



(Applicable from the academic year 2023-24 and onwards)

B. Tech – I Year I Semester

S.No.	Category	Title	L/D	T	P	Credits
1	BS&H	Engineering Physics	3	0	0	3
2	BS&H	Linear Algebra & Calculus	3	0	0	3
3	Engineering Science	Basic Electrical & Electronics Engineering	3	0	0	3
4	Engineering Science	Engineering Graphics	1	0	4	3
5	Engineering Science	Introduction to Programming	3	0	0	3
6	Engineering Science	IT Workshop	0	0	2	1
7	BS&H	Engineering Physics Lab	0	0	2	1
8	Engineering Science	Electrical & Electronics Engineering Workshop	0	0	3	1.5
9	Engineering Science	Computer Programming Lab	0	0	3	1.5
10	BS&H	NSS/NCC/Scouts & Guides/Community Service	-	-	1	0.5
Total			13	00	15	20.5

B. Tech – I Year II Semester

S.No.	Category	Title	L	T	P	Credits
1	BS&H	Communicative English	2	0	0	2
2	BS&H	Engineering Chemistry	3	0	0	3
3	BS&H	Differential Equations & Vector Calculus	3	0	0	3
4	Engineering Science	Basic Civil & Mechanical Engineering	3	0	0	3
5	Professional Core	Data structures	3	0	0	3
6	BS&H	Communicative English Lab	0	0	2	1
7	BS&H	Engineering Chemistry Lab	0	0	2	1
8	Engineering Science	Engineering Workshop	0	0	3	1.5
9	Professional Core	Data structures Lab	0	0	3	1.5
10		Health and wellness, Yoga and Sports	-	-	1	0.5
Total			14	00	11	19.5





B.Tech. II Year I Semester

S.No.	Category	Title	L	T	P	Credits
1	BS&H	Discrete Mathematics & Graph Theory	3	0	0	3
2	BS&H	Universal Human Values– Understanding Harmony	2	1	0	3
3	Engineering Science	Digital Logic & Computer Organization	3	0	0	3
4	Professional Core	Software Engineering	3	0	0	3
5	Professional Core	Object Oriented Programming Through Java	3	0	0	3
6	Professional Core	CASE Tools Lab	0	0	3	1.5
7	Professional Core	Object Oriented Programming Through Java Lab	0	0	3	1.5
8	Skill Enhancement Course	Python Programming	0	1	2	2
9	Audit Course	Environmental Science	2	0	0	-
Total			16	2	8	20

B.Tech. II Year II Semester

S.No.	Category	Title	L	T	P	Credits
1	Management Course- I	Managerial Economics and Financial Analysis	2	0	0	2
2	Engineering Science/ Basic Science	Probability & Statistics	3	0	0	3
3	Professional Core	Operating Systems	3	0	0	3
4	Professional Core	Database Management Systems	3	0	0	3
5	Professional Core	Formal Languages and Automata Theory	2	1	0	3
6	Professional Core	Operating Systems Lab	0	0	3	1.5
7	Professional Core	Database Management Systems Lab	0	0	3	1.5
8	Skill Enhancement Course	Full Stack Development –I	0	1	2	2
9	BS&H	Design Thinking & Innovation	1	0	2	2
Total			14	2	10	21
Mandatory Community Service Project Internship of 08 weeks duration during summer vacation						



MC	Minor Course (Student may select from the specialized minors pool)	3	0	3	4.5
HC	Honors Course (Student may select from the honors pool)	3	0	0	3

B.Tech. – III Year I Semester

S.No	Category	Title	L	T	P	Credits
1	Professional Core	Data Warehousing and Data Mining	3	0	0	3
2	Professional Core	Compiler Design	3	0	0	3
3	Professional Core	Design and Analysis of Algorithms	3	0	0	3
4	Professional Elective-I	1. Object Oriented Analysis and Design 2. Software Testing Methodologies 3. Computer Architecture 4. Computer Graphics 5. 12 week MOOC Swayam/ NPTEL course recommended by the BoS	3	0	0	3
5	Open Elective-I		3	0	0	3
6	Professional Core	Data Mining Lab	0	0	3	1.5
7	Professional Core	Compiler DesignLab	0	0	3	1.5
8	Skill Enhancement course	Full Stack development-2	0	1	2	2
9	Engineering Science	User Interface Design using Flutter / SWAYAM Plus - Android Application Development (with Flutter)	0	0	2	1
10	Evaluation of Community Service Project		-	-	-	2
Total			15	1	10	23
MC	Minor Course (Student may select from the same specialized minors pool)		3	0	0	3
MC	Minor Course through SWAYAM/NPTEL (minimum 12 week, 3 credit course)		3	0	0	3
HC	Honors Course (Student may select from the same honors pool)		3	0	0	3
HC	Honors Course (Student may select from the same honors pool)		3	0	0	3



B.Tech. III Year II Semester

S.No.	Category	Title	L	T	P	Credits
1	Professional Core	Computer Networks	3	0	0	3
2	Professional Core	Artificial Intelligence	3	0	0	3
3	Professional Core	Cryptography & Network Security	3	0	0	3
4	Professional Elective-II	1. Cloud Computing 2. Cyber Security 3. DevOps 4. No SQL Databases 5. 12 week MOOC Swayam/NPTEL course recommended by the BoS	3	0	0	3
5	Professional Elective-III	1. Software Project Management 2. Human Computer Interaction 3. Big Data Analytics 4. Distributed System 5. 12 week MOOC Swayam/NPTEL course recommended by the BoS	3	0	0	3
6	Open Elective – II		3	0	0	3
7	Professional Core	AI Tools Lab	0	0	3	1.5
8	Professional Core	Computer Network Lab	0	0	3	1.5
9	Skill Enhancement course	Soft skills // SWAYAM Plus - 21st Century Employability Skills	0	1	2	2
10	Audit Course	Technical Paper Writing & IPR	2	0	0	-
Total			20	01	08	23
Mandatory Industry Internship of 08 weeks duration during summer vacation						
MC	Minor Course (Student may select from the same specialized minors pool)		3	0	3	4.5
HC	Honors Course (Student may select from the same honors pool)		3	0	0	3



B.Tech. IV Year I Semester

S.No.	Category	Title	L	T	P	Credits
1	Professional Core	Machine Learning	2	1	0	3
2	Management Course- II	Human Resources & Project Management	2	0	0	2
3	Professional Elective-IV	1. Software Architecture & Design Patterns 2. Blockchain Technology 3. Internet of Things 4. Quantum Computing 5. 12 week MOOC Swayam/NPTEL course recommended by the BoS	3	0	0	3
4	Professional Elective-V	1. Soft Computing 2. Digital Image Processing 3. Natural Language Processing 4. Mobile Adhoc Networks 5. 12 week MOOC Swayam/NPTEL course recommended by the BoS	3	0	0	3
5	Open Elective-III		3	0	0	3
6	Open Elective-IV		3	0	0	3
7	Skill Enhancement Course	Prompt Engineering/ SWAYAM Plus - Certificate program in Prompt Engineering and ChatGPT	0	1	2	2
8	Audit Course	Constitution of India	2	0	0	-
9	Internship	Evaluation of Industry Internship	-	-	-	2
Total			18	2	02	21
MC	Minor Course (Student may select from the same specialized minors pool)		3	0	0	3
HC	Honors Course (Student may select from the same honors pool)		3	0	0	3
HC	Honors Course (Student may select from the same honors pool)		3	0	0	3



B.Tech IV Year II Semester

S.No.	Category	Title	L	T	P	Credits
1	Internship & Project Work	Full semester Internship & Project Work	0	0	24	12

Note : Student need to do at least **ONE MOOC/NPTEL Course** (of 3 credits out of 160 credits) to meet the mandatory requirement (11th criteria, as per R23 Regulations); they are allowed to register one semester in advance

Open Elective I:

1. Data Structures
2. Database Management Systems
3. Computer Organization
4. Python Programming
5. Scripting Languages
6. Operating Systems

Open Elective II:

1. Web services
2. Computer Networks
3. Image Processing
4. UNIX & Shell Programming
5. Fundamentals of Cloud Computing
6. Fundamentals of Information Security

Open Elective III:

1. Big Data Analytics
2. Block Chain Technologies
3. Cyber Security
4. Devops
5. Quantum Computing
6. Mean Stack Technologies



HONOR DEGREE IN COMPUTER SCIENCE AND ENGINEERING

(I) Computer Networks

S.No	Subject Title	L	T	P	C
1	Data Communication	3	0	0	3
2	Internetworking with TCP/IP	3	0	0	3
3	Network Programming	3	0	0	3
4	Wireless Network Technologies	3	0	0	3
5	03 MOOCS courses @ 2credits each (8 weeks course) 02 MOOCS courses @ 3credits each (12 weeks course) (Any CSE/IT related Program Core subject from NPTEL/SWAYAM course other than the courses listed above needs to be taken)				6
Total					18

(II) Cyber Security

S.No	Subject Title	L	T	P	C
1	Cyber Security Essentials	3	0	0	3
2	Secure Coding	3	0	0	3
3	Vulnerability Assessment & Penetration Testing	3	0	0	3
4	Malware Analysis	3	0	0	3
5	03 MOOCS courses @ 2credits each (8 weeks course) 02 MOOCS courses @ 3credits each (12 weeks course) (Any CSE/IT related Program Core subject from NPTEL/ SWAYAM course other than the courses listed above needs to be taken)				6
Total					18

(III) Pattern Recognition

S.No	Subject Title	L	T	P	C
1	Mathematics for Image Processing	3	0	0	3
2	Biometrics	3	0	0	3
3	Speech Processing	3	0	0	3
4	Advanced Computer Vision	3	0	0	3
5	03 MOOCS courses @ 2credits each (8 weeks course) 02 MOOCS courses @ 3credits each (12 weeks course) (Any CSE/IT related Program Core subject from NPTEL/ SWAYAM course other than the courses listed above needs to be taken)				6
Total					18



(IV) Data Science

S.No	Subject Title	L	T	P	C
1	Mathematical Essential for Data Science	3	0	0	3
2	Introduction to Data Science	3	0	0	3
3	Data Analytics and Visualization	2	0	2	3
4	Python for Data Science	2	0	2	3
5	03 MOOCS courses @ 2credits each (8 weeks course) 02 MOOCS courses @ 3credits each (12 weeks course) (Any CSE/IT related Program Core subject from NPTEL/ SWAYAM course other than the courses listed above needs to be taken)				6
Total					18

**MINOR DEGREE IN COMPUTER SCIENCE AND ENGINEERING****(For non CSE/IT Students)****Minor Degree in Computer Science and Engineering**

S.No	Subject Title	L	T	P	C
1	Data Structures	2	0	2	3
2	Database Management Systems	2	0	2	3
3	Operating Systems	3	0	0	3
4	Computer Networks	3	0	0	3
5	03 MOOCS courses @ 2credits each (8 weeks course) 02 MOOCS courses @ 3credits each (12 weeks course) (Any CSE/IT related Program Core subject from NPTEL/ SWAYAM course other than the courses listed above needs to be taken)				6
Total					18

(I) Artificial Intelligence

S.No	Subject Title	L	T	P	C
1	Introduction to Artificial Intelligence	3	0	0	3
2	Mathematics for Machine Learning	3	0	0	3
3	Machine Learning	3	0	0	3
4	Deep Learning	3	0	0	3
5	03 MOOCS courses @ 2credits each (8 weeks course) 02 MOOCS courses @ 3credits each (12 weeks course) (Any CSE/IT related Program Core subject from NPTEL/ SWAYAM course other than the courses listed above needs to be taken)				6
Total					18

(II) Computer Security

S.No	Subject Title	L	T	P	C
1	Cyber Security	3	0	0	3
2	Cyber Crime Investigation and Digital Forensics	3	0	0	3
3	Cryptography and Applications	3	0	0	3
5	Blockchain Technology	3	0	0	3
6	03 MOOCS courses @ 2credits each (8 weeks course) 02 MOOCS courses @ 3credits each (12 weeks course) (Any CSE/IT related Program Core subject from NPTEL/SWAYAM course other than the courses listed above needs to be taken)				6
Total					18



(III) Programming and Web Development

S.No	Subject Title	L	T	P	C
1	Object Oriented Programming through Java	2	0	2	3
2	Basic Web Designing	2	0	2	3
3	Advanced Web Technologies	2	0	2	3
4	Mobile Application Development	2	0	2	3
5	03 MOOCS courses @ 2credits each (8 weeks course) 02 MOOCS courses @ 3credits each (12 weeks course) (Any CSE/IT related Program Core subject from NPTEL/SWAYAM course other than the courses listed above needs to be taken)				6
Total					18

(IV) Advanced Computing

S.No	Subject Title	L	T	P	C
1	Computer Organization and Architecture	3	0	0	3
2	Client Server Computing	3	0	0	3
4	Distributed Systems	3	0	0	3
5	Cloud Computing	3	0	0	3
6	03 MOOCS courses @ 2credits each (8 weeks course) 02 MOOCS courses @ 3credits each (12 weeks course) (Any CSE/IT related Program Core subject from NPTEL/SWAYAM course other than the courses listed above needs to be taken)				6
Total					18