



LATEX



CHRIST
COLLEGE (AUTONOMOUS)
IRINJALAKUDA, KERALA
Reaccredited by NAAC with 'A' grade

COURSE CODE

NAME OF THE COURSE

FOU06

TECHNICAL SCRIPTING USING LATEX

OFFERED BY

ABOUT COLLEGE

DEPT. OF MATHEMATICS

Christ College (Autonomous), Irinjalakuda established in the year 1956 by CMI fathers has always been a place where young generations are moulded towards a bright future. College has excellent infrastructure, with state of the art laboratories, seminar rooms and lecture halls. The campus is Wi-Fi enabled. Presently College is home for 4500+ students, 200 teaching staff and 45 supporting staff. The strength of the College lies in its hardworking and tech savvy teachers who are eager to involve in all matters of students. The lush green campus with gardens and open gym is moving towards the next phase on education both offline and online.

COURSE COORDINATOR

DR. SEENA V
Dept. of Mathematics

COURSE DETAILS

Irrespective of the domain of specialization, documentation skills are inevitable in the field of science and technology. There are some standard norms by which technical documents are being prepared. These norms can be easily met with documentation software LaTeX. It is rather a program written in plain text and can be formatted to the requirement. The program is compiled to get the output, usually in pdf format. LaTeX is free software that works in Windows, Linux, and Mac OS. There are some interfaces to make the program more user friendly and these interfaces are also available free of cost. With the help of different types of interfaces available, one can make a standard document in LaTeX with ease. In this course, using LaTeX in various operating systems with different interfaces is discussed in detail. Further, there are some useful tools available on the web that make LaTeX very easy for beginners. Some of these tools are also discussed in this course which makes the students comfortable with LaTeX. Creating a table of contents, giving a proper citation, placing figures and tables at the right places, etc. are troublesome in many of the popular documentation tools. These things can be easily performed in LaTeX with the help of a command. Therefore, this course "Technical Scripting in LaTeX" will be a valuable addition in your career.

LEARNING OUTCOMES

By the end of this course, you will have acquired proficiency with LaTeX, as well as many features of LaTeX which include:

- Download and install a comprehensive LaTeX distribution.
- Create basic types of LaTeX documents (article, report, letter, book).
- Format words, lines, and paragraphs, design pages, create lists, tables, references, and figures in LaTeX

SYLLABUS

MODULE 1 (8HRS)

A brief History of Latex, What is Latex, Merits of LATEX over Word Processors, Demerits of LATEX, Installation of the software LATEX, Understanding LATEX compilation, LATEX input File structure, Preamble, Basic Syntex: Creating a Title Page, Page Numbering and Headings, Modifying Text etc. Use packages.

MODULE 2 (10HRS)

Writing equations, Matrix, Tables, Math in Latex, Advanced Math in Latex. Page Layout : Titles, Abstract, Chapters, Sections, Equation references, citation.

MODULE 3 (12HRS)

List making environments, Table of contents, Generating new commands , Figure handling, numbering, List of figures, List of tables, Generating bibliography and index.

MODULE 4. (10HRS)

Beamer presentation, Pstricks: drawing simple pictures, Function plotting, drawing pictures with nodes, Tikz: drawing simple pictures, Function plotting, drawing pictures with nodes.

REFERENCES

- [1] L. Lamport: A Document Preparation System, User's Guide and Reference Manual, Addison - Wesley, New York, second edition, 1994.
- [2] M.R.C. van Dongen: LATEX and Friends, Springer-Verlag Berlin Heidelberg 2012.
- [3] Stefan Kottwitz: LATEX Cookbook, Packt Publishing 2015.
- [4] David F. Griffiths and Desmond J. Higham: Learning LATEX (second edition), Siam 2016.
- [5] George Gratzer: Practical LATEX, Springer 2015.
- [6] W. Snow: TEX for the Beginner. Addison-Wesley, Reading, 1992
- [7] D. E. Knuth: The TEX Book. Addison-Wesley, Reading, second edition, 1986

