

Bachelor of Technology in Robotics and Artificial Intelligence

- Regular & Lateral

2026

SEMESTER I		
S No	Course Code	Course Title
1	26BTPH11C01	Applied Physics
2	26BTPH11C02	Applied Physics Lab
3	26BTAL11C03	Programming Concepts
4	26BTAL11C04	Programming Concepts Lab
5	26BTAL11C05	Engineering Mathematics-I
6	26BTAL11C06	Workshop Practices
7	26DOAS0VAC01	Environmental Studies
8	26ENGL0AEC1	Communicative English- I
9	26ETPM0VAC1	Entrepreneurship Mindset-I
10	26BTCN11E01	Open Source Technology
11	26BTCN11E02	Open Source Technology Lab

Entrepreneurship Mindset-I shall be delivered through blended and self-paced learning approaches, supported by experiential learning, mentoring, startup-oriented activities, and innovation practices.

SEMESTER II		
S No	Course Code	Course Title
1	26BTCM12C01	Applied Chemistry
2	26BTCM12C02	Applied Chemistry Lab
3	26BTBE12C03	Basics of Electrical and Electronics Engineering
4	26BTBE12C04	Basics of Electrical and Electronics Engineering Lab
5	26BTAL12C05	Engineering Mathematics- II
6	26BTAL12C06	Engineering Drawing
7	26BTAL12C07	C++ Programming
8	26BTAL12C08	C++ Programming Lab
9	26UHVU0VAC1	Universal Human Value
10	26ENGL0AEC02	Communicative English II
11	26ETPM0VAC2	Entrepreneurship Mindset-II
12	26BTCN12E01	Frontend Technologies
13	26BTCN12E02	Frontend Technologies Lab

Entrepreneurship Mindset-II shall be delivered through blended and self-paced learning approaches, supported by experiential learning, mentoring, startup-oriented activities, and innovation practices.

SEMESTER III

S No	Course Code	Course Title
1	26BTCS23C01	Database Management System
2	26BTCS23C02	Database Management System Lab
3	26BTCS23C03	Data Structures and Algorithms
4	26BTCS23C04	Data Structures and Algorithms Lab
5	26BTCS23C05	Engineering Mathematics-III
6	26BTCS23C06	Advanced Python Programming
7	26BTCS23C07	Advanced Python Programming Lab
8	26ETPM0VAC3	Entrepreneurship Mindset-III
9	26BTRA23E01	Sensors and Instrumentation
10	26BTRA23E02	Sensors and Instrumentation Lab
11	26BTRA23E03	R Language
12	26BTRA23E04	R Language Lab

Entrepreneurship Mindset-III shall be delivered through blended and self-paced learning approaches, supported by experiential learning, mentoring, startup-oriented activities, and innovation practices.

MOOCs courses from recognized platforms such as NPTEL/SWAYAM may be mapped or included after registration opens; total credits and contact hours may increase accordingly

SEMESTER IV		
S No	Course Code	Course Title
1	26BTCS24C01	Analysis & Design of Algorithms
2	26BTCS24C02	Analysis & Design of Algorithms Lab
3	26BTCS24C03	Computer Networks
4	26BTCS24C04	Computer Networks Lab
5	26BTCS24C05	Discrete Structures
6	26BTCS24C06	Operating System
7	26BTCS24C07	Operating System Lab
8	26BTCS24C08	Computer Architecture and Organization
9	26BTRA24E01	Principles of Robotics
10	26BTRA24E02	Principles of Robotics Lab
11	26BTRA24E03	Robotics and Automation
12	26BTRA24E04	Robotics and Automation Lab
13	26ETPM0VAC4	Entrepreneurship Mindset -IV
Optional to choose (Open Elective Basket)		
14		Learn-One-More-Bharatiya-Bhasha or Foreign Languages
*Summer Term Training (45 days) will be evaluated in Semester V		

Learn One More Bharatiya Bhasha /Foreign Languages courses are optional. Students opting for these courses will earn 1 additional credit

Entrepreneurship Mindset-VI shall be delivered through blended and self-paced learning approaches, supported by experiential learning, mentoring, startup-oriented activities, and innovation practices.

MOOCs courses from recognized platforms such as NPTEL/SWAYAM may be mapped or included after registration opens; total credits and contact hours may increase accordingly

SEMESTER V		
S No	Course Code	Course Title
1	26BTCS35C01	Software Engineering
2	26BTCS35C02	Theory of Computation
3	26BTCS35C03	Java Programming
4	26BTCS35C04	Java Programming Lab
5	26BTCS35C05	Information Security and Cyber Laws
6	26BTRA35E01	Programmable Logic Controller
7	26BTRA35E02	Programmable Logic Controller Lab
8	26BTRA35E03	Automation System Design
9	26BTRA35E04	Automation System Design lab
10	26BTCS35C06	Summer Training-I Evaluation
11	26ASUG0SEC1	Analytical Skills - I
12	26ETPM0VAC5	Entrepreneurship Mindset- V
Optional to choose		
13		Disaster Risk Reduction and Management

Disaster Risk Reduction and Management is an optional course. Students who opt for this course will earn 2 additional credits.

Entrepreneurship Mindset-V shall be delivered through blended and self-paced learning approaches, supported by experiential learning, mentoring, startup-oriented activities, and innovation practices.

MOOCs courses from recognized platforms such as NPTEL/SWAYAM may be mapped or included after registration opens; total credits and contact hours may increase accordingly.

SEMESTER VI		
S No	Course Code	Course Title
1	26BTCS36C01	Network Security and Cryptography
2	26BTCS36C02	Network Security and Cryptography Lab
3	26BTCS36C03	Advanced Data Structure
4	26BTCS36C04	Advanced Data Structure Lab
5	26BTCS36C05	Compiler Design
6	26BTCS36C06	Artificial Intelligence
7	26BTCS36C07	Data Warehousing and Data Mining
8	26BTAI36E01	Robot Operating Systems
9	26BTAI36E02	Robot Operating Systems Lab
10	26BTAI36E03	Machine Learning
11	26BTAI36E04	Machine Learning Lab
12	26ASUG0AEC4	Analytical Skills - II
13	26BTCS36C08	Capstone Project - I
Optional to choose (Non-Credit Course)		
13	26PRDV0AEC1	Professional Development –I

- Professional Development–I is an optional, non-credit course. Evaluation shall be on a Satisfactory/Unsatisfactory basis.
- Entrepreneurship Mindset-V shall be delivered through blended and self-paced learning approaches, supported by experiential learning, mentoring, startup-oriented activities, and innovation practices.
- MOOCs courses from recognized platforms such as NPTEL/SWAYAM may be mapped or included after registration opens; total credits and contact hours may increase accordingly
- Capstone Project-I emphasizes guided self-learning and project work; accordingly, the allotted hours are excluded from total teaching hours

SEMESTER VII		
S No	Course Code	Course Title
1	26BTCS47C01	Computer Vision
2	26BTCS47C02	IOT
3	26BTCS47C03	IOT Lab
4	26BTCS47C04	System Design
5	26BTCS47C05	Blockchain
6	26BTCS47C06	Blockchain Lab
7	26BTCS47C07	Research Methodology
8	26BTRA47E01	Machine Vision
9	26BTRA47E02	Machine Vision Lab
10	26BTRA47E03	Autonomous Mobile Robots
11	26BTRA47E04	Autonomous Mobile Robots Lab
12	26BTCS47C08	Capstone Project - II
Optional to choose (Non Credit course)		
9	26PRDV0AEC2	Professional Development –II

- Professional Development–II is an optional, non-credit course. Evaluation shall be on a Satisfactory/Unsatisfactory basis.
- Entrepreneurship Mindset-V shall be delivered through blended and self-paced learning approaches, supported by experiential learning, mentoring, startup-oriented activities, and innovation practices.
- MOOCs courses from recognized platforms such as NPTEL/SWAYAM may be mapped or included after registration opens; total credits and contact hours may increase accordingly
- Capstone Project-II emphasizes guided self-learning and project work; accordingly, the allotted hours are excluded from total teaching hours

SEMESTER VIII		
S No	Course Code	Course Title
1	26BTCS048C01	Industrial Training

Open Elective Basket Course

S. no	Course Code	Course Title
1	26BFRN0AEC1	Basic French
2	26BKOR0AEC1	Basic Korean
3	26BSPA0AEC1	Basic Spanish
4	26BHIN0AEC1	Basic Hindi
5	26BPUN0AEC1	Basic Punjabi
6	26BURD0AEC1	Basic Urdu

