

BCA Syllabus with Electives

BCA Year-1 (Semester-1)

Course Code	Course Name
BCA 1001T	Mathematical Foundation for Computer Science - I
BCA 1002T/P	Computer Architecture
BCA 1003T	Indian Knowledge System
BCA 1004T/P	Problem Solving Techniques
BCA 1005T	General English - I
BCA 1006T	Environmental Science and Sustainability

BCA Year-1 (Semester-2)

Course Code	Course Name
BCA 2001T	Mathematical Foundation for Computer Science - II
BCA 2002T/P	Data Structures
BCA 2003T/P	Operating Systems
BCA 2004T/P	Object Oriented Programming Using Java
BCA 2005T/P	Web Technologies
BCA 2006T	Indian Constitution

BCA Year-2 (Semester-3)

Students choose one Discipline Specific Elective (DSEC) based on their specialization.

Course Code	Course Name
BCA 3001T	Probability & Statistics
BCA 3002T/P	Database Management Systems
BCA 3003T	Software Engineering
BCA 3004T/P	DSEC-I: Feature Engineering (Group A: AI/ML)
BCA 3005T/P	DSEC-I: Basics of Data Analytics using Spreadsheet (Group B: Data Science)
BCA 3006T/P	DSEC-I: Web Programming-I (Group C: Full Stack)
BCA 3007T/P	Python Programming
BCA 3008P	Value Addition Course - III

BCA Year-2 (Semester-4)

Students choose one Discipline Specific Elective (DSEC) based on their specialization.

Course Code	Course Name
BCA 4001T	Entrepreneurship and Startup Ecosystem
BCA 4002T/P	Computer Networks
BCA 4003T	Design and Analysis of Algorithms
BCA 4004T/P	Artificial Intelligence
BCA 4005T/P	DSEC-II: Introduction to Machine Learning (Group A: AI/ML)
BCA 4006T/P	DSEC-II: Data Visualization (Group B: Data Science)
BCA 4007T/P	DSEC-II: Web Programming-II (Group C: Full Stack)
BCA 4008T	Design Thinking and Innovation

BCA Year-3 (Semester-5)

Students take the electives corresponding to their chosen specialization group.

Course Code	Course Name
BCA 5001T/P	DSEC-III: Neural Network (Group A)
BCA 5002T/P	DSEC-IV: Digital Image Processing (Group A)
BCA 5003T/P	DSEC-V: Natural Language Processing (Group A)
BCA 5004T/P	DSEC-III: Introduction to Data Science (Group B)
BCA 5005T/P	DSEC-IV: Time Series Analysis (Group B)
BCA 5006T/P	DSEC-V: Machine Learning (Group B)
BCA 5007T	Quantitative Techniques
BCA 5008R	Summer Internship/Capstone Project-I

BCA Year-3 (Semester-6)

Students take the electives corresponding to their chosen specialization group.

Course Code	Course Name
BCA 6001T/P	Generative AI
BCA 6002T/P	DSEC-VI: Deep Learning for Computer Vision (Group A)
BCA 6003T/P	DSEC-VII: Predictive Analysis (Group A)
BCA 6004T/P	DSEC-VI: Big Data Analytics (Group B)
BCA 6005T/P	DSEC-VII: Exploratory Data Analysis (Group B)
BCA 6006R	Major Project
BCA 6007P	Soft Skills