


Rayat Shikshan Sanstha's
Rajarshi Chhatrapati Shahu College Kolhapur
Department of Mathematics
A Report on Short Term Course
"Mathematics Into LaTeX"
2024-25

The Department of Mathematics, Rajarshi Chhatrapati Shahu College, Kolhapur organized a short term course on "Mathematics Into Latex" for Mathematics students in the college. In this course students learn how to create a program for simple mathematical problem and typing of equations in LaTeX. This course has 30 lectures. This course starts from 31/01/2025 to 28/02/2025. Exam was conducted on 01/03/2025 and it is conducted by Mr. Shedge S.D. Total 10 Students are successfully completed this course.

Outcomes: After completion of this course students will be able to:

- How to write research paper in LaTeX
- Aware about LaTeX Software.

No. of Beneficiaries: 10


Head
Department of Mathematics
Rajarshi Chh. Shahu College
Kolhapur.




I/C PRINCIPAL
R.C. SHAHU COLLEGE
KOLHAPUR

Rayat Shikshan Sanstha's
Rajarshi Chhatrapati Shahu College Kolhapur
Department of Mathematics
Short Term Course
Course: Mathematics into LaTeX
(2024-25)

- **Objectives**

The purpose of this course is

- i) To provide an understanding of the basic mechanisms of LaTeX.
- ii) To acquaint students with the latest typesetting skills.

- **Course Outcomes**

After completion this course, Student will be able to

- i) Write a simple LaTeX input document based on the article class.
- ii) Turn the input document into pdf with the pdflatex program.
- iii) Format Words, Lines, and Paragraphs.
- iv) Understand how to present data using tables

Syllabus

Unit 1. Introduction to LaTeX

[8 Lectures]

Definition and application of LaTeX, Preparation and Compilation of LaTeX input file, LaTeX Syntax, Keyboard Characters in LaTeX

Unit 2. Listing and Tabbing Texts

[7 Lectures]

Listing Texts, Tabbing Texts Through the tabbing Environment

Unit 3. Listing and Tabbing Texts

[8 Lectures]

Listing Texts, Tabbing Texts Through the tabbing Environment

Unit 4. Table Preparation

[7 Lectures]

Table Through the tabular Environment, Table Through the tabularx Environment, Vertical Positioning of Tables, Sideways (Rotated) Texts in Tables, Adjusting Column Width in Tables, Additional Provisions for Customizing Columns of Tables, Merging Rows and Columns of Tables.

- **Reference Books:**

1. LaTeX, A Document Preparation System, User's Guide and Reference Manual, Leslie Lamport, Addison-Wesley Publishing Company, Inc., 1994.
2. LaTeX Beginner's Guide, Stefan Kottwitz, Packt Publishing Ltd, 2011.
3. LaTeX and Friends, M.R.C. van Dongen, Springer-Verlag Berlin Heidelberg, 2012



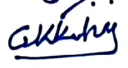
Workload

Sr. No.	Content	No. of Theory Lectures	No. of Practical 1pr=3hr	Total Lectures
1	Unit 1	2	2pr=2*2=6L	08
2	Unit 2	4	1pr=1*3=3L	07
3	Unit 3	2	2pr=2*2=6L	08
4	Unit 4	4	1pr=1*3=3L	07
Total		12	18	30

Coordinator: Mr. Shedge S.D.

Name of Faculty: Mr. Shedge S.D.

• BOS Committee:

- Mr. Shedge S.D. 
- Miss. Jadhav R.J. 
- Mr. Kolhe G.K. 

Time Table

Theory

Sr. No.	Day and Date	Time	Unit	Name of Faculty/ Resource Person	Theory/ Practical
1	Friday, 31/01/2025	11.00 am to 11.45 a.m.	UNIT 1	Mr. Shedge S.D.	Theory
2	Friday, 31/01/2025	12.00 am to 12.45 a.m.	UNIT 1	Mr. Shedge S.D.	Theory
3	Saturday, 01/02/2025	11.00 am to 11.45 a.m.	UNIT 1	Mr. Shedge S.D.	Theory
4	Saturday, 01/02/2025	12.00 am to 12.45 a.m.	UNIT 1	Mr. Shedge S.D.	Theory
5	Friday, 07/02/2025	11.00 am to 11.45 a.m.	UNIT 2	Mr. Shedge S.D.	Theory
6	Friday, 07/02/2025	12.00 am to 12.45 a.m.	UNIT 2	Mr. Shedge S.D.	Theory
7	Saturday, 08/02/2025	11.00 am to 11.45 a.m.	UNIT 2	Mr. Shedge S.D.	Theory
8	Saturday, 08/02/2025	12.00 am to 12.45 a.m.	UNIT 2	Mr. Shedge S.D.	Theory
9	Friday, 18/02/2025	11.00 am to 11.45 a.m.	UNIT3	Mr. Shedge S.D.	Theory
10	Friday, 18/02/2025	12.00 am to 12.45 a.m.	UNIT3	Mr. Shedge S.D.	Theory
11	Saturday, 19/02/2025	11.00 am to 11.45 a.m.	UNIT3	Mr. Shedge S.D.	Theory
12	Saturday, 19/02/2025	12.00 am to 12.45 a.m.	UNIT3	Mr. Shedge S.D.	Theory

Time Table

Practical

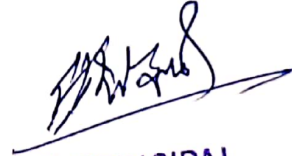
Sr. No.	Day and Date	Time	Unit	Name of Faculty/ Resource Person	Theory/ Practical
1	Monday, 07/02/2025	08.00 am to 11.00 a.m.	UNIT 1	Mr. Shedge S.D.	Practical
2	Monday, 14/02/2025	08.00 am to 11.00 a.m.	UNIT 1	Mr. Shedge S.D.	Practical
3	Tuesday 15/02/2025	08.00 am to 11.00 a.m.	UNIT 2	Mr. Shedge S.D.	Practical
4	Monday, 21/02/2025	08.00 am to 11.00 a.m.	UNIT 2	Mr. Shedge S.D.	Practical
5	Tuesday 22/02/2025	08.00 am to 11.00 a.m.	UNIT 3	Mr. Shedge S.D.	Practical
6	Monday, 28/02/2025	08.00 am to 11.00 a.m.	UNIT 3	Mr. Shedge S.D.	Practical



Coordinator
Short Term Course



Chairman
Short Term Course




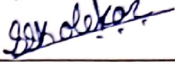
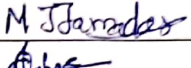
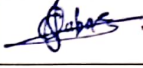
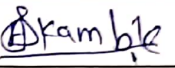

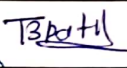

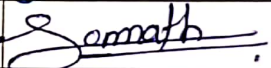
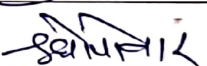
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Rajarshi Chhatrapati Shahu College Kolhapur
Department of Mathematics
Short Term Course
Course: Mathematics into LaTeX

(2024-25)

Student List

Sr. No.	Roll No.	Name of The Student	Signature
1	SII-1	BORGAVE OM AJIT	
2	SII-4	KOLEKAR SAMRUDDHI SACHIN	
3	SII-45	JAMADAR MAHAMADREHAN JAVED	
4	SII-65	BABAR OMKAR SANJAY	
5	SII-70	KAMBLE ARJUN SUNIL	
6	SII-71	KAMBLE BHUMIKA CHANDRAKANT	
7	SII-73	PATIL TANVI BABAN	
8	SII-74	POWAR RAHUL PANDIT	
9	SII-75	POWAR SOMNATH BALASO	
10	SII-76	POWAR SHREYASH DHONDIRAM	



Head
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Rajarshi Chhatrapati Shahu College Kolhapur
Department Of Mathematics
Mathematics Into LaTeX
Presenty Sheet
2024-25

		Theory											
Roll No.		31/01/2025	31/01/2025	1/2/2025	1/2/2025	7/2/2025	7/2/2025	8/2/2025	8/2/2025	18/2/2025	18/2/2025	19/2/2025	19/2/2025
SII-1													
SII-4													
SII-45													
SII-65													
SII-70													
SII-71													
SII-73													
SII-74													
SII-75													
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Presenty Sheet
2024-25

Practical

Roll No.	SII-1	SII-4	SII-45	SII-65	SII-70	SII-71	SII-73	SII-74	SII-75	SII-76
7/2/2025										
14/02/2025										
15/02/2025										
21/02/2025										
22/02/2025										
28/02/2025										

Head
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**Rayat Shikshan Sanstha's
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Course: Mathematics into LaTeX**

(2024-25)

Nature of Examination	50Marks
Q1) Tikk the Correct Alternative	(10M)
Q2) Solve any two of the following. (Run Programme on Computer)	(10M)
Q.3) Solve any two of the following . (Run Programme on Computer)	(20M)
Q4) Oral	(10M)



**Head
Department of Mathematics
Rajarshi Chh. Shahu College
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Rayat Shikshan Sanstha's
Rajarshi Chhatrapati Shahu College Kolhapur

Short Term Course

Mathematics Into LaTeX

Date – 01/03/2025

Time – 11am to 02.00pm

Marks: 50

(10)

Q1) Tikk the Correct Alternative

1. Which is correct syntax for Latex Table?

- a) `\begin{tables}` b) `\begin{Tabular}` c) `\ start{tables}` d) `\open{tables}`

2. Correct syntax for $\frac{a}{b}$ is

- a) `$\frac{a}{b}$` b) `$(\frac{a}{b})$` c) `a/b` d) `$\divide{a}{b}$`

3. Correct syntax for 2^{a+b} is

- a) `2^a+b` b) `2^a+b` c) `2^{a+b}` d) `\exp{2}{a+b}`

4. Correct syntax for equation $ax + by = c$ is

- a) `ax + by = c` b) `\ ax + by = c` c) `$ ax + by = c$` d) `ax + by = c\\`

5. Which is correct syntax for latex?

- a) `\begin{ } ... \stop{ }` b) `\begin{ } ... \end{ }` c) `\start{ } ... \stop{ }` d) `\start{ } ... \end{ }`

6. Latex provides which of the following environment for list?

- a) Enumerate b) Itemize c) Description d) All of the above

7. Display the title by syntax _____

- a) `\make` b) `\title` c) `\maketitle` d) `maketitle`

8. The syntax for Real Analysis(bold font) is _____

- a) `\textrm{Real Analysis}` b) `\textbf{Real analysis}`
c) `textbf{Real Analysis}` d) `\text{Real Analysis}`

9. The syntax for $\sqrt{2}$ is

- a) `\sqrt{2}` b) `sqrt{2}` c) `\sqrt(2)` d) `sqrt(2)`

10. Latex is developed by _____

- a) Donald E. Knuth b) Guido c) Dannis Ritchie d) Brendon Eich

Q2) Solve any two of the following.

(10M)

1) Run in LaTeX code for the following equation.

$$\int_{-\infty}^{\infty} e^{-x^2} dx = \pi$$

2) Run in LaTeX for the following equation.

3) Run in LaTeX program to rotate a figure counter-clock wise by an angle 45° .

$$\lim_{x \rightarrow 0} \frac{\sin x}{x} = 1$$

4) Run in LaTeX code for following system of equation.

$$y = d \quad (1)$$

$$y = cx + d \quad (2)$$

$$y = bx^2 + cx + d \quad (3)$$

$$y = ax^3 + bx^2 + cx + d \quad (4)$$

Q.3) Solve any two of the following .

(20M)

1) Run in LaTeX code for the following system of equation using gather environment.

$$x = r \cos \phi \sin \theta$$

$$y = r \sin \phi \sin \theta$$

$$z = r \cos \theta$$

2) Run in LaTeX code for the following.

$$\begin{array}{llll} \text{i)} \begin{vmatrix} 5 & -6 & 7 \\ 1 & 4 & 3 \\ 3 & 7 & 2 \end{vmatrix} & \text{ii)} \begin{pmatrix} 5 & -6 & 7 \\ 1 & 4 & 3 \\ 3 & 7 & 2 \end{pmatrix} & \text{iii)} \begin{bmatrix} 5 & -6 & 7 \\ 1 & 4 & 3 \\ 3 & 7 & 2 \end{bmatrix} & \text{iv)} \begin{vmatrix} 5 & -6 & 7 \\ 1 & 4 & 3 \\ 3 & 7 & 2 \end{vmatrix} \\ \text{v)} \begin{vmatrix} 5 & -6 & 7 \\ 1 & 4 & 3 \\ 3 & 7 & 2 \end{vmatrix} & & & \end{array}$$

3) Run in LaTeX code for the following.

$$f(x) = x^3 - 4x^2 + 5x + 10$$

$$f(x) = x^3 - 4x^2 + 5x + 10$$

$$f(x) = x^3 - 4x^2 + 5x + 10$$

$$f(x) = x^3 - 4x^2 + 5x + 10$$

$$f(x) = x^3 - 4x^2 + 5x + 10$$

4) Run in LaTeX code for following system of equation using eqnarray environment.

$$x + 2y - 2z = -11$$

$$y + z = 11$$

$$z = 21$$

Q4) Oral

(10)

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(2024-25)

Marks List

Sr. No.	Roll No.	Name of The Student	Marks out of 50
1	SII-1	BORGAVE OM AJIT	40
2	SII-4	!KOLEKAR SAMRUDDHI SACHIN	46
3	SII-45	JAMADAR MAHAMADREHAN JAVED	44
4	SII-65	BABAR OMKAR SANJAY	48
5	SII-70	KAMBLE ARJUN SUNIL	48
6	SII-71	KAMBLE BHUMIKA CHANDRAKANT	44
7	SII-73	!PATIL TANVI BABAN	40
8	SII-74	POWAR RAHUL PANDIT	40
9	SII-75	POWAR SOMNATH BALASO	42
10	SII-76	POWAR SHREYASH DHONDIRAM	40



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Rayat Shikshan Sanstha's

Rajarshi Chhatrapati Shahu College, Kolhapur
Certificate Course In
Mathematics Into Latex
2024-25

This is to certify Mr./Miss _____ Has successfully
completed the course of Mathematics Into Latex from 31/01/2025 to 29/02/2025(30 Hours) Organized by
Department of Mathematics, Rajarshi Chhatrapati Shahu College Kolhapur.

Coordinator

IQAC Coordinator

Principal,
R.C. Shahu College, Kolhapur