

Course Offering
Semester: Fall 2023
Program: BS (CS) - MS (CS)

S.#	Code	Course Title	Status	Section	Hidden Sec.	Pre-Req.	Co-Req.	Semester	Remarks
1.	CS1133	Introduction to Programming	Core	4	0	Nil	CS1131	1	Click here to enter text.
2.	CS1131	Introduction to Programming Lab	Core	5	0	Nil	CS1133	1	Click here to enter text.
3.	HMCS1002	Pakistan Studies	G. Edu	4	0	Nil	Nil	1	Click here to enter text.
4.	HMCS1013	English-1	G. Edu	4	0	Nil	Nil	1	Click here to enter text.
5.	MTCS1013	Calculus and Analytical Geometry	Math & Science	4	0	Nil	Nil	1	Click here to enter text.
6.	PHCS1013	Applied Physics	Math & Science	4	0	Nil	Nil	1	Click here to enter text.
7.	CS1143	Object Oriented Programming	Core	2	0	CS1133	CS1141	2	Click here to enter text.
8.	CS1141	Object Oriented Programming Lab	Core	3	0	CS1131	CS1143	2	Click here to enter text.
9.	HMCS1012	Islamic Studies/Ethics	G. Edu	2	0	Nil	Nil	2	Click here to enter text.
10.	HMCS1023	English-II	G. Edu	2	0	HMCS1013	Nil	2	Click here to enter text.
11.	HMCS2063	Introduction to Sociology	Uni. Elective	2	0	Nil	Nil	2	Click here to enter text.
12.	CS2053	Discrete Structures	Core	2	0	CS1133	Nil	2	Click here to enter text.
13.	MTCS1033	Linear Algebra	Math & Science	2	0	MTCS1013	Nil	2	Click here to enter text.
14.	HMCS2033	Technical Report Writing	G. Edu	3	0	HMCS1023	Nil	3	Click here to enter text.
15.	HMCS2243	English Literature - I	Uni. Elective	3	0	HMCS1023	Nil	3	Click here to enter text.
16.	CS2313	Introduction to Database Systems	Core	3	0	CS1143	CS2311	3	Click here to enter text.
17.	CS2311	Introduction to Database Systems Lab	Core	4	0	CS1141	CS2313	3	Click here to enter text.

S.#	Code	Course Title	Status	Section	Hidden Sec.	Pre-Req.	Co-Req.	Semester	Remarks
18.	CS2143	Data Structures	Core	3	0	CS1143	CS2141	3	Click here to enter text.
19.	CS2141	Data Structures Lab	Core	4	0	CS1141	CS2143	3	Click here to enter text.
20.	MTCS3063	Probability & Statistics	Math & Science	3	0	MTCS1033	Nil	3	Click here to enter text.
21.	CS2513	Digital Logic Design	Core	2	0	CS2053	CS2511	4	Click here to enter text.
22.	CS2511	Digital Logic Design Lab	Core	3	0	CS2053	CS2513	4	30 students/section
23.	CS2223	Software Engineering-I	Core	2	0	CS2313	Nil	4	Click here to enter text.
24.	MTCS1053	Multi Variate Calculus	CS Supporting	2	0	MTCS3063	Nil	4	Click here to enter text.
25.	CS3413	Operating Systems	Core	2	0	CS2143	CS3411	4	Click here to enter text.
26.	CS3411	Operating Systems Lab	Core	2	0	CS2141	CS3413	4	Click here to enter text.
27.	CS3773	Computer Networks	Core	2	0	CS2143	CS3771	4	Click here to enter text.
28.	CS3771	Computer Networks Lab	Core	2	0	CS2141	CS3773	4	Click here to enter text.
29.	CS2523	Computer Organization and Assembly Language	Core	3	0	CS2513	CS2521	5	Click here to enter text.
30.	CS2521	Computer Organization and Assembly Language Lab	Core	4	0	CS2511	CS2523	5	Click here to enter text.
31.	CS3163	Design and Analysis of Algorithms	Core	3	0	CS2143	Nil	5	Click here to enter text.
32.	CS3613	Theory of Automata & Formal Lang.	Core	3	0	CS2143	Nil	5	Click here to enter text.
33.	CS3713	Introduction to Information Security and forensics	Core	3	0	CS3773	Nil	5	Click here to enter text.
34.	CS3283	Graph Algorithms	CS Supporting	3	0	CS2143	Nil	5	Click here to enter text.
35.	CS3433	Parallel and Distributed Computing	Core	3	0	CS2523	Nil	6	Click here to enter text.
36.	CS4813	Artificial Intelligence	Core	3	0	CS3163	CS4811	6	Click here to enter text.

S.#	Code	Course Title	Status	Section	Hidden Sec.	Pre-Req.	Co-Req.	Semester	Remarks
37.	CS4811	Artificial Intelligence Lab	Core	3	0	CS3163	CS4813	6	Click here to enter text.
38.	CS3833	Theory of Programming Languages	CS Supporting	3	0	CS3613	Nil	6	Click here to enter text.
39.	CS3213	Object Oriented Analysis and Design	Elective	3	0	CS2313	Nil	6	Click here to enter text.
40.	CS4613	Machine Learning	Elective	3	0	CS2313	Nil	6	Click here to enter text.
41.	ACCS3003	Financial Accounting	Uni. Elective	3	0	MTCS1013	Nil	6	Click here to enter text.
42.	CS4623	Compiler Construction	Core	3	0	CS3613	Nil	7	Click here to enter text.
43.	CS4912	Design Project (Part-I)	Core	1	0	CS2223	Nil	7	Click here to enter text.
44.	CS3273	Human Computer Interaction	Elective	3	0	CS2223	Nil	7	Click here to enter text.
45.	HMCS2013	Professional Ethics and Legal Issues	G. Edu	3	0	Nil	Nil	7	Click here to enter text.
46.	MGCS4003	Entrepreneurship and Innovation	Uni Elective	3	0	Nil	Nil	7	Click here to enter text.
47.	CS4333	Introduction to Data Warehousing	Elective	3	0	CS2313	Nil	7	Click here to enter text.
48.	CS4873	Malware Analysis	Elective	1	0	CS2523	Nil	8	Click here to enter text.
49.	CS4924	Design Project (Part-II)	Core	1	0	CS4912	Nil	8	Click here to enter text.
50.	HMCS1033	Personal Management and Grooming	G. Edu	1	0	Nil	Nil	8	Click here to enter text.
51.	CS5123	Advanced Analysis of Algorithm	Core	1	0	Nil	Nil	Any	[Coupled with AI5833]
52.	CS5433	Advanced Operating Systems	Core	1	0	Nil	Nil	Any	Click here to enter text.
53.	CS5843	Mathematics for Artificial Intelligence	Elective	1	0	Nil	Nil	Any	[Coupled with AI5843]
54.	CS5993	Machine Learning for Data Science	Elective	1	0	Nil	Nil	Any	[Coupled with AI5993]

S.#	Code	Course Title	Status	Section	Hidden Sec.	Pre-Req.	Co-Req.	Semester	Remarks
55.	CS5793	Digital Forensics	Elective	1	0	Nil	Nil	Any	Click here to enter text.
56.	CS5143	Internet of Things for Healthcare	Elective	1	0	Nil	Nil	Any	Click here to enter text.
57.	CS6323	Web Mining	Elective	1	0	Nil	Nil	Any	[Coupled with AI6813]