



**CHAITANYA BHARATHI
INSTITUTE OF TECHNOLOGY**

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



COMMITTED TO
RESEARCH,
INNOVATION AND
EDUCATION

47
years

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

Date:11-07-2026

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. Specializations 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	Course Title	Credits
1	Operating Systems	3/4
2	Discrete Structures	4
3	Object Oriented Programming(OOPs)	3/4
4	Computer Organization and Architecture	4
5	Database Management Systems	3
6	Design and Analysis of Algorithms	3/4
7	Computer Networks	3
8	Artificial Intelligence & Machine Learning	4
9	Software Engineering	3

Core Elective NPTEL Equivalent courses during July-26, AY:26-27

SNo	Course Title	No of Weeks	NPTEL Link
1	Introduction to operating Systems	8	https://onlinecourses.nptel.ac.in/e-learning/preview/noc26_cs123
2	Discrete Mathematics- IITB	12	https://onlinecourses.nptel.ac.in/e-learning/preview/noc26_cs125 https://onlinecourses.nptel.ac.in/e-learning/preview/noc26_cs137
3	Programming in Java	12	https://onlinecourses.nptel.ac.in/e-learning/preview/noc26_cs153
4	The Joy of Computing using Python	12	https://onlinecourses.nptel.ac.in/e-learning/preview/noc26_cs136
5	Computer Architecture and Organization	12	https://onlinecourses.nptel.ac.in/e-learning/preview/noc26_cs166
6	Data Base Management System	8	https://onlinecourses.nptel.ac.in/e-learning/preview/noc26_cs117
7	Design and Analysis of Algorithms	8	https://onlinecourses.nptel.ac.in/e-learning/preview/noc26_cs110
8	Software Engineering	12	https://onlinecourses.nptel.ac.in/e-learning/preview/noc26_cs151
9	Artificial Intelligence: Search Methods for Problem Solving	12	https://onlinecourses.nptel.ac.in/e-learning/preview/noc26_cs132
10	Introduction to Machine Learning	12	https://onlinecourses.nptel.ac.in/e-learning/preview/noc26_cs119
11	Computer Networks	12	https://onlinecourses.nptel.ac.in/e-learning/preview/noc26_cs99

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

SNO	Course Title	Credits
1	Programming in Java	3
2	Algorithmic Game Theory	3
3	Machine Learning	3
4	Cloud Computing	3
5	Deep learning	3
6	Natural LanguageProcessing	3
7	Quantum computing	1 to 3
8	Human computer interface	3

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

NPTEL Equivalent courses during July-26, AY:26-27

SNO	Course Title	No of Weeks	Nptel link
1.	Programming in Java	12	https://onlinecourses.nptel.ac.in/e-learning/preview/noc26_cs153
2	Introduction to Machine Learning	12	https://onlinecourses.nptel.ac.in/e-learning/preview/noc26_cs119
3	Cloud computing	12	https://onlinecourses.nptel.ac.in/e-learning/preview/noc26_cs150
	Natural Language Processing	12	https://onlinecourses.nptel.ac.in/e-learning/preview/noc26_cs180
5	Deep Learning for Natural Language Processing	12	https://onlinecourses.nptel.ac.in/e-learning/preview/noc26_cs150
4	Linear Algebra for Machine Learning and Quantum Computing	4	https://onlinecourses.nptel.ac.in/e-learning/preview/noc26_ma140
5	Programming with Generative AI	8	https://onlinecourses.nptel.ac.in/e-learning/preview/noc26_cs188
6	Algorithmic Game Theory	12	https://onlinecourses.nptel.ac.in/e-learning/preview/noc26_cs164
7	Design & Implementation of Human-Computer Interfaces	12	https://onlinecourses.nptel.ac.in/e-learning/preview/noc26_cs177

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 Title	Credits
1	Fundamentals Of Computer Vision	3
2	Natural LanguageProcessing	3
3	Data Science	3
4	Machine Learning	4
5	Deep Learning	4
6	Special Topics onAI	2

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

NPTEL Equivalent courses during July-26, AY:26-27

SNO	Course Title	No of Weeks	Nptel link
1	Artificial Intelligence: Search Methods for Problem Solving	12	https://onlinecourses.nptel.ac.in/e-learning/preview/noc26_cs132
2	Computer Vision	12	https://onlinecourses.nptel.ac.in/e-learning/preview/noc26_cs158
3	Data Science for Engineers	8	https://onlinecourses.nptel.ac.in/e-learning/preview/noc26_cs112
4	Introduction to Machine Learning	12	https://onlinecourses.nptel.ac.in/e-learning/preview/noc26_cs119
5	Deep Learning - IIT Ropar	12	https://onlinecourses.nptel.ac.in/e-learning/preview/noc26_cs138
6	Mobile Virtual Reality and Artificial Intelligence(CE/AI/ML,IO T)	4	https://onlinecourses.nptel.ac.in/e-learning/preview/noc26_cs186
7	Reinforcement Learning	12	https://onlinecourses.nptel.ac.in/e-learning/preview/noc26_cs134
8	Natural Language Processing	12	https://onlinecourses.nptel.ac.in/e-learning/preview/noc26_cs180
9	Programming with Generative AI	8	https://onlinecourses.nptel.ac.in/e-learning/preview/noc26_cs188

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

SNO	Course Title	Credits
1	Internet of Things	3
2	Cyber Security	3
3	Applied Cryptography	3
4	Computer Graphics and Multimedia	3
5	Special Topics in Cyber Systems	2
6	Special modules in Systems	1

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

NPTEL Equivalent courses during July-26, AY:26-27

SNO	Course Title	No of Weeks	Nptel link
1	Cyber Security and Privacy	12	https://onlinecourses.nptel.ac.in/e-learning/preview/noc26_cs144
2	Theory and Practice of Modern Cryptography	12	https://onlinecourses.nptel.ac.in/e-learning/preview/noc26_cs101
3	Privacy Enabling Techniques (PETS)	12	https://onlinecourses.nptel.ac.in/e-learning/preview/noc26_cs100
4	Ethical hacking	12	https://onlinecourses.nptel.ac.in/e-learning/preview/noc26_cs157
5	Privacy and Security in Online Social Media	12	https://onlinecourses.nptel.ac.in/e-learning/preview/noc26_cs141
6	Secure Computation: Part II	12	https://onlinecourses.nptel.ac.in/e-learning/preview/noc26_cs126
7	Practical Cyber Security for Cyber Security Practitioners	12	https://onlinecourses.nptel.ac.in/noc25_cs120/preview

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

SNO	Course Title	Credits
1	IT 5.0	3
2	Internet of Things	3
3	Special Topics in IOT	3
4	Special modules in Systems	1

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

NPTEL Equivalent courses during July-26, AY:26-27

SNO	CourseTitle	No of Weeks	Nptel link
1	Introduction To Internet Of Things	12	https://onlinecourses.nptel.ac.in/e-learning/preview/noc26_cs161
2	Introduction to Industry 4.0 and Industrial Internet of Things	12	https://onlinecourses.nptel.ac.in/e-learning/preview/noc26_cs160
2	Cloud computing	12	https://onlinecourses.nptel.ac.in/e-learning/preview/noc26_cs150
3	Mobile Virtual Reality and Artificial Intelligence(CE/AI/ML,IOT)	4	https://onlinecourses.nptel.ac.in/noc25_cs80/preview
4	Data Science for Engineers	8	https://onlinecourses.nptel.ac.in/e-learning/preview/noc26_cs65

Note: Students are instructed to have their NPTEL certificates verified and signed by their respective Parent Department Coordinator. Only certificates that are duly verified and signed by the coordinator will be considered valid for further processing in the Department of Computer Science and Engineering (CSE).

AMD Coordinators

1. S. Durga Devi

2. Isha Padhy


Head, Dept of CSE

Professor and Head Department
Department of Computer Science & Engineering
Chaitanya Bharathi Institute of Technology (A)
Wandipet, Hyderabad-500 075.(T.S.)