M.E.S ASMABI COLLEGE

DEPARTMENT OF MATHEMATICS

CERTIFICATE COURSE

Course Details : Foundation course in LaTeX.

Course Code: ASCC12

About this course

LaTeX, a document preparation system, is widely used for publishing in many scientific fields like mathematics, statistics, computer science, engineering, chemistry, physics, economics, linguistics, etc.. It is a powerful and open-source system that provides numerous facilities for automating typesetting of the document: i.e. structuring page layout, listing and auto-numbering of sections, tables, figures, generating a table of contents, managing cross-referencing, citing, and indexing.

This course introduces the basic concepts of LaTeX. Participants taking this course will be able to create and design documents in LaTeX .

Prerequisites
There are no prerequisites for this course, except knowledge of editing text. The course can be taken by any learner who wants to create documents using LaTeX.

Objectives:

- Handle different types of documents
- Organize documents into different sections, subsections, etc..
- Formatting pages (margins, header, footer, orientation)
- Formatting text
- Write complex mathematical formulae
- Include tables and images
- Cross-referencing, bibliography, and Indexing
- Read error messages as and when required

Syllabus

Topic 1: Introduction
This topic introduces the learner to LaTeX, its installation, and different IDEs. The learner creates the first document using LaTeX, organizes content into sections using article and book class of LaTeX.

Topic 2: Styling Pages

In this topic, the session starts by reviewing different paper sizes, examines packages, formats the page by setting margins, customizing header and footer, changing the page orientation, dividing the document into multiple columns. The topic ends with reading different types of error messages.

Topic 3: Formatting Content

This topic concentrates on formatting text (styles, size, alignment), adding colors to text and entire page, and adding bullets and numbered items. It concludes by explaining the process of writing complex mathematics.

Topic 4: Tables and Images

The topic starts by creating basic tables, adding simple and dashed borders, merging rows and columns, and handling situations where a table exceeds the size of a page. The sessions then continue to add an image, explore different properties like rotate, scale, etc..

Topic 5: Referencing and Indexing

In this topic, the learner learns to add cross-referencing (refer to sections, table, images), add bibliography (references), and create back index.

Suggested intake :   90 students

Course Fee :   Rs.500 per student

Practical Session :   Computer Lab

Duration :   30 hrs

Examination :   Theory & Practical at the end of the course

Coordinator   HOD   Principal