

Curriculum and Syllabi for Degree of Bachelor of Science Honours in Artificial Intelligence						
Level 01						
Course Code	Course Title	Type	Lectures (Hrs)	Lab/Tutorials (Hrs)	Credits	Min ¹ /Max ²
CM 1210	Introduction to Intelligent Machines	C	2	-	2	
CM 1220	Fundamentals of Machines	C	1	3	2	
CM 1310	Linear Algebra and Calculus	C	2	3	3	
CM 1410	Probability and Statistics	C	2	3	3	
CM 1230	Foundations of Artificial Intelligence	C	2	-	2	
IN 1321	Computer Organization	C	2	3/2	2.5	
IN 1101	Programming Fundamentals	C	3	3	4	
IN 1111	Data structures and Algorithms	C	2	3/2	2.5	
IN 1401	Fundamentals of Databases	C	2	3/2	2.5	
IN 1311	Digital Systems	C	2	-	2	
IN 1331	Microcontroller based System Design	C	1	3	2	
IN 1501	Data Communication	C	2	3/2	2.5	
IN 1621	Web Technologies	C	2	3	3	
CM 1900	Intelligent Machines inspirational Project	C			2.5	
Total Compulsory (GPA)						35.5
IS 1000	English	C	2	3	3	
Total Compulsory (Non GPA)						3
Level 02						
CM 2510	Modern Approach to Artificial Intelligence	C	2	3/2	2.5	
CM 2520	Deductive Reasoning and Logic Programming	C	2	3/2	2.5	
CM 2320	Mathematical Methods	C	2	3/2	2.5	
CM 2420	Statistical Inference	C	2	3	3	
IS 1100	Principles of Management	C	2	3/2	2.5	
IN 2311	Operating Systems	C	2	3/2	2.5	
IN 2211	Object-oriented Analysis and Design	C	2	3/2	2.5	
IN 2201	Software Engineering	C	2	3/2	2.5	
IN 2101	Object-Oriented Programming	C	2	3	3	
IN 2111	Advanced Data structures and Algorithm	C	2	3/2	2.5	
IN 2511	Computer Networks	C	2	3/2	2.5	
IN 2601	Computer Graphics	C	2	3/2	2.5	
IN 2401	Database Management Systems	C	2	3/2	2.5	
CM 2900	Industry Based AI Software Project	C			3	
Total Compulsory (GPA)						36.5

Level 03 & Level 04

CM 3610	Expert Systems	C	2	3/2	2.5	
CM 3230	Automata Theory	C	2	3/2	2.5	
CM 3620	Natural Language Processing	C	2	3/2	2.5	
CM 3710	Artificial Neural Networks	C	2	3/2	2.5	
CM 3720	Machine Learning	C	2	3/2	2.5	
CM 3810	Fuzzy Logic	C	2	3/2	2.5	
CM 3820	Evolutionary Computing	C	2	3/2	2.5	
CM 3630	Multi Agent System	C	2	3/2	2.5	
CM 3530	Research Methods	C	2	3/2	2.5	
IN 2321	Computer Architecture	C	2	3/2	2.5	
CM 4650	Semantic Web & Ontological Modelling	C	2	3/2	2.5	
CM 4730	Deep Learning	C	2	3/2	2.5	
CM 4150	Recommender Systems	C	2	3/2	2.5	
IS 4600	IT Quality Assurance	C	2	3/2	2.5	
IS 3700	IT Project Management	C	2	3/2	2.5	
IS 4400	Social Aspect of IT	C	2	3/2	2.5	
CM 4900	Research Project in AI	C			10	
Total Compulsory (GPA)						50
CM 3900	Independent Study in AI	C	2	-	2	
CM 3000	Industrial Training	C	24 Weeks		6	
CM 4560	Philosophy of Science	C	2	-	2	
IS 3420	Business and Entrepreneurship	C	2	3/2	2.5	
Total Compulsory (Non GPA)						12.5
CM 3830	Rough Set Theory	E	2	3/2	2.5	
CM 3640	Artificial Cognitive Systems	E	2	3/2	2.5	
CM 3250	Fundamentals of Visual Communication Design	E	2	3/2	2.5	
CM 3540	Bioinformatics	E	2	3/2	2.5	
CM 3430	Computational Statistics	E	2	3/2	2.5	
CM 3340	Numerical Analysis	E	2	3/2	2.5	
CM 3130	Operations Research	E	2	3/2	2.5	
CM 4270	Theory of Computability and Complexity	E	2	3/2	2.5	
CM 4740	Deep Reinforcement Learning	E	2	3/2	2.5	
CM 4240	Robotics	E	2	3/2	2.5	
CM 4250	Affective Computing	E	2	3/2	2.5	
CM 4280	Theory of Compilers	E	2	3/2	2.5	
CM 4680	Neuroscience for Artificial Intelligence	E	2	3/2	2.5	
CM 4440	Advanced Statistical Modelling	E	2	3/2	2.5	
CM 4660	Speech Processing	E	2	3/2	2.5	
CM 4670	Quantum Computing	E	2	3/2	2.5	
CM 4690	Introduction to Agent-based Modelling	E	2	3/2	2.5	

CM 4170	Abstract Algebraic Structures	E	2	3/2	2.5		
CM 4450	Computational Bayesian Statistics	E	2	3/2	2.5		
CM 4460	Time Series Analysis & Forecasting	E	2	3/2	2.5		
CM 4180	Mathematical Modelling	E	2	3/2	2.5		
CM 4260	Machine Translations	E	2	3/2	2.5		
CM 4550	Distributed Computing for AI	E	2	3/2	2.5		
CM 4290	Swarm Intelligence	E	2	3/2	2.5	7.0	*
IN 3101	Enterprise Application Development	E	2	3/2	2.5		
IN 4401	Data Mining & Warehousing	E	2	3/2	2.5		
IN 4501	Wireless Communication & Mobile Networks	E	2	3/2	2.5		
IN 4411	Big Data Analytics	E	2	3/2	2.5		
IN 4621	Digital Image Processing	E	2	3/2	2.5		
IN 4721	Geographic Information Systems	E	2	3/2	2.5		
IN 4551	Security & Cryptography	E	2	3/2	2.5		
IN 4631	Augmented and Virtual Reality	E	2	3/2	2.5		
IN 4561	Cloud Computing	E	2	3/2	2.5		
IN 4641	Game Theory	E	2	3/2	2.5		
IS 2200	Principles of Marketing and Consumer Solutions	E	2	3/2	2.5		
IS 3610	Management Information Systems	E	2	3/2	2.5		
IS 3020	Human Communication and Language Structures	E	2	3/2	2.5	*	*
Total Elective (GPA)						12.5	
Total GPA						134.5	
Total Compulsory Non GPA Credits						15.5	
<p>* To be based on a minimum total GPA of 135 credits 1 - Minimum required 2 - Maximum allowed</p>							