

**Certificate Course on
Introduction to Scientific writing in LaTeX**

Organized and conducted by

Department of Physics, North Gauhati College

About the course:

What is LaTeX? LaTeX is one of the best typesetting software. It is designed to create technical and scientific documents. It is widely used in the academic world to communicate and publish scientific documents in fields such as Mathematics, Statistics, Engineering, Chemistry, Physics, Economics, and Medical Sciences. One of the main benefits of using LaTeX is that you don't have to worry about the layout of your document. LaTeX does all the work for you, making your documents look professional and impactful.

Course duration: 36 hours

Requirements: Basic knowledge of typing and handling computers

Number of seats: 20

Target group of students: Undergraduate students of 1st, 2nd, and 3rd year from any Department or discipline.

Learning Outcomes:

By the end of this course, students will be able to:

- identify and write different parts of scientific reports
- write articles, books or thesis, CV for academia or industry, write an official letter, prepare a homework assignment
- make a poster or a presentation for seminar or workshop

Syllabus:

Theory (12 hours):

(1 hour per day x 12 days)

1. Structure and components of scientific reports. Technical reports and thesis-different steps, layout. Bibliography, referencing, and footnotes. Scientific word processors and their importance.

2. Introduction to LaTeX as a tool for scientific writing, preparing and compiling an article using LaTeX, its advantages (software to install: TeXStudio or Texmaker in Linux/Windows).
3. Introduction to document classes e.g. article, book, thesis, CV, letter, homework assignment, calendar, poster, presentation etc.
4. Packages, preamble and body of LaTeX using titles, abstract, introduction, chapters, sections and subsections, paragraph verbatim.
5. Figures, tables, lists, labels, references and bibliography, hyperlinked citations.
6. Manipulating fonts and special characters, expressing mathematical equations and symbols.

Practical in Computer Lab (24 hours):

(2 hours per day x 12 days)

- Installation of software in computer
- Creating a basic LaTeX document
- Creating a scientific report in LaTeX
- Creating a presentation in LaTeX

Evaluation: MCQ based theory exam, report submission after practical

Course coordinator:

Dr. Gautam Saikia, Department of Physics, North Gauhati College