

B.Tech 1st Year — Curriculum Structure (AIML / AIDS / DS / SC / IOT / RAI)

B.Tech (AIML / AIDS / DS / SC / IOT / RAI) — 1st Semester

Physics Group

B.Tech - 1st Semester (Physics Group)			
Sr. No.	Course Code	Course Name	Type
1	25C1PHU-101	Engineering Physics	Basic Sciences
2	25C1PHU-111	Engineering Physics Lab	Basic Sciences
3	26C1EMU-101	Engineering Mathematics-I	Basic Sciences
4	25C1ECU-101	Basic Electrical and Electronics Engineering	Professional Core Course
5	25C1ECU-111	Basic Electrical and Electronics Engineering Lab	Professional Core Course
6	25C1CSU-101	Programming for Problem Solving using C	Professional Core Course
7	25C1CSU-111	Programming for Problem Solving using C Lab	Professional Core Course
8	25C1MEU-111	Engineering Graphics & Design	Professional Core Course
9	25C1MEU-112	Engineering Graphics & Design	Professional Core Course
10	26C1ESU-101	Environmental Sciences and Sustainability	NCC
11	26C1ICU-101	Indian Constitution	NCC

Chemistry Group**B.Tech - 1st Semester (Chemistry Group)**

Sr. No.	Course Code	Course Name	Type
1	26C1CHU-101	Engineering Chemistry	Basic Sciences
2	26C1CHU-111	Engineering Chemistry Lab	Basic Sciences
3	26C1EMU-101	Engineering Mathematics-I	Basic Sciences
4	25C1CSU-102	Programming for Problem Solving using Python	Professional Core Course
5	25C1CSU-112	Programming for Problem Solving using Python Lab	Professional Core Course
6	25C1MEU-101	Elements of Mechanical Engineering	Professional Core Course
7	25C1EPU-101	English & Professional Communication	Humanities and Social Sciences
8	25C1EPU-111	English & Professional Communication Lab	Humanities and Social Sciences
9	25C1MEU-111	Workshop/Manufacturing Practices Lab	Professional Core Course
10	26C1DTU-101	Design Thinking & AI Elements	Value Added

B.Tech (AIML / AIDS / DS / SC / IOT / RAI) — 2nd Semester**Physics Group****B.Tech - 2nd Semester (Physics Group)**

Sr. No.	Course Code	Course Name	Type
1	25C1PHU-101	Engineering Physics	Basic Sciences
2	25C1PHU-111	Engineering Physics Lab	Basic Sciences
3	26C1EMU-201	Engineering Mathematics-II	Basic Sciences
4	25C1ECU-101	Basic Electrical and Electronics Engineering	Professional Core Course
5	25C1ECU-111	Basic Electrical and Electronics Engineering Lab	Professional Core Course
6	25C1CSU-101	Programming for Problem Solving using C	Professional Core Course
7	25C1CSU-111	Programming for Problem Solving using C Lab	Professional Core Course
8	25C1MEU-111	Engineering Graphics & Design	Professional Core Course
9	25C1MEU-112	Engineering Graphics & Design	Professional Core Course
10	26C1ESU-101	Environmental Sciences and Sustainability	NCC
11	26C1ICU-101	Indian Constitution	NCC

Chemistry Group

B.Tech - 2nd Semester (Chemistry Group)			
Sr. No.	Course Code	Course Name	Type
1	26C1CHU-101	Engineering Chemistry	Basic Sciences
2	26C1CHU-111	Engineering Chemistry Lab	Basic Sciences
3	26C1EMU-201	Engineering Mathematics-II	Basic Sciences
4	25C1CSU-102	Programming for Problem Solving using Python	Professional Core Course
5	25C1CSU-112	Programming for Problem Solving using Python Lab	Professional Core Course
6	25C1MEU-101	Elements of Mechanical Engineering	Professional Core Course
7	25C1EPU-101	English & Professional Communication	Humanities and Social Sciences
8	25C1EPU-111	English & Professional Communication Lab	Humanities and Social Sciences
9	25C1MEU-111	Workshop/Manufacturing Practices Lab	Professional Core Course
10	26C1DTU-101	Design Thinking & AI Elements	Value Added

B.Tech 2nd Year — Curriculum Structure (AIML / AIDS / DS / SC / IOT / RAI)

B.Tech - 3rd Semester			
Sr. No.	Course Code	Course Name	Type
1	25C1CSU-301	Mathematics – III (Probability and Statistics)	Basic Sciences
2	25C1CSU-302	Object Oriented Programming using C++	Professional Core Course
3	25C1CSU-311	Object Oriented Programming using C++ Lab	Professional Core Course
4	25C1CSU-303	Digital Electronics	Engineering Sciences
5	25C1CSU-312	Digital Electronics Lab	Engineering Sciences
6	25C1CSU-304	Data Structures and Algorithms	Professional Core Course
7	25C1CSU-313	Data Structures and Algorithms Lab	Professional Core Course
8	25C1XXU-XXX	Open Elective – I (Swayam / NPTEL/ MOOCs/Any other Platform/Department Elective pool)	Open Elective
9	25C1SEU-301	Career and Placement Planning (CPP) -1	Skill Enhancement
10	25C1CSU-314	Future Skills Lab	Skill Enhancement
11	25C1NCU-301	Constitution of India	NCC
12	25C1CSU-315	Summer Internship – I	Training

B.Tech – 4th Semester			
Sr. No.	Course Code	Course Name	Type
1	25C1CSU-401	Discrete Mathematics	Basic Sciences
2	25C1CSU-402	Operating Systems	Professional Core Course
3	25C1CSU-411	Operating Systems Lab	Professional Core Course
4	25C1CSU-403	Computer Organization and Architecture	Engineering Sciences
5	25C1CSU-412	Computer Organization and Architecture Lab	Engineering Sciences
6	25C1CSU-404	Design and Analysis of Algorithms	Professional Core Course
7	25C1CSU-413	Design and Analysis of Algorithms Lab	Professional Core Course
8	25C1HSU-401	Universal Human Values	Humanities and Social Sciences
9	25C1CSU-405	Core Elective – I (Swayam / NPTEL/ MOOCs/Any other Platform/Department Elective Pool)	Professional Elective
10	25C1SEU-401	Career and Placement Planning (CPP) - 2	Skill Enhancement

B.Tech Cyber Security — 3rd Year Curriculum Structure

B.Tech Cyber Security - 5th Semester			
Sr. No.	Course Code	Course Name	Type
1	BTES 505-20	Mathematics Foundations for Cryptography	Engineering Science
2	BTCS 501-18	Database Management Systems	Professional Core Courses
3	BTCS 502-18	Formal Language & Automata Theory	Professional Core Courses
4	BTCS 602-18	Artificial Intelligence	Professional Core Courses
5	BTCS 504-18	Computer Networks	Professional Core Courses
6	BTITCS XXX-18	Elective-I	Professional Elective
7	MC	Constitution of India / Essence of Indian Traditional Knowledge	Mandatory Courses
8	BTCS 505-18	Database Management Systems Lab	Professional Core Courses
9	BTCS 605-20	Artificial Intelligence Lab	Professional Core Courses
10	BTCS 507-18	Computer Networks Lab	Professional Core Courses
11	BTCS XXX-18	Elective-I Lab	Professional Elective
12	—	Industrial Training	Professional Training

B.Tech Cyber Security - 6th Semester			
Sr. No.	Course Code	Course Name	Type
1	BTCS 701-18	Network Security & Cryptography	Professional Core Courses
2	BTITCS601-20	Digital Forensics	Professional Core Courses
3	BT* UUU-18	Elective-II	Professional Elective Courses
4	BT* YYY-18	Elective-III	Professional Elective Courses
5	BTOE ***	Open Elective-I	Open Elective Courses
6	BTCS 603-18	Project-1	Project
7	BTITCS602-20	Network Security & Cryptography Lab	Professional Core Courses
8	BTITCS603-20	Digital Forensics Lab	Professional Core Courses

B.Tech Cyber Security - 6th Semester			
Sr. No.	Course Code	Course Name	Type
9	BTCS UUU-18	Elective-II Lab	Professional Elective Courses
10	BTCS YYY-18	Elective-III Lab	Professional Elective Courses

List of Electives

Elective I	
Course Code	Course Name
BTITCS503-20	Web Technologies
BTITCS504-20	Web Technologies Lab
BTAIML501-20	Programming in Python
BTAIML503-20	Programming in Python Lab
BTITCS603-20	Cyber Law & IPR
BTITCS604-20	Cyber Law & IPR Lab

Elective II	
Course Code	Course Name
BTITCS501-20	Internet of Things
BTITCS502-20	Internet of Things Lab
BTITCS703-20	Ethical Hacking
BTITCS704-20	Ethical Hacking Lab
BTITCS707-20	Cyber Attacks
BTITCS708-20	Cyber Attacks Lab

Elective III	
Course Code	Course Name
BTCS618-18	Machine Learning
BTCS619-18	Machine Learning Lab
BTITCS605-20	Intrusion Detection System (IDS)
BTITCS606-20	Intrusion Detection System (IDS) Lab
BTITCS705-20	Vulnerability Analysis and Penetration Testing
BTITCS706-20	Vulnerability Analysis and Penetration Testing Lab

B.Tech Cyber Security — 4th Year Curriculum Structure

B.Tech Cyber Security - 7th/8th Semester			
Sr. No.	Course Code	Course Name	Type
1	BTCS 601-18	Compiler Design	Professional Core Courses
2	BTITCS701-20	Blockchain & Cryptocurrency	Professional Core Courses
3	BTOE ***	Open Elective-II	Open Elective Courses
4	BT* ZZZ-18	Elective-IV	Professional Elective
5	BT* TTT-18	Elective-V	Professional Elective Courses
6	BTCS 604-18	Compiler Design Lab	Professional Core Courses
7	BTITCS701-20	Blockchain & Cryptocurrency Lab	Professional Core Courses
8	BTCS 703-18	Project-II	Project
9	BT* ZZZ-18	Elective-IV Lab	Professional Elective Courses
10	BT* TTT-18	Elective-V Lab	Professional Elective Courses

B.Tech Cyber Security - 7th/8th Semester (Training)		
Sr. No.	Course Code	Course Name
1	BTCS 801-20	Semester Training

List of Electives

Elective IV	
Course Code	Course Name
BTITCS709-20	Applied Cryptography
BTITCS710-20	Applied Cryptography Lab
BTITCS608-20	IoT Security
BTITCS609-20	IoT Security Lab
BTITCS701-20	Distributed Computing
BTITCS702-20	Distributed Computing Lab

Elective V	
Course Code	Course Name
BTAI ML709-20	Applied Intelligence

Elective V	
Course Code	Course Name
BTAIML710-20	Applied Intelligence Lab
BTAIML603-20	Neural Networks
BTAIML604-20	Neural Networks Lab
BTIT703-20	Attacks in IoT Networks
BTIT704-20	Attacks in IoT Networks Lab

