

Scheme of Studies BS Computer Science (Specialisation in Artificial Intelligence)

First Year									
Fall Semester					Spring Semester				
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
CT-175	Programming Fundamentals.	3	1	4	CS-251	Logic Design & Switching Theory.	3	1	4
CT-174	Fundamentals of Information Technology	2	1	3	CT-162	Discrete Structures.	3	0	3
MT-171	Differential & Integral Calculus	3	0	3	CT-260	Object Oriented Programming.	3	1	4
PH-122	Applied Physics.	3	1	4	HS-104	Functional English	3	0	3
HS-205	Islamic Studies. OR	2	0	2	HS-105	Pakistan Studies. OR	2	0	2
HS-209	Ethical Behaviour.				HS-127	Pakistan Studies. (For Foreigners)			
MT-001	Mathematics-1 (Pre-Medical)	-	-	NC	HSK-I	Chinese Language OR	-	-	NC
					HS-231	Turkish Language - I	-	-	NC
					MT-002	Mathematics-2 (Pre-Medical)	-	-	NC

Second Year									
Fall Semester					Spring Semester				
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
CT-159	Data Structure Algorithms & Applications.	3	1	4	CS-252	Computer Architecture & Organization.	3	1	4
CT-259	System Analysis and Design.	3	0	3	CT-261	Database Management Systems.	3	1	4
MT-227	Differential Equations.	3	0	3	HS-218	Business Communication	2	1	3
HS-115	Academic Reading and Writing	3	0	3	MT-272	Linear Algebra & Geometry..	3	0	3
HS-219	Professional Ethics	2	0	2	EC-209	Financial & Cost Accounting.	3	0	3
HSK-II	Chinese Language. OR	-	-	NC	HS-200	Community Service	-	-	NC
HS-232	Turkish Language-II	-	-	NC					

Third Year									
Fall Semester					Spring Semester				
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
CT-361	Artificial Intelligence & Expert Systems.	3	1	4	CT-354	Machine Learning	3	1	4
CT-351	Knowledge Representation & Reasoning	3	0	3	CT-376	Computer Communication Networks.	3	1	4
CT-353	Operating Systems.	3	1	4	CS-428	Parallel & Distributed Computing	3	1	4
CT-###	AI Elective I	3	0	3	CT-363	Design and Analysis of Algorithms	3	0	3
CT-365	Software Engineering	3	0	3	CT-###	AI Elective II	3	0	3

Final Year									
Fall Semester					Spring Semester				
Course Code	Course Title	Credit Hours			Course Code	Course Title	Credit Hours		
		Th	Pr	Total			Th	Pr	Total
MG-482	Organisational Behaviour.	3	0	3	CT-355	Information Security	3	0	3
CT-466	Artificial Neural Networks	3	0	3	MG-481	Entrepreneurship.	3	0	3
CT-485	Natural Language Processing	3	0	3	CT-467	Image Processing & Computer Vision	3	1	4
CT-###	AI Elective-III	3	0	3	CT-##	AI Elective-IV.	3	0	3
CT-499	Software Based Project.	-	3	3	CT-499	Software Based Project.	0	3	3

Elective-I and Elective-II Courses	
CT-377	Data Mining
CT-357	Speech Processing
CT-358	Fuzzy Systems
CT-359	Knowledge Based Systems

Elective-III & Elective-IV Courses	
CT-468	Deep Learning
CT-469	Reinforcement Learning
CT-470	Swarm Intelligence