



Deccan Education Society's
**Fergusson College (Autonomous),
Pune**
Department of Computer Science
M.Sc. (Computer Science)



CURRICULUM

The M.Sc. (Computer Science) program of autonomous Fergusson College provides a unique opportunity to the students for obtaining skills that will enable them to pursue a career in the Computer Science / Information Technology industry. It also develops attitude and interest along with necessary knowledge and proficiency among the students to enable them to do further academic studies / research as well.

The basic aim of the course is to produce technology-oriented students with the knowledge and ability to develop creative solutions, and to understand and master in

the field in of Computer Science and technology.

HIGHLIGHTS OF THE COURSE

- The course is intended for graduates in Computer Science.
- It is a full time course of Two year / Four semesters.
- Emphasis is given more on Hands-on / laboratory courses.
- First three semester includes -
 - Theory subjects
 - Practical based on theory subject
 - Project work
 - Self Learning Course
- In the last semester student will have to undergo full time Industrial training.

Recognizing this, the syllabus of the course focuses on developing an ability to learn current technology, grasping the new concepts and implementing them on computers.

The objectives of this course are to

- Make the students to think about programming languages analytically .
- Understand the principles and foundations of distributed databases.
- Learn the Algorithm Analysis techniques and use of data structures to improve the program performance.
- Study Advanced Operating Systems Concepts using Unix/Linux.
- Enable students to get sound understanding of Advanced Networking Concepts.

- Equip students with knowledge and skills necessary to support for career in Information Security.
- Understand the DOTNET framework, C# language features and Web development using ASP.NET
- Introduce students to various applications, tools and techniques of data mining and warehouse.
- Explore and learn the algorithms and techniques involved in Digital Image Processing.
- Make students aware of the fuzzy logic, Neural networks and Genetic Algorithms concepts to understand how an intelligent system works.
- Study Business Intelligence concepts like applications of intelligent systems in managerial work using software.
- Familiarize the students with the buzz words and technology of mobile communication

PRESCRIBED COURSE (100 Credits)

Master's degree in Computer Science is of 100 credits. Every student has to complete 100 credits in four semesters which includes 5 credits for self learning. Each subject is of 4 credits. Apart from that, student also has to complete 10 extra credits given for three different subjects.

Semester – I

(24 Regular Credits + 1 Credit Self Learning)

- Principles of Programming Languages
- Distributed Database Concepts
- Design and Analysis of Algorithms

- Advanced Networking and Network Programming
- Practical based on PPL and ANNP
- Project
- Self Learning - Logic and analytical skill development

Semester – II

(28 Regular Credits + 2 Credits Self Learning)

- Software Metrics & Project Management
- Data Mining and Data Warehousing
- Programming with DOT NET
- Information System and Security
- Practical based on DOT NET
- Project
- Self Learning - Emerging Trends,
- Any one elective form below subjects
 - Artificial Intelligence
 - Web Services
 - Advance Design and Analysis of Algorithms

Semester – III

(28 Regular Credits + 2 Credits Self Learning)

- Digital Image Processing
- Soft Computing
- Business Intelligence
- Mobile Computing
- Practical based on DIP and SC
- Project
- Self Learning -Python Programming
- Any one elective form below subjects
 - Software Quality Assurance and

Testing

- UNIX: Internals and Programming
- Modeling and Simulation

Semester –IV (15 Credits)

Industrial Training / Institutional Project

ADDITIONAL EXTRA CREDIT COURSE (10 Credits Compulsory)

- Introduction to Cyber Security (4 Credits)
- Human Rights (2 Credits)
- Skill Development (4 Credits)

PLACEMENTS

FC Placements always assures entry for M.Sc. (Computer Science) students to the world of Software Industry. As a part of pre-placement activity, the students undergo rigorous procedure to enhance their skills to the fullest before they are presented to the industry. This is an additional activity apart from regular college schedule.

This includes

- Lecture series on latest technologies
- Project guidance by Industry experts
- Conduct of technical and aptitude tests
- Group discussion
- Mock Interviews

The students are groomed further by arranging personality development and communication skill programs.

This activity is a small evidence of the quality of *Fergussonian*, which is delivered to the software industry.

Our Recruiters

Following is the list of few prestigious companies, which have given placement to our M.Sc (CS) students.

- Persistent Systems
 - Eaton Technologies Pvt. Ltd
 - Symantec Software Solutions Pvt Ltd
 - Bristlecone
 - Quick Heal
 - Sybase
- and many more..

CONTACT

Mrs. Shubhangi Thakar
Coordinator,
Department Of Computer Science
shubhangi.thakar@fergusson.edu
+912030866423

Mrs. Shubhangi Page
Head,
Department of Computer Science
shubhangi.page@fergusson.edu
+912030866435/24

Mrs. Aparna Vaidyanathan
M.Sc. (Computer Science) course coordination
aprna.vaidyanathan@fergusson.edu
+912030866608

Mrs. Anjali Naik
Placement Coordinator
placements@fergusson.edu
+912030866613