



**Deccan Education Society's
Fergusson College (Autonomous), Pune**

Department of Computer Science B.Sc. (Computer Science)



About the Course

The B.Sc. (Computer Science) is a specifically designed three year course which aims to prepare the students for a bright future in Software Industry and for becoming an entrepreneur. The syllabus of computer Science subject is designed separately in combination with three allied subjects Mathematics, Electronics and Statistics. The syllabi of Mathematics, Electronics and Statistics subjects are specially designed to satisfy the

requirements of Computer Science curriculum. This provides the necessary platform for pursuing higher studies in Computer Science in the global scenario. The Syllabus also develops required professional skills and problem solving abilities with an excellent job potential.

The first year forms basic foundation of two important skills required for software development. The two theory papers namely programming concepts and database handling form the preliminary skill set for solving computational problems. Simultaneously, two practical courses are designed on each theory paper to supplement the theoretical training of both these subjects. Along with Computer Science papers, two theories and one practical paper each in Statistics, Mathematics and Electronics help in building a strong foundation of Computer Science studies.

At second year, two theory papers in Computer Science covers advanced programming skills and web technologies. Two practical courses on each of the theory paper are designed to strengthen the hands-on training. Simultaneously, two theories and one practical paper each

in Mathematics and Electronics help in giving the insight of necessary concepts.

At third year (**under SPPU**), six theory papers and three practical courses cover the entire spectrum of topics necessary to build knowledge base for pursuing higher studies and required skill set as per industrial requirements. A practical course here also includes project work which gives students hands on experience in solving a real world problem.

Objectives:

- To enhance problem solving abilities.
- To develop the necessary skills and analytical abilities for implementing computer based solutions.
- To imbibe quality software development practices.
- To create awareness about process and product standards.
- To guide students to build-up a successful career in Computer Science.

Eligibility:

- a) HSC (10+2) Science Stream with Mathematics.
- b) Three Years Diploma Course, after S.S.C. (10th standard) of Board of

Technical Education conducted by Government of Maharashtra or its equivalent as per the Savitribai Phule Pune University eligibility norms (as on today)

Please check latest admission process details/ changes on www.fergusson.edu.

Course Structure

First year and Second Year papers under autonomous Fergusson College and Third year papers under SPPU at present are:

**First Year (Semester examination)
(2 credits for each paper except Computer Science Practical II and IV with no credit point)**

Semester – I

Programming Fundamentals using C, DBMS-I, Discrete Mathematics, Algebra, Descriptive Statistics, Probability Theory & Discrete Probability Distributions, Basic Circuit theory and networks, Digital Electronics.

Semester – II

Advance Programming using C, DBMS (SQL/PLSQL), Graph Theory, Calculus, Regression Analysis and Time Series, Continuous Probability Distributions & Inference, Semiconductor devices, Sequential Circuits

Two labs on Computer Science and One each for Mathematics, Electronics and Statistics for both semesters

**Second Year (Semester examination)
(3 credits for each theory paper and 2 credits for each practical paper except Computer Science Practical VI and VIII with no credit point.)**

Semester – III

Data structures using C, Introduction to Web Technology, Applied Algebra, Numerical Techniques, Computer Instrumentation, Computer Organization

Semester –IV

Object Oriented Concepts using C++, PHP Programming, Computational Geometry, Operations Research, Electronic Communication, Advanced Microcontroller
Two labs on Computer Science and One each for Mathematics, Electronics for both semesters

**Third Year-Semester exam under SPPU
(40 external + 10 internal for each sem.)**

Semester – III

Systems programming, Theoretical Computer Science, Computer networking, Internet programming, Java programming, Object oriented software engineering

Semester –IV

Operating systems, Compiler construction, Computer networking, Internet programming, Java programming, Computer Graphics
Three labs on Computer Science including development of a small project.

Additional Compulsory Course

Environmental Awareness and a course on language at Second year.

CONTACTS

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

Dr. Kavita Khobragade
Computer Science
+912030866432

Mr. Manojkumar Kukade
Electronics
+912030866428

Mrs. Vedvati Pethe
Mathematics
+912030866430