

BCA (HONOURS) PROGRAMME

SEMESTER 1

BCA1CJ101	Core Course 1 in Major Fundamentals of Computers and Computational Thinking
BCA1CJ 102/BCA1MN 101	Core Course 2 in Major Mathematical Foundation for Computer Applications
BCA1CJ 103/BCA1MN 102	Core Course 3 in Major Discrete Structures for Computer Applications 60 4 0 4 4 30 70 100 BCA1FM 105 MDC/MDE – 1
BCA1FS111	Skill Enhancement Course 1 Introduction to Computers and Office Automation
	AEC1 ENGLISH
	AEC2 Additional Language

SEMESTER II

BCA2CJ101	Core Course 4 in Major Fundamentals of Programming (C Language)
BCA2CJ102/BCA2MN 101	Core Course 5 in Major Statistical Foundation for Computer Applications
BCA2CJ103/BCA2MN102	Core Course 6 in Major Numerical Analysis and Optimization Techniques
BCA2FS112	Skill Enhancement Course 2 Data Analysis using Spread Sheet
ENG2FA103(2)	AEC 3 English AEC4 Additional Language

SEMESTER III

BCA3CJ201	Core Course 7 in Major Data Structures using C
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BCA3CJ202 Core Course 8 in Major
Computer Networks

BCA3CJ203/BCA3MN201 Core Course 9 in Major
Introduction to Data Science

BCA3CJ204/BCA3MN202 Core Course 10 in Major
Foundations of Artificial Intelligence

BCA3FS113 Skill Enhancement Course 3
Website Designing using Content Management System
MDC/MDE 2 – (E/AL)
Kerala Knowledge System 4

SEMESTER IV

BCA4CJ205 Core Course 11 in Major
Database Management System

BCA4CJ206 Core Course 12 in Major
Python Programming

BCA4CJ207 Core Course 13 in Major
Software Engineering

BCA4CJ208 Core Course 14 in Major
Automation and Robotics

BCA4FV108 Value-Added Course 1
Introduction to Cyber Laws

ENG4FV109(2) Value-Added Course 2
English

SEMESTER V

BCA5CJ301 Core Course 15 in Major
Object Oriented Programming (Java)

BCA5CJ302 Core Course 16 in Major
Progressive Web Application using PHP

BCA5CJ303 Core Course 17 in Major

	Digital Fundamentals and Computer Organization
BCA5EJ301(X)	Elective Course 1 in Major
BCA5EJ302(X)	Elective Course 2 in Major
BCA5FS114	Skill Enhancement Course 4
	Professional Skill Development for IT Career Excellence
BCA5FS115	Skill Enhancement Course
	Internship
	Audit Course 1

SEMSETER VI

BCA6CJ304/BCA8MN304	Core Course 18 in Major
	Introduction to AI and ML
BCA6CJ305/BCA8MN305	Core Course 19 in Major
	Principles of Operating System
BCA6EJ303(X)	Elective Course 3 in Major
BCA6EJ304(X)	Elective Course 4 in Major
BCA6FV110	Value-Added Course 2
	Business Intelligence and Innovation
BCA6FS 116	Skill Enhancement Course
	Project
	Audit Course 2

SEMESTER VII

BCA7CJ401	Core Course 20 in Major
	Advanced Data Structures and Algorithms
BCA7CJ402	Core Course 21 in Major
	Data Science Programming using R
BCA7EJ401(X)	Elective Course 5 in Major
BCA7EJ402(X)	Elective Course 6 in Major
BCA7EJ403(X)	Elective Course 7 in Major (in Honours with Research Programme)

BCA7OE401(X)	Open Elective in Major (in Honours programme)
BCA7FS117	Skill Enhancement Course
	Internship 2
SEMESTER VIII	
BCA8EJ404(X)	Elective Course 8 in Major (in Honours Programme)
BCA8EJ405(X)	Elective Course 9 in Major (in Honours Programme)
BCA8EJ406(X)	Elective Course 10 in Major (in Honours Programme)
BCA8FS118	Skill Enhancement Course
	Project 2 (in Honours Programme)
	OR (instead of Elective Course 8– 10 in Major
BCA8FS119	Skill Enhancement Course
	Research Project
	(in Honours with Research Programme)

B.Sc. COMPUTER SCIENCE HONOURS PROGRAMME

SEMESTER 1

CSC1CJ101/CSC1MN100	Fundamentals of Computers & Computational Thinking.
XXX1MNXXX	Minor Course 1
XXX1MNXXX	Minor Course 2
ENG1FA101 (2)	AEC 1
XXX1FA102 (2)	AEC 2
XXX1FM105	MDC 1

SEMESTER II

CSC2CJ101/CSC2MN100	Fundamentals of Programming(CLanguage)
XXX1MNXXX	Minor Course 3
XXX1MNXXX	Minor Course 4
ENG2FA103 (2)	AEC 3
XXX2FA104 (2)	AEC4
XXX2FM106	MDC 2

SEMESTER III

CSC3CJ201	Software Project Management
CSC3CJ202/CSC3MN200	Data Structures and Algorithm
XXX1MNXXX	Minor Course 5
XXX1MNXXX	Minor Course 6
XXX3FM107 (2)	MDC 3 –Kerala Knowledge System
ENG3FV108 (2)	Value-Added Course 1

SEMESTER IV

CSC4CJ203	Database Management System
CSC4CJ204	Python Programming
CSC4CJ205	Computer Networks

ENG4FV109 (2)	Value-Added Course 2
XXX4FV110(2)	Value-Added Course 3
ENG4FS111 (2)	Skill Enhancement Course – 1

SEMESTER V

CSC5CJ301	Data Mining
CSC5CJ302	Object Oriented Programming (Java)
CSC5CJ303	Full Stack Web Development
CSC5EJ305	Elective Course 1 in Major
CSC5EJ306	Elective Course 2 in Major
CSC5FS112	Skill Enhancement Course 2 - Introduction to Digital Marketing

SEMESTER VI

CSC6CJ304/CSC8MN304	Digital Electronics and Computer Architecture 100
CSC6CJ305/CSC8MN305	Principles of Operating Systems
CSC6CJ306/CSC8MN306	Introduction to Artificial Intelligence & Machine Learning
CSC6CJ311 `	Elective Course 3 in Major
CSC6CJ312	Elective Course 4 in Major
CSC6FS113	Skill Enhancement Course 3 - Project Implementation
CSC6CJ349	Internship in Major (Credit for internship to be awarded only at the end of Semester 6)

SEMESTER VII

CSC7CJ401	Theory of Computation
CSC7CJ402	System Security
CSC7CJ403	Advanced Data Structures and Algorithms
CSC7CJ404	Block Chain Technology

CSC7CJ405 Internet of Things

CSC8CJ406 Compiler Design

CSC8CJ407 Client-Server Architecture

CSC8CJ408 Parallel Computing

OR (instead of Core Courses CSC8CJ406, CSC8CJ407 and CSC8CJ408 in Major)

CSC8CJ449** Project (in Honours programme)

CSC8CJ499** Research Project(in Honours with Researchprogramme)

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SEMESTER VIII

CSC8EJXXX*/CSC8MN406 Elective Course 5 in Major /Minor Course

CSC8EJXXX*/CSC8MN407 Elective Course 6 in Major /Minor Course 8

CSCEJXXX*/CSC8MN408 Elective Course 7 in Major /Minor Course 9 / Major Course in any Other Discipline

OR (instead of Elective Course 7 in Major, in the case of Honours with Research Programme)

CSC8CJ489 Research Methodology 60 4 4 30 70 100