

Scheme of Studies of BS (Computer Science) TIEST for Batch 2021 and Onwards

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
PH-122	Applied Physics	3	1	4	CT-251	Object Oriented Programming	3	1	4
HS-104	Functional English	3	0	3	HS-115	Academic Reading and Writing	3	0	3
HS-105	Pakistan Studies OR	2	0	2	MT-171	Differential & Integral Calculus	3	0	3
HS-127	Pakistan Studies (for Foreigners)				HSK-I	Chinese Language			NC
MT-001	Mathematics-I (for Pre-Medical)			NC	MT-002	Mathematics-II (for 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-157	Data Structure Algorithms & Applications	3	1	4	CS-252	Computer Architecture & Organisation	3	1	4
MT-227	Differential Equations	3	0	3	CT-257	Database Management Systems	3	1	4
HS-218	Business Communications	2	1	3	HS-219	Professional Ethics	2	0	2
CT-259	System Analysis & Design	3	0	3	CT-258	Financial & Cost Accounting	3	0	3
HS-205	Islamic Studies OR	2	0	2	MT-272	Linear Algebra & Geometry	3	0	3
HS-209	Ethical Behaviour				HS-200	Community Service			NC
HSK-II	Chinese Language			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-365	Software Engineering	3	0	3	CS-351	Computer Communication Networks	3	1	4
CT-353	Operating Systems	3	1	4	CT-361	Artificial Intelligence & Expert Systems	3	1	4
CT-363	Design and Analysis of Algorithms	3	0	3	CT-362	Web Engineering	3	1	4
MT-331	Probability & Statistics	3	0	3	CT-367	Theory of Programming Languages	3	0	3
CT-364	Theory of Automata and Formal Languages	3	0	3	MT-442	Numerical Methods	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
CT-460	Network & Information Security	3	1	4	CS-428	Parallel & Distributed Computing	3	1	4
MG-482	Organisational Behaviour	3	0	3	CT-465	Compiler Design	3	0	3
CT-###	Elective I	3	0	3	MG-481	Entrepreneurship	3	0	3
CT-###	Elective II	3	1	4	CT-###	Elective III	3	1	4
CT-499	*Software Based Project	0	3	3	CT-499	*Software Based Project	0	3	3

Elective – I (to be chosen from the following)

- *CT-366 E-Commerce
- *CT-485 Natural Language Processing
- *CT-464 Modeling & Simulation

Elective – II & III (to be chosen from the following)

- *CT-352 Computer Graphics
- *CT-360 Visual Programming
- *CT-462 Distributed Computing
- *CT-463 Data Warehousing & Mining
- *CT-481 Wireless Network & Mobile Computing
- *CT-484 Introduction to Cyber Security