

DEPARTMENT OF INFORMATION TECHNOLOGY

NATIONAL INSTITUTE OF TECHNOLOGY SRINAGAR



SCHEME OF COURSES

FOR

B. TECH. (HONS) INFORMATION TECHNOLOGY

2023 BATCH

DEPARTMENT OF INFORMATION TECHNOLOGY
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Semester - I

S.No.	Course	Code	L T P	Credits
1	Basic English and Communication skills	HST 101	2 1 0	3
2	Mathematics I	MAT 101	2 1 0	3
3	Elements of Mechanical Engineering	MET 101	2 1 0	3
4	Engineering Physics	PHT 101	2 1 0	3
5	Environmental studies	CHT 102	2 1 0	3
6	Engineering Mechanics	CVT 102	2 1 0	3
7	English Language Lab	HSL 101	0 0 2	1
8	Engineering and Applied Physics Lab	PHL 101	0 0 2	1
9	Workshop Practice	WSL 101	0 0 4	2
	Total credits			22

Semester - II

S.No.	Course	Code	L T P	Credits
1	Advanced English & Comm. Skills	HST 102	2 1 0	3
2	Mathematics II	MAT 102	2 1 0	3
3	Basic Electrical Engineering	EET 101	2 1 0	3
4	Computer Programming	ITT 101	2 1 0	3
5	Engineering Chemistry	CHT 101	2 1 0	3
6	Engineering Drawing	CVT 101	1 0 4	3
7	Chemistry Lab	CHL 101	0 0 2	1
8	Computer Programming Lab	ITL 101	0 0 2	1
9	Fundamental Knowledge of Accreditation	NBA 101	2 0 0	0
	Total credits			20

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Semester - III

S.No.	Course	Code	L T P	Credits
1	Data Structures	ITT 201	2 1 0	3
2	Control System	EET254	3 0 0	3
3	Logic and Graph Theory	ITT 202	2 1 0	3
4	Object Oriented Programming	ITT 203	2 1 0	3
5	Electronic Devices & Circuits	ECT 206	2 1 0	3
6	Discrete Mathematics	MAT 208	3 0 0	3
7	Data Structures Lab	ITL 201	0 0 2	1
8	Object-Oriented Programming Lab	ITL 203	0 0 2	1
9	Electronic Devices & Circuits Lab	ECL 207	0 0 2	1
10	Web Programming	ITT 204	1 0 2	2
	Total credits			23

Semester - IV

S.No.	Course	Code	L T P	Credits
1	Operating Systems	ITT 251	2 1 0	3
2	Software Engineering	ITT 252	3 0 0	3
3	Digital Electronics & Logic Design	ECT 251	2 1 0	3
4	Database Management System	ITT 253	2 1 0	3
5	Introduction to Probability and Statistics	MAT 218	3 0 0	3
6	Signal and Systems	ECT 257	2 1 0	3
7	Digital Electronics & Logic Design Lab	ECL 255	0 0 2	1
8	Operating System Lab	ITL 251	0 0 2	1
9	Database Management System Lab	ITL 253	0 0 2	1
	Total credits			21

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Semester - V

S.No.	Course	Code	L T P	Credits
1	Design & Analysis of Algorithms	ITT 301	2 1 0	3
2	Artificial Intelligence	ITT 302	3 0 0	3
3	Computer Organization & Architecture	ITT 303	2 1 0	3
4	Theory of Computation	ITT 304	2 1 0	3
5	Elective I	ITx0xx	Refer to Elective List	3
6	Institute Open Elective I	OPEN	3 0 0	3
7	Design & Analysis of Algorithms Lab	ITL 301	0 0 2	1
8	Artificial Intelligence Lab	ITL 302	0 0 2	1
9	Honors Elective I	ITx0xx	Refer to Elective List	3
	Total credits			23

Semester - VI

S.No.	Course	Code	L T P	Credits
1	Computer Networks	ITT 351	2 1 0	3
2	Machine Learning	ITT 352	2 1 0	3
3	Big Data	ITT 353	2 1 0	3
4	Elective II	ITx0xx	Refer to Elective List	3
5	Institute Open Elective II	OPEN	3 0 0	3
6	Computer Networks Lab	ITL 351	0 0 2	1
7	Machine Learning Lab	ITL 352	0 0 2	1
8	Seminar	ITS 354	0 0 2	1
9	Industrial Training and Internship	ITI 355	0 0 2	1
10	Elective III	ITL0xx	0 0 2	1
11	Honors Elective II	ITx0xx	Refer to Elective List	3
	Total credits			23

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Semester - VII

S.No.	Course	Code	L	T	P	Credits
1	Image Processing	ITT 401	2	1	0	3
2	Entrepreneurship Development	HST 006	3	0	0	3
3	Elective IV	ITx0xx	Refer to Elective List			3
4	Elective V	ITx0xx	Refer to Elective List			3
5	Elective VI	ITx0xx	Refer to Elective List			3
6	Image Processing Lab	ITL 401	0	0	2	1
7	Elective VII	ITL0xx	0	0	2	1
8	Pre-project	ITP 402	0	0	4	2
9	Honors Elective III	ITx0xx	Refer to Elective List			3
10	Honors Elective IV	ITx0xx	Refer to Elective List			2
Total credits						24

Semester - VIII

S. No.	Course	Code	L	T	P	Credits
1	Project	ITP 451	0	0	12	6
2	Elective VIII	ITx0xx	Refer to Elective List			3
3	Elective IX	ITx0xx	Refer to Elective List			3
4	Engineering Economics & Management	HST 004	3	0	0	3
5	Honors Elective V	ITx0xx				3
6	Honors Elective VI	ITx0xx				3
7	Honors Elective VII	ITx0xx				3
Total credits						24

List of Electives

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List of Electives

S. No.	Subject	Code	L	T	P	Credits
1.	Management Information Systems	ITT001	2	0	0	2
2.	Software Project Management	ITT002	2	0	0	2
3.	Realtime Operating System	ITT003	3	0	0	3
4.	Embedded Systems	ITT004	3	0	0	3
5.	Simulation using Matlab and Python	ITL005	1	0	2	2
6.	Geographic Information System	ITT006	3	0	0	3
7.	E-Health	ITT007	3	0	0	3
8.	System Design	ITT008	3	0	0	3
9.	Network Management & Administration	ITT009	3	0	0	3
10.	Parallel Programming	ITT010	3	0	0	3
11.	Bioinformatics	ITT011	3	0	0	3
12.	Ad hoc and Wireless Sensor Networks	ITT012	3	0	0	3
13.	Blockchain	ITT013	3	0	0	3
14.	Foundations of Automatic Verification	ITT014	3	0	0	3
15.	Synthesis of Digital Systems	ITT015	3	0	0	3
16.	Cyber Security & Forensics	ITT016	3	0	0	3
17.	Natural Language Processing	ITT017	3	0	0	3
18.	Distributed Computing	ITT018	3	0	0	3
19.	Expert Systems	ITT019	3	0	0	3
20.	Natural Algorithms	ITT020	3	0	0	3
21.	Advanced Artificial Intelligence	ITT021	3	0	0	3
22.	Advanced Computer Graphics	ITT022	3	0	0	3
23.	High-Performance Computing	ITT023	3	0	0	3
24.	Advanced Database Management Systems	ITT024	3	0	0	3
25.	Introduction to Logic and Functional Programming	ITT025	2	1	0	3
26.	Biometrics and Network Security	ITT026	3	0	0	3
27.	Deep learning	ITT027	3	0	0	3
28.	Pervasive Computing	ITT028	3	0	0	3
29.	Advanced Algorithms	ITT029	3	0	0	3
30.	Advanced Image Processing	ITT030	3	0	0	3
31.	Virtualization and Cloud	ITT031	3	0	0	3
32.	Computer vision and Robotics	ITT032	3	0	0	3
33.	Green Computing	ITT033	2	0	0	2
34.	Advanced Computer Networks	ITT034	3	0	0	3
35.	Compiler Design	ITT035	3	0	0	3
36.	Data Communication	ITT036	3	0	0	3
37.	Computer Graphics	ITT037	3	0	0	3
38.	Cloud Computing	ITT038	3	0	0	3

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S. No.	Subject	Code	L	T	P	Credits
39.	Information Security	ITT039	3	0	0	3
40.	Internet of Things	ITT040	3	0	0	3
41.	Information Security Lab	ITL041	0	0	2	1
42.	Compiler Design Lab	ITL042	0	0	2	1
43.	Computer Graphics Lab	ITL043	0	0	2	1
44.	Python Programming	ITT044	2	0	2	3
45.	Fundamentals of Machine Learning	ITT045	2	1	0	3
46.	Web Development	ITT046	2	0	2	3
47.	Big Data Analytics	ITT047	2	1	0	3

Note: Under all electives, students can also opt for subjects offered by other sister departments