

# Integrated Master of Technology in Computer Science and Engineering (Data Science)

School of Computer Science and Engineering

Programme Credit Structure		Credits				
<b>University Core Courses</b>		72	IACSI202	Digital Logic and Computer Design	3	0 2 4
<b>Professional Core Courses</b>		80	IACSI203	Advanced Computer Architecture and Organization	3	1 0 4
<b>Professional Elective Courses</b>		28	IACSI204	Database Systems Design	3	0 2 4
<b>Open Elective Courses</b>		20	IACSI205	Operating System Fundamentals	3	0 2 4
<b>Total Graded Credit Requirement</b>		200	IACSI206	Internet and Web Programming	2	0 4 4
			IACSI301	Microprocessors and Microcontrollers	3	0 2 4
<b>University Core Courses</b>		72	IACSI302	Data Communication and Computer Networks	3	0 2 4
	L T P C		IACSI303	IoT and Embedded Systems	3	0 2 4
IACHY102	Engineering Chemistry	3 0 2 4	IACSI304	Cryptography and Cyber Security	3	0 2 4
IAPHY101	Engineering Physics	3 0 2 4	IACSI305	Artificial Intelligence and Machine Learning	3	0 2 4
IAMAT101	Multivariable Calculus and Differential Equations	3 0 2 4	IACSI306	Software Engineering Principles and Practices	3	0 2 4
IAMAT201	Applied Linear Algebra	3 1 0 4	IACSI308	Formal Languages and Automata Theory	3	1 0 4
IAMAT202	Discrete Mathematics and Graph Theory	3 1 0 4	IACSI401	Cloud Computing Technologies	3	0 2 4
IAMAT203	Probability and Statistics	3 0 2 4	IAMDI401	Programming for Data Science	3	0 2 4
IAEEE101	Basic Electrical and Electronics Engineering	3 0 2 4	IAMDI402	Data Visualization	3	0 2 4
IACSE101	Problem Solving Using Python	0 0 4 2	IAMDI403	Data Mining	3	0 2 4
IACSE102	Problem Solving Using Java	0 0 4 2	IAMDI404	Soft Computing Techniques	3	1 0 4
IACSE201	Structured and Object-Oriented Programming	2 0 4 4	<b>Professional Elective Courses</b>		28	
IASTS101	Qualitative and Quantitative Skills Practice I	3 0 0 1	IAMDI405	Machine Learning for Data Science	3	0 2 4
IASTS102	Qualitative and Quantitative Skills Practice II	3 0 0 1	IAMDI406	Distributed Systems	3	1 0 4
IASTS201	Qualitative and Quantitative Skills Practice III	3 0 0 1	IAMDI407	Exploratory Data Analysis	3	0 2 4
IASTS202	Qualitative and Quantitative Skills Practice IV	3 0 0 1	IAMDI408	Statistical Inference	3	0 2 4
IAFLC100	Foreign Language	1 0 2 2	IAMDI409	Predictive Analytics	3	1 0 4
IAHUM101	India Studies	1 0 0 1	IAMDI410	Healthcare Data Analytics	3	1 0 4
IACHY101	Environmental Sciences	2 0 0 2	IAMDI411	Financial Data Analytics	3	0 2 4
IAHSM100	Humanities, Social Science and Management	3 0 0 3	IAMDI412	Advanced Data Visualization Techniques	3	0 2 4
IAENG101	Technical English Communication	3 0 2 4	IAMDI413	Advanced Data Compression Techniques	3	0 2 4
IACSI399	Summer Industrial Internship	0 0 4 2	IAMDI414	Computer Vision	3	0 2 4
IACSI498	Project - I	0 0 16 8	IACSI404	Deep Learning	3	0 2 4
IACSI499	Project - II / Capstone	0 0 20 10	IACSI405	MLOPs	3	0 2 4
IAENG100	Effective English Communication (NCC)	0 0 4 2	IACSI406	Gen AI and Large Language Models	3	0 2 4
IAEXC100	Extracurricular Activities (NCCM)	0 0 4 2	IACSI407	Agentic AI	3	0 2 4
<b>Professional Core Courses</b>		80	<b>Open Elective Courses</b>		20	
IAMAT204	Complex Variables and Integral Transforms	3 1 0 4				
IACSI101	Data Structures and Algorithms	3 0 2 4				
IACSI201	Design and Analysis of Algorithms	3 0 2 4				