

**Certificate course**  
**On**  
**An Introduction to Latex**



**Organized by**  
**Department of Mathematics**  
**Nowgong Girls' College**

## Course code: LCC

Total course duration: 30 hours

Eligibility: 10+2 passed

**About the course:** LATEX is a very well developed typesetting program and is an extension of the original program TEX written by Donald Knuth. Donald Knuth says that his aim in creating TEX is to beautifully typeset technical documents especially those containing a lot of Mathematics. Since now a days, mathematics is very widely use in all branches of science, economics, commerce, so this typesetting program will definitely help students in their future work. Complex mathematical formulas can be difficult, sometimes not impossible, to generate using a standard word processor. If you want your document to look very nice, even if it's just ordinary text, LATEX is the natural option. This is an excellent introductory course to acquaint students with the latest typesetting skills which will enable them to prepare high quality typesetting, beamer presentation.

**Objective:** To create understanding of Latex and to develop proficiency in communication skill.

Course Learning Outcomes: The student will be able to learn the followings, after completing this course.:

- i) To create a LaTeX document.
- ii) Typeset a mathematical document using LaTeX.
- iii) Learn about graphics in LaTeX.
- iv) Create beamer presentations.

Course Fees: Free

S.No.	Contents	Course duration
1	Installation of the software LaTeX	1 hr
2	Basics of Latex file and its extentions, Tex processing procedure, Understanding Latex compilation , Writing equations, Environments, Special Characters , Command names and arguments.	4 hr
3	Document Layout, Parts of document – Titles, Abstract Chapters, Sections, References, Equation references, changing font, citation. Table of contents, Generating new commands, Figure handling numbering, List of figures, List of tables, Printing literal text, Footnotes , marginal notes	8 hr
4	Packages: Geometry, Hyperref, amsmath, amssymb, algorithms, algorithmic graphic, color, bibliography with bibtex.	8 hr

	Different Document Classes: article, thesis, book, report, beamer, slides.	
6	Applications to: Writing question paper Writing articles/ research papers Presentation using beamer.	8 hr
7	Theory, Practical and exercises based on the above concepts.	1 hr

References:

1. Kopka, Helmut and Daly, P.W. *A Guide to LATEX and Electronic Publishing*, 4<sup>th</sup> Edition, Addison Wesley Longman Limited, 2004.
2. Grätzer, G. *More Math Into LATEX*, 4th Edition, Springer Science + Business Media, LLC, 2007.