



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY

An Autonomous Institute | Affiliated to Osmania University
Kokapet Village, Gandipet Mandal, Hyderabad, Telangana-500075, www.cbti.ac.in



Department of Computer Science and Engineering Scheme of Additional Minor Engineering Degree in Computer Engineering, AI/ML, Cyber Security, IoT

Date:17-12-2024

Academic Requirements: (Min 20 credits)

A) For Engineering (Mechanical, Civil, ECE, EEE, Bio-Tech and Chemical)

1. Students can choose courses which were not studied earlier in the previous semester. Further the courses should not be present in the curriculum of the forthcoming semesters.
2. This scheme is effective for the batches starting from 2024-25 Academic year

3. Specialization in CSE

- i. Computer Engineering
- ii. AI &ML
- iii. Cyber Security
- iv. Internet of Things
- ii. Core elective courses are common for all the specializations.

B) CORE ELECTIVE LIST (Any 3 Courses including mandatory course)- 9 to 12credits

SNO	CourseCode	Course Title	L:T:P	Credits	PreferredSemester
1	22CSC15N	Operating Systems(mandatory course)	3-0-0	3	4 or above
2	22CSC06	Discrete Structures	3-0-0	4	4 or above
3	22CSC03	Object Oriented Programming(OOPs)	2-1-0	3	2 or above
4	22CSC10	Computer Organization and Architecture	3-0-0	4	4 or above
5	22CSC11	Database Management Systems	2-0-0	3	3 or above
6	22CSC14N	Design and Analysis of Algorithms	3-0-0	3	5 or above
7	22ITC10	Computer Networks	3-0-0	3	5 or above
8	22CAC13	Artificial Intelligence & Machine Learning	3-0-0	4	5 or above
9	22CSC21	Software Engineering	3-0-0	3	5 or above

Core Elective NPTEL Equivalent courses during Jan-25, AY:24-25

SNO	Course Title	No of Weeks/ Credits	Start and End Date	Enrollment Last date	NPTEL Link
1	Discrete Mathematics (Discrete Structures)	12/3	20 Jan 2025 and 11 Apr 2025	27 Jan 2025	https://onlinecourses.nptel.ac.in/noc25_cs26/preview
2	Fundamentals of Object Oriented Programming	12/3	20 Jan 2025 and 11 Apr 2025	27 Jan 2025	https://onlinecourses.nptel.ac.in/noc25_cs34/preview
3	Data Base Management System	8/2	20 Jan 2025 and 14 Mar 2025	27 Jan 2025	https://onlinecourses.nptel.ac.in/noc25_cs18/preview
4	Design and analysis of algorithms	8/2	20 Jan 2025 and 14 Mar 2025	27 Jan 2025	https://onlinecourses.nptel.ac.in/noc25_cs23/preview
5	Computer Networks And Internet Protocol	12/3	20 Jan 2025 and 11 Apr 2025	27 Jan 2025	https://onlinecourses.nptel.ac.in/noc25_cs15/preview

COMPUTER ENGINEERING: (Any THREE Courses or TWO Courses and Project) – 8 to 11 Credits

SNO	Course Code	Course Title	L:T:P	Credits	Preferred Semester
1	22CSCXX	Programming in Java	3-0-0	3	3 or Above
2	22CSE06	Algorithmic Game Theory	3-0-2	3	5 Or Above
3	20CSE09	Machine Learning	3-0-0	3	4 Or Above
4	20CSE34	Cloud Computing	3-0-0	3	6 Or Above
5	20CSE21	Deep learning	3-0-0	3	6 Or Above
6	20CSE11	Natural Language Processing	3-0-0	3	6 Or Above
7	22CSCXX	Special Topics Computer Science	2-0-0	2	7 Or 8

Above list is tentative and can be suitably updated based on needs of the Industry and availability of relevant course

NPTEL Equivalent courses during Jan-25, AY:24-25

SNO	Course Title	No of Weeks/Credits	Start and end dates	Enrollment last date	Nptel link
1.	Programmi ng in Java	12/3	20 Jan 2025 and 11 Apr 2025	27 Jan 2025	https://onlinecourses.nptel.ac.in/noc25_cs57/preview

2	Introduction to Machine Learning	12/3	20 Jan 2025 and 11 Apr 2025	27 Jan 2025	https://onlinecourses.nptel.ac.in/noc25_cs46/preview
3	Cloud Computing	12/3	20 Jan 2025 and 11 Apr 2025	27 Jan 2025	https://onlinecourses.nptel.ac.in/noc25_cs11/preview
4	Deep Learning	12/3	20 Jan 2025 and 11 Apr 2025	27 Jan 2025	https://onlinecourses.nptel.ac.in/noc25_ee16/preview
5	Natural Language Processing	12/3	20 Jan 2025 and 11 Apr 2025	27 Jan 2025	https://onlinecourses.nptel.ac.in/noc25_cs51/preview

Above list is tentative and can be suitably updated based on needs of the Industry and availability of relevant course,

AI & ML (Any THREE Courses or TWO Courses and Project) – 8 to 11 Credits

SNO	Course Code	Course Title	L:T:P	Credits	Preferred Semester
1	20CSO14	Fundamentals Of Computer Vision	2-0-0	3	3 or above
2	20CSE26	Human Computer Interaction	2-0-0	3	6 or above
3	20CSE11	Natural Language Processing	2-0-1	3	5 or above
4	20CSE09	Machine Learning	3-0-2	4	6 or above
5	20CSE21	Deep Learning	3-0-2	4	6 or above
6	20CSC34	Project	0-1-4	4	7 or 8
7	20CSCXX	Special Topics on AI	2-0-0	2	7 or 8
8	20CSCXX	Special modules in AI	1-0-0	1	7 or 8

Above list is tentative and can be suitably updated based on needs of the Industry and availability of relevant course.

NPTEL Equivalent courses during Jan-25, AY:24-25

SNO	Course Title	No of Weeks/Credits	Start and end dates	Enrollment last date	Nptel link
1	Introduction to Machine Learning	12/3	20 Jan 2025 and 11 Apr 2025	27 Jan 2025	https://onlinecourses.nptel.ac.in/noc25_cs46/preview
2	Natural Language Processing	12/3	20 Jan 2025 and 11 Apr 2025	27 Jan 2025	https://onlinecourses.nptel.ac.in/noc25_cs51/preview
3	Deep Learning	12/3	20 Jan 2025 and 11 Apr 2025	27 Jan 2025	https://onlinecourses.nptel.ac.in/noc25_ee16/preview
4	Human Computer Interaction	12/3	20 Jan 2025 and 11 Apr 2025	27 Jan 2025	https://onlinecourses.nptel.ac.in/noc25_cs37/preview

CYBER SECURITY (Any THREE Courses or TWO Courses and Project) – 8 to 11 Credits

SNO	Course Code	Course Title	L:T:P	Credits	PreferredSemester
1	20CSE17	Internet of Things	3-0-0	3	2 or above
2	22CIE55	Cyber Security	3-0-0	3	4 or above
3	20CSC27	Applied Cryptography	2-0-1	3	6 or above
4	22CSE01	Computer Graphics and Multimedia	3-0-0	3	6 or above
5	20CSCxx	Special Topics in Cyber Systems	2-0-0	2	7 or 8
6	20CSCX X	Special modules in Systems	1-0-0	1	7 or 8

Above list is tentative and can be suitably updated based on needs of the Industry and availability of relevantcourse

NPTEL Equivalent courses during Jan-25, AY:24-25

SNO	Course Title	No of Weeks/Credits	Startand end dates	Enrollment last date	Nptel link
1	Introduction To Internet Of Things	12/3	20 Jan 2025 and 11 Apr 2025	27 Jan 2025	https://onlinecourses.nptel.ac.in/noc25_cs44/preview
2	Cryptography and Network Security	12/3	20 Jan 2025 and 11 Apr 2025	27 Jan 2025	https://onlinecourses.nptel.ac.in/noc25_cs16/preview
3	Information Security - 5 - Secure Systems Engineering	8/2	20 Jan 2025 and 14 Mar 2025	27 Jan 2025	https://onlinecourses.nptel.ac.in/noc25_cs39/preview
4	Privacy and Security in Online Social Media	12/3	20 Jan 2025 and 11 Apr 2025	27 Jan 2025	https://onlinecourses.nptel.ac.in/noc25_cs79/preview

INTERNET OF THINGS (Any THREE Courses OR TWO Courses and Project) 8 to 11 Credits

SNO	Course Code	Course Title	L:T:P	Credits	PreferredSemester
1	20CSC05	IT 5.0	3-0-0	3	2 or above
2	20CSE17	Internet of Things	3-0-1	3	5 or above
3	20CSCXX	Special Topics in IOT	3-0-1	3	5 or above
4	20CSCXX	Special modules in Systems	1-0-0	1	7 or 8

#Above list is tentative and can be suitably updated based on needs of the industry and availability of relevantcourse

NPTEL Equivalent courses during Jan-25, AY:24-25

SNO	Course Title	No of Weeks/Credits	Start and end dates	Enrollment last date	Nptel link
1	Introduction To Industry 4.0 And Industrial InternetOf Things	12/3	20 Jan 2025 and 11 Apr 2025	27 Jan 2025	https://onlinecourses.nptel.ac.in/noc25_cs43/preview
2	Introduction To Internet Of Things	12/3	20 Jan 2025 and 11 Apr 2025	27 Jan 2025	https://onlinecourses.nptel.ac.in/noc25_cs44/preview
3	Foundation of Cloud IoT Edge ML	8/2	22-07-2024 to 13-09-2024	29-07-2024	https://onlinecourses.nptel.ac.in/noc25_cs75/preview
3	Data Science for Engineers	8/2	20 Jan 2025 and 14 Mar 2025	27 Jan 2025	https://onlinecourses.nptel.ac.in/noc25_cs20/preview

AMD Coordinators

1. S. Durga Devi *S. Durga Devi 28/12/24*
2. Isha Padhy *Isha Padhy 28/12/24*

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