

Department of Computer Science

Programme Offer

- **B.Sc. (COMPUTER SCIENCE)** 3 years- Full Time
- **BCA COMPUTER APPLICATION** 3 years- Full Time
- **M.Sc. (COMPUTER SCIENCE)** 2 years – Full Time

Curriculum

Knowledge of software, hardware organization, operating systems, theory of computation and principles of programming languages is at the core of our Undergraduate degree. The Department aims at providing high quality training to students through the latest technology. In order to maintain the standard of education, University of Madras upgraded the academic syllabi to CBCS pattern so as to keep the students well trained to deal with changing trends in the field of Computer Science and Technology. The syllabus and courseware are planned to be flexible and wide-ranging, incorporating the cutting edge as well as ensuring a firm grasp of core fundamentals.

The flexible, updated curriculum and intensive hands on training enables the students to gain-in-depth understanding, develop strong computational thinking, problem solving capability and programming skills sculpting them to the most sorts after professional in the Information Technology arena.

B.Sc. Computer Science

I YEAR	II YEAR	III YEAR
SEMESTER - I	SEMESTER - III	SEMESTER - V
Language-I	Language – III	Operating Systems
English –I	English – III	Database Management Systems
Allied-I: Mathematics-I	Allied-III: Statistical methods and Practical-III (Data Structures Using	Computer Architecture and Practical-V: RDBMS Lab
Programming in C	Practical-III (Data Structures Using	Visual Programming
Practical –I(Programming in C)	Allied III Lab	Elective-I: Value Education
Non Major Elective/ Basic Tamil	Environmental Studies	
Soft Skills- I	Soft Skills- III	
SEMESTER - II	SEMESTER - IV	
Language-II	Language – IV	Data Communication and
English –II	English – IV	Web Technology
Allied-II: Mathematics-II	Allied – IV: Statistical Methods & its Programming in Java	Practical-VI: Web Applications Lab Elective- II: Software Testing
Digital Electronics &	Allied III Lab	Elective – III: Computer Graphics
Practical – II: Digital Electronics &	Practical - IV: (Programming in Java	Extension Activities
Non Major Elective/ Basic Tamil-	Environmental Studies	
Soft Skills-II	Soft Skills-IV	

B.C.A Computer Applications

I YEAR	II YEAR	III YEAR
SEMESTER - I	SEMESTER - III	SEMESTER - V
Language-I	Programming in C++ & Data	Database Management System
English –I	Microprocessors & its Applications	Software Engineering
Allied Mathematics – I	Numerical & Statistical Methods	Resource Management Techniques
Fundamentals of Digital Computers	Financial accounting Practical – III Programming in C++	RDBMS Lab Visual Programming
Practical – I: PC Software Lab	Environmental Studies	Value Education
Non Major Elective / Basic Tamil	Soft Skill – III	
Soft Skill – I		
SEMESTER - II	SEMESTER - IV	SEMESTER - VI
Language-II	Programming in java	Web Technology
English –II	Operating system	Data Communication and
Allied Mathematics – II	Computer Graphics	Software Testing
Programming in ‘C’	Practical – IV Java Lab	Web Application Lab
Practical – II: Programming in ‘C’	Cost & Management Accounting Environmental Studies	Elective –II Object Oriented Elective –III Multimedia Systems
Non Major Elective / Basic Tamil	Soft Skills – IV	Extension Activities
Soft Skill – II		

M.Sc. Computer Science

I YEAR	II YEAR
SEMESTER - I	SEMESTER - III
Design and Analysis of Algorithms	Principles of Compiler Design
Advanced Java Programming	Information Security
System Software	Artificial Intelligence
Theoretical Foundations of Computer Science	Elective-II: Big Data Analytics / Cryptography/ Distributed
Practical- I: Algorithms Lab	Elective-III: Multimedia Systems / E-Commerce / Cloud
Practical – II: Advanced Java Programming	Practical-V: Mini-Project
Soft Skills – I Language And Communication (Advanced Level)	Soft Skills-IV: Foreign Language Skills, French
	Soft Skills-IV: Foreign Language Skills, Italy
	Soft Skills-IV: Foreign Language Skills, German
	Internship
SEMESTER - II	SEMESTER - IV
Computer Networks	Project (Viva-Voce)
Digital Image Processing	
Practical-III RDBMS Lab	
Elective I: Mobile Computing /	
Object Oriented Analysis and Design	
Practical-IV: Image Processing using Java Lab	

VALUE ADDED COURSES

Apart from curriculum Certificate Courses are conducted by department to complement students' knowledge and skills in their field of study. Courses offered are chosen based on current trends, relevance and value in the job-market.