)	Departmental Elective* (DE-5)
Computer Programming	Object Oriented Programming	Design and Analysis of Algorithms	Database Management System	Software Engineering & Agile Methodology	Compiler Design	Departmental Elective* (DE-4)	Open Category Course* (OC-3)
Digital Logic Design	Discrete Structures	Computer Networks	Operating Systems	AI & ML in Business Systems	Departmental Elective* (DE-2)	Open Category Course* (OC-2)	Industry Internship/ Research Internship/ Innovation & Start-up
Web Technology	Probability and Random Process	Computer Organization and Architecture	Business System Optimization Techniques	Departmental Elective* (DE-1)	Open Category Course (OC-1)	Creative Problem Solving	Professional Development##
Matrices and Calculus	Basic Electrical & Electronics Engineering	E-Commerce and Digital Business	Data Science	Edge Computing	Data Mining & Pattern Warehousing	Skill Enhancement Program/ Research Internship/On Job Training	**Permitted to opt Honours or Minor Degree (Optional)**
Computer Programming Lab	Data Structures Lab	Design Analysis and Algorithm Lab	Data Science Lab	Software Engineering Lab	Compiler Design Lab	**Permitted to opt Honours or Minor Degree (Optional)**	
Web Technology Lab	Object Oriented Programming Lab	Numerical Computation using MATLAB	Database Management System Lab	Artificial Intelligence and Machine Learning Lab	IoT Lab		
Novel Engaging Course	Electrical & Electronics Engineering Lab	Problem Solving through Python Programming	Competitive Programming	Cornerstone Project	Capstone Project		
Language Lab	Novel Engaging Course	Novel Engaging Course	Novel Engaging Course	Professional Skills & Competencies - I	Professional Skills & Competencies - II		
Micro Project-I	Micro Project-II	Macro Project-I	Macro Project-II	Supply Chain Management	Professional Certification		
Universal Human Values & Professional Ethics (UHVPE)	Sustainability & Environmental Science		Project Management, Economics & Financing	**Permitted to opt Honours or Minor Degree (Optional)**	Disaster Management		
Skill Internship Program (Soft Skill): Minimum 45 hours duration: Evaluation in II Semester.		Skill Internship Project (Institute Level) (Qualifier): Minimum 30 hours duration: Evaluation in IV Semester	**Permitted to opt Honours or Minor Degree (Optional)**		**Permitted to opt Honours or Minor Degree (Optional)**		

	Departmental Core Courses
	Basic Science Courses
	Engineering Science Courses
	Mandatory Audit Courses

Note:

1. ***Mandatory Workshops in each semester (I to VI) at Department Level***
2. **** Course will be run through SWAYAM/NPTEL***
3. ***# Course will be run through MITS MOOCs.***

Departmental Elective Courses
Enterprise Mobile Apps
Distributed Systems
Software Testing
Social Network Analysis
Mobile Computing
Cryptography and Network Security
Ethical Hacking
Distributed Optimization and Machine Learning
Business Analytics & Text Mining Modeling using Python
Information Retrieval
Deep Learning for Computer Vision
Natural Language Processing
Reinforcement Learning
Blockchain Technologies
Big Data Computing
Introduction to Internet of Things
Introduction to Industry 4.0 and Industrial Internet of Things
Recommender Systems
Open Category Courses
Soft Computing
Software Engineering
Software Testing
Data Mining & Pattern Warehousing

Computer Science	*Business Systems*
Introduction to Computer Science and Business Systems	E-Commerce and Digital Business
Computer Programming	Business System Optimization Techniques
Digital Logic Design	Web Technology
Data Structures	AI & ML in Business Systems
Object Oriented Programming	Business Intelligence & Analytics
Design and Analysis of Algorithms	
Computer Networks	
Computer Organization and Architecture	
Database Management System	
Operating Systems	
Data Science	
Formal Language and Automata Theory	
Compiler Design	
Data Mining & Pattern Warehousing	
Problem Solving through Python Programming	
Software Engineering & Agile Methodology	
Edge Computing	