

SVKM'S NMIMS Sunandan Divatia School of Science
 Statistics Department
Program Name: Four-Year B.Sc. (Honours) Artificial Intelligence
 Course Structure

Year	First	Credit		First	Credit		Second	Credit		Second	Credit	
Semester	I	L	P	II	L	P	III	L	P	IV	L	P
Module	Title			Title			Title			Title		
Core Courses	Foundations of Computer Science	3	0	Data Structures and Algorithms	3	0	Operating Systems	3	0	Architectures of Intelligence	3	0
	Principles of Imperative Computation	3	0	Introduction to Artificial Intelligence	3	0	Introduction to AI: Representation and Problem Solving	3	0	Natural Language Processing	3	0
	CORE LAB 1	0	1	CORE LAB 2	0	1	CORE LAB 3	0	1	CORE LAB 4	0	1
Discipline Specific Courses	Python Programming-I	3	0	Python Programming-II	3	0	Data base systems	3	0	Machine Learning - I	3	0
	C Programming	3	0	System Analysis and Design	3	0	Java Programming	3	0	Computer Networks	3	0
	Disciplinary Specific Courses LAB 1	0	1	Disciplinary Specific Courses LAB 2	0	1	Disciplinary Specific Courses LAB 3	0	1	Disciplinary Specific Courses LAB 4	0	1
Multi-Disciplinary Courses	Calculus for Artificial Intelligence	3	0	Multivariate Calculus	3	0	Sampling Distributions & Applications	3	0	Statistical Inference	3	0
	Discrete Mathematics	3	0	Linear Algebra	3	0	Statistical Graphics and Visualization	3	0	Multivariate Analysis	3	0
	Statistical Methods	3	0	Probability Models	3	0						
	Multi-Disciplinary Courses LAB 1	0	1	Multi-Disciplinary Courses LAB 2	0	1	Multi-Disciplinary Courses LAB 3	0	1	Multi-Disciplinary Courses LAB 4	0	1
Ability Enhancement/Skill Development	Environmental Studies	3	0	Effective Communication	2	0						
Research and Internship							Research Writing	2	0	Research Ethics	2	0
							Research Initiative in AI - 1	0	1	Research Initiative in AI - 2	0	1
Modular Elective Courses												
Total Credits		24	3		23	3		20	4		20	4

Year	Third	Credit		Third	Credit		Fourth	Credit		Fourth	Credit	
Semester	V	L	P	VI	L	P	VII	L	P	VIII	L	P
Module	Title			Title			Title			Title		
Core Courses	AI and Human Brain	3	0	Design of AI Products and Services	3	0	Audio Signalling Process	3	0			
	Deep Learning Techniques	3	0	Digital Service Innovation	3	0	Image Processing	3	0			
	CORE LAB 5	0	1	CORE LAB 6	0	1	CORE LAB 7	0	1			
Discipline Specific Courses	Machine Learning - 2	3	0	Introduction to Data Protection and IT Security	3	0						
	Computer Vision	3	0	IT Law and IPR Protocols	3	0						
	Disciplinary Specific Courses LAB 5	0	1	Disciplinary Specific Courses LAB 6	0	1						
Multi-Disciplinary Courses	Regression Analysis	3	0	Theory of Optimization & Graph Theory	3	0						
	Time Series Analysis	3	0	Stochastic Processes	3	0						
	Multi-Disciplinary Courses LAB 5	0	1	Multi-Disciplinary Courses LAB 6	0	1						
Ability Enhancement/Skill Development			ABC of Start-up Entrepreneurship	3	0							
Research and Internship				Capstone Project in AI - 1	0	2	Capstone Project in AI - 2	0	2	Industry Internship	0	20
Modular Elective Courses							Modular Elective Course 1	3	0			
							Modular Elective Course 2	3	0			
							Modular Elective Courses LAB- 1	0	1			
Total Credits		18	3		21	5		12	4		0	20

Modular Elective Courses:

A1:Decision Making and Robotics

A2:Machine Learning

A3:Perception and Language

A4: Human-AI Interaction

Total Programme credits: 184