

# MANNAM MEMORIAL NSS COLLEGE, KOTTIYAM

## STUDENT ENROLMENT LIST

Name of department : Physics

Name of course : Latex for Beginners (2021-22)

| Sl No | Name of Student    | Signature    |
|-------|--------------------|--------------|
| 1     | Arsha Unnithan R.J | Arsha        |
| 2     | Akhila . A         | Akhila       |
| 3     | Amritha . A.S      | Amritha      |
| 4     | Anjali Devi . S.J  | Anjali       |
| 5     | Arya . R. Nath     | Nath         |
| 6     | AVanthika . V.s    | Avanthika    |
| 7     | chithra . V.s      | Chithra      |
| 8     | Lekshmi . B        | Lekshmi      |
| 9     | parvathi . B       | Parvathi     |
| 10    | Revathy . R        | Revathy      |
| 11    | Sajna . S          | Sajna        |
| 12    | shivani . S. Prem  | Shivani      |
| 13    | Soma Vasanthan     | Soma         |
| 14    | Vishnu Biju        | Vishnu       |
| 15    | Vishnu Ratheesan.  | Ratheesan    |
| 16    | Abhinandana . B    | Abhinandana  |
| 17    | Abhirami . R.s     | Abhirami     |
| 18    | Akhila . B         | Akhila       |
| 19    | Amrutha . u        | Amrutha      |
| 20    | Anoop . s          | Anoop        |
| 21    | Aparna . B         | Aparna       |
| 22    | Gopikrishnan . J   | Gopikrishnan |
| 23    | Krishnapriya . L   | Krishnapriya |
| 24    | PranaV . S . B     | PranaV       |
| 25    | Sradha . J . s     | Sradha       |
| 26    | Nayana . S . Kumar | Nayana       |
| 27    | Pallavi . P . s    | Pallavi      |
| 28    | Krishnendu . A . s | Krishnendu   |
| 29    | Sanjay . V . Nair  | Sanjay       |
| 30    |                    |              |
| 31    |                    |              |
| 32    |                    |              |
| 33    |                    |              |
| 34    |                    |              |



Department of Physics  
M. N. S. S. COLLEGE  
KOTTIYAM.



LaTeX For Beginners.

(3)

Curriculum

- Introduction to LaTeX - Overview of LaTeX and its advantages in writing - installation and setup of LaTeX
- Basics of creating a LaTeX document structure - Document formatting - Sectioning - Subsectioning and Labelling
- pagelayout and margins, Tables and alignment - Figures and graphics inclusion - Mathematical Equations & Symbols - writing mathematical expressions and equations - commonly used symbols, operators and functions - Matrices - vectors and arrays - Specialized mathematical constructs - References, citations and Bibliography - Managing bibliographic references using BibTeX or BibLaTeX - Inserting citations and creating a bibliography - Advanced Topics in physics - Typesetting complex equations (e.g. tensors, notations, Dirac notation) - specific packages (Siunitx for units) - Creating Feynmann diagrams - constants and units in physics, Package - Graphs & charts for data visualization.

Objectives.

- To empower Physics Msc students with the knowledge and skills necessary to leverage LaTeX effectively for scientific communication, research papers, thesis writing and presentations throughout their academic and professional career.
- Familiarize them with basic features and advantages of LaTeX as a type setting system for scientific documents.



*S. Subashan*  
DEPARTMENT OF PHYSICS  
M. M. N. S. S. COLLEGE  
KOTTIYAM



## Course Schedule

|                        |                  |                                                   |                                        |
|------------------------|------------------|---------------------------------------------------|----------------------------------------|
| 21/12/2021 (Tuesday)   | 3.30 - 4.30pm    | Introduction to LaTeX                             | overview of its Advantages in writing. |
| 22/12/2021 (Wednesday) | 3.30 - 4.30pm    | Installation & set-up.                            |                                        |
| 23/12/2021 (Thursday)  | 3.30 - 4.30pm    | Basics of LaTeX document                          | document & document formatting         |
| 31/1/2022 (Monday)     | 3.30 - 4.30pm    | Tables & Alignment                                |                                        |
| 4/1/2022 (Tuesday)     | 3.30 - 4.30pm    | Figures & graphics                                | inclusions                             |
| 5/1/2022 (Wednesday)   | 3.30 - 4.30pm    | Mathematical equations                            | & symbols                              |
| 6/1/2022 (Thursday)    | 3.30 - 4.30pm    | Mathematical expressions                          | , operations & functions               |
| 7/1/2022 (Friday)      | 3.30 - 4.30pm    | Matrices, vectors & Arrays                        | constructs                             |
| 8/1/2022 (Saturday)    | 9.00 - 1.00pm    | Specialised Mathematical Lab.                     |                                        |
| 15/1/2022 (Saturday)   | 9.00am - 1.00pm  |                                                   |                                        |
| 17/1/2022 (Monday)     | 3.30 - 4.30pm    | References, citations & Bibliography              |                                        |
| 18/1/2022 (Tuesday)    | 3.30 - 4.30pm    | Managing Bibliography                             | References using BibTex.               |
| 22/1/2022 (Saturday)   | 10.00am - 1.00pm | Inserting citations & Creating Bibliography, Lab. |                                        |
| 24/1/2022 (Monday)     | 3.30 - 4.30pm    | Type setting complex equations - tensor notation  |                                        |
| 29/1/2022 (Saturday)   | 10.00 - 1.00pm   | Dirac notations - Lab.                            |                                        |
| 2/2/2022 (Wednesday)   | 3.30 - 4.30pm    | Specific packages - SI units for units            |                                        |
| 5/2/2022 (Saturday)    | 10.00 - 1.00pm   | Creating Feynman diagrams - Lab.                  |                                        |
| 8/2/2022 (Tuesday)     | 3.30 - 4.30pm    | Graph & chart for data visualization.             |                                        |
| 10/2/2022 (Thursday)   | 3.30 - 4.30pm    | Lab. work.                                        |                                        |
| 18/2/2022              |                  | End course Evaluation                             |                                        |



*Sulheetha S. Jai*  
(Dr. Sulheetha S. Jai)

DEPARTMENT OF PHYSICS  
M. M. S. S. COLLEGE  
KOTTIYAM



## Latex for Beginners

Add On-Course 2021-22, PG Department of Physics

MM NSS College, Kottiyam

Total Marks: 50

Duration: 2 Hours

**Section A: 1-Mark Questions** *Answer all questions. Each question carries 1 mark.*

1. What is the purpose of the `\documentclass{article}` command in LaTeX?
2. How do you create a section heading in LaTeX?
3. What command is used to insert a line break in LaTeX?
4. Name the command used to include an image in a LaTeX document.
5. How do you create a bullet list in LaTeX?

**Section B: 2-Mark Questions** *Answer all questions. Each question carries 2 marks.*

1. Explain the difference between `\begin{itemize}` and `\begin{enumerate}` in LaTeX. Provide a brief example of each.
2. How do you format text as bold and italic in LaTeX? Provide code snippets for both.
3. Describe the purpose of the `\usepackage` command in LaTeX. Provide an example of including the `graphicx` package.
4. Write a LaTeX command to create a simple table with two columns and three rows.
5. How do you add a page number to the bottom right corner of each page in LaTeX?

**Section C: 15-Mark Questions** *Answer all questions. Each question carries 15 marks.*

1. **Creating a Basic Document:** a. Write a LaTeX document that includes a title page with a title, author, and date.  
b. Include at least two sections with headings and some text under each section.  
c. Add a bullet list and a numbered list within the document.
2. **Formatting and Sections:** a. Create a LaTeX document that includes a title, an abstract, and a table of contents.  
b. Add sections and subsections with some sample text in each.  
c. Ensure that the document includes a table and a figure, each with a caption.
3. **Mathematics in LaTeX:** a. Write a LaTeX document that demonstrates how to include inline and display-style mathematical equations.  
b. Include examples of basic mathematical symbols, fractions, and summations.  
c. Create a document with a section dedicated to mathematical expressions.
4. **References and Citations:** a. Create a LaTeX document that includes a bibliography section.  
b. Add a few citations within the text using the `\cite` command.  
c. Use the `\bibliographystyle` and `\bibliography` commands to format and include the bibliography.

*Sutheethan*  
DEPARTMENT OF PHYSICS  
M. M. N. S. S. COLLEGE  
KOTTIYAM.



**MANNAM MEMORIAL NSS COLLEGE, KOTTIYAM**  
**END COURSE EVALUATION**

Name of department : PHYSICS

Name of course : LATEX FOR BEGINNERS (2021-22)

Duration of exam : 2 hrs

Total Marks : 50

| Sl No | Name of Student    | Marks Obtained |
|-------|--------------------|----------------|
| 1     | Arsha Annithan R.I | 43             |
| 2     | Akhila . A         | 40             |
| 3     | Amritha A. S       | 35             |
| 4     | Anjali Devi S. J   | 37             |
| 5     | Arya . R. Nath     | 39             |
| 6     | Avanthika . V. S   | 42             |
| 7     | Chithra V. S       | 44             |
| 8     | Kekahmi . B        | 39             |
| 9     | Parvathi . B       | 35             |
| 10    | Revathy . R        | 37             |
| 11    | Sajna . S          | 39             |
| 12    | Shivani . S. Prem. | 41             |
| 13    | Sona Vasanthan     | 43             |
| 14    | Vishnu Rathnasan   | 48             |
| 15    | Abhinandana . B    | 41             |
| 16    | Abhirami . R. S    | 40             |
| 17    | Akhila . B         | 38             |
| 18    | Amrutha . U        | 39             |
| 19    | Apoor . S          | 40             |
| 20    | Aparna . B         | 35             |
| 21    | Gopikrishnan . J   | 47             |
| 22    | Krishnapriya . L   | 42             |



|    |                   |    |
|----|-------------------|----|
| 23 | Sradha . J. S     | 43 |
| 24 | Nayana . S. kumar | 29 |
| 25 | Pallavi . P. S    | 30 |
| 26 | Krishnendu . A. S | 38 |
| 27 | Sanjay . V. Nair  | 44 |
| 28 | Vishnu . Biju.    | 42 |
| 29 |                   |    |
| 30 |                   |    |
| 31 |                   |    |
| 32 |                   |    |
| 33 |                   |    |
| 34 |                   |    |
| 35 |                   |    |
| 36 |                   |    |
| 37 |                   |    |
| 38 |                   |    |
| 39 |                   |    |
| 40 |                   |    |
| 41 |                   |    |
| 42 |                   |    |
| 43 |                   |    |
| 44 |                   |    |
| 45 |                   |    |
| 46 |                   |    |
| 47 |                   |    |
| 48 |                   |    |
| 49 |                   |    |
| 50 |                   |    |

Number of students enrolled: 29

Number of students completed: 28



*Sulthan*  
 DEPARTMENT OF PHYSIC.  
 M. M. N. S. S. COLLEGE  
 KOTTIYAM,



2021-22

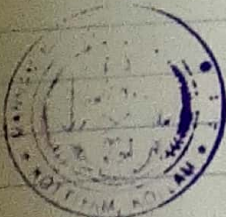
53

Report

To develop a solid foundation in using LaTeX for document preparation, equipping the <sup>PC</sup> students with the skills to create well-structured documents for academic and professional purpose. Department of Physics offered an Add on course on "LaTeX for Beginners" for the PC students of Department of Physics. The course duration was 30 hours. The course started by introducing the Basics of LaTeX. Students were guided through the installation process as well as the setup of LaTeX editors and compiled the documents efficiently. Through out the course students engaged on hands on exercises and projects to reinforce their understanding on LaTeX. The students were benefited by the course.

Feed back analysis

The students gave a positive feedback. They were very much confident <sup>to</sup> write their project in LaTeX. <sup>The course</sup> helped them to practise writing and formatting documents, solving mathematical equations and producing professional - looking outputs. The overall feedback suggested that the LaTeX add on course has been well received by students providing them a valuable skillset for producing high quality documents and fostering a deeper understanding of LaTeX and its applications.



Sutheertha Das

Dr Sutheertha S. Das  
(HOD)

DEPARTMENT OF PHYSICS  
M. M. N. S. COLLEGE  
KOTTIYAM.

Anusha M.C

Anusha M.C  
Course co-ordinator

Sol  
Principal  
M.M.N.S. COLLEGE  
KOTTIYAM