

**Course Offering**  
**Semester: Spring 2022**  
**Program:BS Computer Science**

S.#	Code	Course Title	Status	Section	Hidden Sec.	Pre-Req.	Co-Req.	Semester	Remarks
1.	CS1133	Introduction to Programming	Core	2	1	Nil	CS1131	1	Click here to enter text.
2.	CS1131	Introduction to Programming Lab	Core	3	1	Nil	CS1133	1	Click here to enter text.
3.	HMCS1002	Pakistan Studies	G. Edu	2	1	Nil	Nil	1	Click here to enter text.
4.	HMCS1013	English-1	G. Edu	2	1	Nil	Nil	1	Click here to enter text.
5.	MTCS1013	Calculus and Analytical Geometry	Math & Science	2	1	Nil	Nil	1	Click here to enter text.
6.	PHCS1013	Applied Physics	Math & Science	2	1	Nil	Nil	1	Click here to enter text.
7.	CS1143	Object Oriented Programming	Core	4	1	CS1133	CS1141	2	Click here to enter text.
8.	CS1141	Object Oriented Programming Lab	Core	5	1	CS1131	CS1143	2	Click here to enter text.
9.	HMCS1012	Islamic Studies/Ethics	G. Edu	4	0	Nil	Nil	2	Click here to enter text.
10.	HMCS1023	English-II	G. Edu	4	0	HMCS1013	Nil	2	Click here to enter text.
11.	HMCS2063	Introduction to Sociology	Humanity	2	0	Nil	Nil	2	Click here to enter text.
12.	HMCS2053	Introduction to Psychology	Humanity	2	0	Nil	Nil	2	Click here to enter text.
13.	CS2053	Discrete Structures	Core	4	1	Nil	Nil	2	Click here to enter text.
14.	MTCS1033	Linear Algebra	Math & Science	4	1	MTCS1013	Nil	2	Click here to enter text.
15.	HMCS2033	Technical Report Writing	G. Edu	3	0	HMCS1013	Nil	3	Click here to enter text.
16.	[HMCS2213]	Chinese Language	Uni. Elective	2	0	Nil	Nil	3	Click here to enter text.

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17.	HMCS2223	French Language	Uni. Elective	1	0	Nil	Nil	3	Click here to enter text.
18.	CS2313	Introduction to Database Systems	Core	3	0	CS1133	CS2311	3	Click here to enter text.
19.	CS2311	Introduction to Database Systems Lab	Core	4	0	CS1131	CS2313	3	Click here to enter text.
20.	CS2143	Data Structures	Core	3	0	CS1133	CS2141	3	Click here to enter text.
21.	CS2141	Data Structures Lab	Core	4	0	CS1131	CS2143	3	Click here to enter text.
22.	MTCS3063	Probability & Statistics	Math & Science	3	0	MTCS1013	Nil	3	Click here to enter text.
23.	CS2513	Digital Logic Design	Core	4	1	Nil	CS2511	4	Click here to enter text.
24.	CS2511	Digital Logic Design Lab	Core	7	0	Nil	CS2512	4	Click here to enter text.
25.	CS2223	Software Engineering-I	Core	4	1	CS1133	Nil	4	Click here to enter text.
26.	CS3073	Numerical Computing	CS Supporting	4	1	MTCS1013	Nil	4	Click here to enter text.
27.	CS3413	Operating Systems	Core	4	1	CS2143	CS3411	4	Click here to enter text.
28.	CS3411	Operating Systems Lab	Core	5	1	CS2141	CS3413	4	Click here to enter text.
29.	CS3773	Computer Networks	Core	4	1	CS1133	CS3771	4	Click here to enter text.
30.	CS3771	Computer Networks Lab	Core	5	1	Nil	CS3773	4	Click here to enter text.
31.	CS2523	Computer Organization and Assembly Language	Core	1	1	CS2143	CS2521	5	Click here to enter text.
32.	CS2521	Computer Organization and Assembly Language Lab	Core	2	0	CS2141	CS2523	5	Click here to enter text.
33.	CS3163	Design and Analysis of Algorithms	Core	1	1	CS1143	Nil	5	Click here to enter text.
34.	CS3613	Theory of Automata & Formal Lang.	Core	1	1	CS2053	Nil	5	Click here to enter text.
35.	CS3713	Introduction to Information Security and forensics	Core	1	1	CS2513	Nil	5	Click here to enter text.

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36.	CS3283	Graph Algorithms	CS Supporting	1	1	CS2053	Nil	5	Click here to enter text.
37.	CS3433	Parallel and Distributed Computing	Core	2	1	CS1143	Nil	6	Click here to enter text.
38.	CS4813	Artificial Intelligence	Core	2	1	CS2143	Nil	6	Click here to enter text.
39.	CS4811	Artificial Intelligence Lab	Core	3	1	CS2141	Nil	6	Click here to enter text.
40.	CS3833	Theory of Programming Languages	CS Supporting	2	1	CS1143	Nil	6	Click here to enter text.
41.	CS3193	Web Application Development	Elective	2	1	CS1133	Nil	6	Click here to enter text.
42.	CS4883	Introduction to Data Science	Elective	1	1	CS2313	Nil	6	Click here to enter text.
43.	CS4743	Internet of Things	Elective	1	0	CS3773	Nil	6	Click here to enter text.
44.	ACCS3003	Financial Accounting	Uni. Elective	2	1	Nil	Nil	6	Click here to enter text.
45.	CS4623	Compiler Construction	Core	1	1	CS3613	Nil	7	Click here to enter text.
46.	CS4912	Design Project (Part-I)	Core	1	0	CS2223	Nil	7	Click here to enter text.
47.	CS4193	Mobile Application Development	Elective	1	1	CS1133	Nil	7	Click here to enter text.
48.	HMCS2013	Professional Ethics Legal Issues	G. Edu	1	1	Nil	Nil	7	Click here to enter text.
49.	MGCS4003	Entrepreneurship and Innovation	Elective	1	1	Nil	Nil	7	Click here to enter text.
50.	CS4573	Blockchain Technology	Elective	1	1	CS1133	Nil	7	Click here to enter text.
51.	CS4773	Penetration Testing	Elective	2	1	CS1133	Nil	8	Click here to enter text.
52.	CS4924	Design Project (Part-II)	Core	1	0	CS4912	Nil	8	Click here to enter text.
53.	HMCS1033	Personal Management and Grooming	G. Edu	2	1	Nil	Nil	8	Click here to enter text.