



Department of Physics & Astronomical Science
School of Physical & Material Sciences
Central University of Himachal Pradesh

(Established under Central Universities Act 2009)
Shahpur Campus, DISTRICT KANGRA – 176206
HIMACHAL PRADESH
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Course: Scientific Writing and Presentation

Course Code: PAS IDC-8201

Course Type: Interdisciplinary Course

Course Credits: 2

-----Course Objectives: Understanding the Latex as word processor

Learning Outcomes: After the completion of the course the student will be able to prepare scientific documents required for presentation and publication.

Course Contents

Unit 1 Introduction to LATEX as word processing (2 Hours)

1. What is LATEX?
2. A Typical LATEX Input File
3. Characters and Control Sequences
4. Special needs of scientific word processing, Latex as Scientific word processing

Unit 2 Producing Simple Documents using LATEX (6 Hours)

1. Producing a LATEX Input File
2. Producing Ordinary Text using LATEX
3. Blank Spaces and Carriage Returns in the Input File
4. Quotation Marks and Dashes
5. Section Headings in LATEX
6. Changing Fonts in Text Mode
7. Accents used in Text
8. Active Characters and Special Symbols in Text

Unit 3 Producing Mathematical Formulae using LATEX (8 Hours)

1. Mathematics Mode
2. Characters in Mathematics Mode
3. Superscripts and Subscripts
4. Greek Letters
5. Mathematical Symbols
6. Changing Fonts in Mathematics Mode
7. Standard Functions (sin, cos etc.)
8. Text Embedded in Displayed Equations
9. Fractions and Roots
10. Ellipsis (i.e., 'three dots')

11. Accents in Mathematics Mode
12. Brackets and Norms
13. Multiline Formulae in LATEX
14. Matrices and other arrays in LATEX
15. Derivatives, Limits, Sums and Integrals

Unit 4 Further Features of LATEX (4 Hours)

1. Producing White Space in LATEX
2. Lists
3. Displayed Quotations
4. Tables
5. The Preamble of the LATEX Input file
6. Defining your own Control Sequences in LATEX
7. bibliography and citation
8. fonts and pictures and colours
9. generating the table of contents

Prescribed Textbooks:

1. Learning LATEX by Doing by Andre Heck
2. A Simplified Introduction to Latex by Harvey J, Greenberg

Other Resources/Reference books:

1. A beginner's introduction to typesetting with LATEX by Peter Flynn