

Sree Narayana College, Kollam

Department of Mathematics

Certificate Course Syllabus 2020-2021

Title of the Course: LATEX - A Mathematical Software

Contact Hours: 30 hr [15(T) + 15(P)]

Module 1:

LATEX for preparing a project report in Mathematics (36 Hours) Graphical User Interface (GUI)/ Editor like Kile or TeXstudio should be used for providing training to the students. The main topics in this module are following: Typesetting a simple article and compiling it; How spaces are treated in the document; Document layout : various options to be included in the documentclass command, page styles, splitting files into smaller files, breaking line and page, using boxes (like, mbox) to keep text unbroken across lines, dividing document in to parts like frontmatter, mainmatter, backmatter, chapters, sections, etc, cross referencing with and without page number, adding footnotes; Emphasizing words with $\backslash\text{emph}$, $\backslash\text{texttt}$, $\backslash\text{textsl}$, $\backslash\text{textit}$, $\backslash\text{underline}$ etc. Basic environments like enumerate, itemize, description, flushleft, flushright, center, quote, quotation Controlling enumeration via the enumerate package.

Module 2

Tables : preparing a table and floating it, the long table environment; Typesetting mathematics : basic symbols, equations, operators, the equation environment and reference to it, the displaymath environment, exponents, arrows, basic functions, limits, fractions, spacing in the mathematics environments, matrices, aligning various objects, multi-equation environments, suppressing numbering for one or more equations, handling long equations, phantoms, using normal text in math mode, controlling font size, typesetting theorems, definitions, lemmas, etc, making text bold in math mode, inserting symbols and environments (array, pmatrix etc) using the support of GUIs; Figures : Including JPG, PNG graphics with graphicx package, controlling width, height etc, floating figures, adding captions, the wrapfig package.

Module 3

Adding references/ bibliography and citing them, using the package hyperref to add and control hypertext links, creating presentations with pdf screen, creating new commands; Fonts : changing font size, various fonts, math fonts, Spacing : changing line spacing, controlling horizontal, vertical spacing, controlling the margins using the geometry package, full page package Preparing a dummy project with titlepage, acknowledgement, certificates, table of contents (using $\backslash\text{table of contents}$), list of tables, table of figures, chapters, sections, bibliography (using the bibliography environment). This dummy project

Amal K. Jayaram
Principal
Sree Narayana College
Kollam



should contain at least one example from each of the topics in the syllabus, and should be submitted for internal evaluation before the end semester practical examination.

Reference.

1. Tobias Oetiker, Hubert Partl, Irene Hyna and Elisabeth Schlegl. The (Not So) Short Introduction to L^AT_EX₂ ϵ , Samurai Media Limited (or available online at <http://mirrors.ctan.org/info/lshort/english/lshort.pdf>)
2. Leslie Lamport. L^AT_EX: A Document Preparation System, Addison-Wesley, Reading, Massachusetts, second edition, 1994
3. L^AT_EX Tutorials—A Primer, Indian TeX Users Group, available online at <https://www.tug.org/twg/mactex/tutorials/ltxprimer-1.0.pdf>
4. H. J. Greenberg. A Simplified introduction to L^AT_EX, available online at <https://www.ctan.org/tex-archive/info/simplified-latex/>

Sree Narayana College, Kollam

Department of Mathematics

2020-2021

Certificate Course Syllabus

Title of the Course : LATEX :- A Mathematical Software

Relevance of the Course

LaTeX is widely used in academia for the communication and publication of scientific documents in many fields, including mathematics, statistics, computer science, engineering, physics, economics, linguistics, quantitative psychology, philosophy, and political science. It also has a prominent role in the preparation and publication of books and articles that contain complex multilingual materials, such as Sanskrit and Greek. LaTeX uses the TeX typesetting program for formatting its output, and is itself written in the TeX macro language.

LaTeX can be used as a standalone document preparation system, or as an intermediate format. In the latter role, for example, it is sometimes used as part of a pipeline for translating DocBook and other XML-based formats to PDF. The typesetting system offers programmable desktop publishing features and extensive facilities for automating most aspects of typesetting and desktop publishing, including numbering and cross-referencing of tables and figures, chapter and section headings, the inclusion of graphics, page layout, indexing and bibliographies. Like TeX, LaTeX started as a writing tool for mathematicians and computer scientists, but even from early in its development, it has also been taken up by scholars who needed to write documents that include complex math expressions or non-Latin scripts, such as Arabic, Devanagari and Chinese.

LaTeX is intended to provide a high-level, descriptive markup language that accesses the power of TeX in an easier way for writers. In essence, TeX handles the layout side, while LaTeX handles the content side for document processing. LaTeX comprises a collection of TeX macros and a program to process LaTeX documents, and because the plain TeX formatting commands are elementary, it provides authors with ready-made commands for formatting and layout requirements such as chapter headings, footnotes, cross-references and bibliographies.

Objective of the course

- LATEX is a high-quality typesetting system it includes features designed for the production of technical and scientific documentation
- LATEX is the de facto standard for the communication and publication of scientific documents.
- In higher education, project and thesis are mainly prepared in LATEX

Outcome of the course

- LaTeX is designed by mathematicians for producing beautifully typeset mathematics
- LaTeX has the author specify various elements of the document, such as title, authors, chapter and section headings, environments for theorems and proofs, appendices, and the bibliography
- LaTeX elegantly handles numbering and internal referencing within a document.
- One can easily create macros for use within a particular document. Moreover, LaTeX has a coherent package system that makes it relatively easy for users to write extension packages to provide additional features.
- Most LaTeX programs have a very user-friendly interface. Moreover, since LaTeX has existed for so long, there is a great deal of good documentation

Department of Mathematics SN College KollamCertificate course :-LATEX - A Mathematical Software
2020-2021**BOARD OF STUDIES**

Name	Designation	Position held
Ravivarma B	Assistant Professor, S.N. College, Kollam	Chairman
Kuleena Das	Assistant Professor, S.N. College, Kollam	Member
Mithun AT	Assistant Professor, S.N. College, Kollam	Member
Aswathy S	Assistant Professor, S.N. College, Kollam	Member
Adersh VK	Assistant Professor, T.K.M. College, Kollam	Member
Dr. Aswathy MR	Assistant Professor, T.K.M. College, Kollam	Member

**We are the shapers
of great minds and
honourable values.**

Sree Narayana College, Kollam



**Contact us : Ravivarama B
Contact no: 9496107224**

SREE NARAYANA COLLEGE KOLLAM

(Affiliated to the university of kerala)
Reaccredited by NAAC with 'A' Grade
Atal Ranking : A Band



**COLLEGE - LEVEL CERTIFICATE COURSE
on**

"LaTeX - A Mathematical Software"

Department of Mathematics(2020-21)

SREE NARAYANA COLLEGE, KOLLAM

NOTICE

A meeting of the certificate course Board of studies members will be held on 28/01/2021 at 1.30pm in computer lab, Department of mathematics. All the members are requested to attend the meeting without fail.

Agenda:

1. Commencement of certificate course

Copy to all members

S.N .College, Kollam

27/01/2021


Chairman
~~_____~~

NOTICE

A meeting of the certificate course Board of studies members will be held on 26 /03/2021 at 1.30pm in computer lab, Department of mathematics. All the members are requested to attend the meeting without fail.

Agenda:

1. Publishing results of certificate course

Copy to all members

S.N .College,Kollam

25/03/2021


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**List of Students Applied for Certificate Course LATEX :-
A Mathematical Software (2020-2021)**

Sl No	Name	Candidate Code	Department
1	22019132002	Ajesh.A	Mathematics
2	22019132008	AROMAL K B	Mathematics
3	22019132009	Arsha A.S	Mathematics
4	22019132010	Aswathy A	Mathematics
5	22019132011	Aihira A	Mathematics
6	22019132012	Bilal.j	Mathematics
7	22019132013	Darshana.D.S	Mathematics
8	22019132014	Mayukha	Mathematics
9	22019132015	Meenakshi.s	Mathematics
10	22019132016	Nandu kutian R	Mathematics
11	22019132028	AkhilRaj A R	Mathematics
12	22019132029	Amrutha J.	Mathematics
13	22019132030	ANANDAN.A	Mathematics
14	22019132031	Ananthu S	Mathematics
15	22019132032	Anjana L	Mathematics
16	22019132033	Aparna Raj	Mathematics
17	22019132034	Arjun Krishna M	Mathematics
18	22019132035	ARUN JACOB	Mathematics
19	22019132036	Arunima Ignatius	Mathematics
20	22019132037	ATHIRA AM	Mathematics
21	22019132038	Athul S	Mathematics
22	22019132039	Athulya G R	Mathematics
23	22019132040	Bushra S	Mathematics
24	22019132041	Dakshina C. R.	Mathematics
25	22019132048	NITHIN S	Mathematics

Certificate Course.-LATEX - A Mathematical Software (2020-2021)

Bio data of students

SL Number	Register Number	Student's Name	Gender	ADDRESS	STUDENT MOBILE NUMBER	EMAIL ID
1	22019132002	Ajesh.A	Male	Nedumpurathu veedu , punthalathazham , killikolloor P.O, Kollam	7305282520	ajeshaniikumar0@gmail.com
2	22019132008	AROMAL K B	MALE	9074963909	7994512168	archanarajeev7034@gmail.com
3	22019132009	Arsha A.S	Female	Pulimootil Veedu Edakkidom (PO) Edakkidom 691505	7902384928	aromalcv20@gmail.com
4	22019132010	Aswathy A	Female	Chirakkara p.o Kollam	7012868255	aswathysureshkumar04@gmail.com
5	22019132011	Akhira A	Female	Arathy Bhavan Edavattom Chirakkara po Kollam	8075020059	athirasureshkumar04@gmail.com
6	22019132012	Bilal.J	Male	Vilayil veedu kulopadam nedumapana po kollam	8111943031	bilalajaleel789@gmail.com
7	22019132013	Darshana.D.S	Female	Saralalayam,clappana south,clappana.p.o.karunag apally	7356763283	darshanadayandan2019@gmail.com
8	22019132014	Mayukha	Female	Vrindaram Edavanaserry Mynagappally P.O Kollam 690519	8547750452	mayukhamayu1@gmail.com
9	22019132015	Meenakshi.s	Female	Kochuveetil padinjattathil, Eravipuram p.o kollam	7994512168	sobhaudayan1234@gmail.com
10	22019132016	Nandu kuttan R	Male	Thottumkara Veedu Uliyanadu Karamcode PO	9747496331	nandukuttan180@gmail.com
11	22019132028	AkhilRaj A R	Male	Akhil nivas,pochemkonam, ezhukone po kollam	9074759162	akhilrajzhukone@gmail.com
12	22019132029	Amrutha J.	female	Sheeja mandiram .kudavattoor PO,Odenavattom	9544699536	amruthaj2812@gmail.com
13	22019132030	ANANDAN.A	Male	Meena Bhavan, Mundakkal, Kollam - 1	9633726219	gandharvajit2000@gmail.com
14	22019132031	Ananthu S	Male	Vyshnavi Venpalakkara Kootikkada P.O kollam	8921333701	syamananthvis@gmail.com

15	22019132032	Anjana L	Female	Santhi bhavanam karuvelli (P O) ezhukone Kollam	9947607127	anjanammuzz007@gmail.com
16	22019132033	Aparna Raj	Female	Sreenilayam vadakkumthala Po karunagappally	7902218251	araj33317@gmail.com
17	22019132034	Arjun Krishna M	Male	Pottimadam, Chavara Bridge P O Kollam	9447117249	arjun15032001@gmail.com
18	22019132035	ARUN JACOB	MALE	OLICKARA MELATHIL CHERUMOODU VELLIMON P O KOLLAM	7994909091	arunjacob01.aj@gmail.com
19	22019132036	Arunima Ignatius	Female	Sunitha Bhavan,Vakkeelazhikom,Cu tchery P.O,Vaddy,Kollam.	9562660058	arunima2042000@gmail.com
20	22019132037	ATHIRA AM	FEMALE	ARUNODHAYAM PUNUKKANNOOR PERUMPUZHA PO KOLLAM	8078413381	athlachu2001@gmail.com
21	22019132038	Athul S	Male	Kadamanthekathil kilikalloor Priyadarshini nagar 89 p o kollam	9747083794	athulkunju987@gmail.com
22	22019132039	Athulya G R	Female	Prabha Mandiram Punukannoor Perumpuzha (PO)	9946954544	athulyagr808@gmail.com
23	22019132040	Bushra S	Female	Mathamvila Thekkathil Mynagappally South	7510390909	bushrashamsudeen3@gmail.com
24	22019132041	Dakshina C. R.	Female	Kuzhivila Veedu Darshana Nagar 90 Pattathanam P O Kollam 691021	9188505549	dakshinasajitha2000@gmail.com
25	22019132048	NITHIN S	MALE	SREE NIVAS, EDAVATTAM, VELLIMON P.O.	8848163898	nin035756@gmail.com

**Certificate Course LATEX :- A Mathematical
Software.....2020-2021**

Selection list of students

Sl No	Name	Candidate Code	Department
1	22019132002	Ajesh.A	Mathematics
2	22019132008	AROMAL K B	Mathematics
3	22019132009	Arsha A.S	Mathematics
4	22019132010	Aswathy A	Mathematics
5	22019132011	Athira A	Mathematics
6	22019132012	Bilal.J	Mathematics
7	22019132013	Darshana.D.S	Mathematics
8	22019132014	Mayukha	Mathematics
9	22019132015	Meenakshi.s	Mathematics
10	22019132016	Nandu kuttan R	Mathematics
11	22019132028	AkhilRaj A R	Mathematics
12	22019132029	Amrutha J.	Mathematics
13	22019132030	ANANDAN.A	Mathematics
14	22019132031	Ananthu S	Mathematics
15	22019132032	Anjana L	Mathematics
16	22019132033	Aparna Raj	Mathematics
17	22019132034	Arjun Krishna M	Mathematics
18	22019132035	ARUN JACOB	Mathematics
19	22019132036	Arunima Ignatius	Mathematics
20	22019132037	ATHIRA AM	Mathematics
21	22019132038	Athul S	Mathematics
22	22019132039	Athulya G R	Mathematics
23	22019132040	Bushra S	Mathematics
24	22019132041	Dakshina C. R.	Mathematics
25	22019132048	NITHIN S	Mathematics

Ajesh
Armal
Arsha
Aswathy
Athira
Bilal
Darshana
Mayukha
Meenakshi
Nandu
Akhil
Amrutha
Anandan
Ananthu
Anjana
Aparna
Arjun
Arjun
Arunima
Athira
Athul
Athulya
Bushra
Dakshina
Nithin

**Certificate Course LATEX :- A Mathematical
Software.....2020-2021**

list of students passed

No	Name	Candidate Code	Department
1	22019132002	Ajesh.A	Mathematics
2	22019132008	AROMAL K B	Mathematics
3	22019132009	Arsha A.S	Mathematics
4	22019132010	Aswathy A	Mathematics
5	22019132011	Athira A	Mathematics
6	22019132012	Bilal.j	Mathematics
7	22019132013	Darshana.D.S	Mathematics
8	22019132014	Mayukha	Mathematics
9	22019132015	Meenakshi.s	Mathematics
10	22019132016	Nandu kuttan R	Mathematics
11	22019132028	AkhilRaj A R	Mathematics
12	22019132029	Amrutha J.	Mathematics
13	22019132030	ANANDAN.A	Mathematics
14	22019132031	Ananthu S	Mathematics
15	22019132032	Anjana L	Mathematics
16	22019132033	Apama Raj	Mathematics
17	22019132034	Arjun Krishna M	Mathematics
18	22019132035	ARUN JACOB	Mathematics
19	22019132036	Arunima Ignatius	Mathematics
20	22019132037	ATHIRA AM	Mathematics
21	22019132038	Athul S	Mathematics
22	22019132039	Athulya G R	Mathematics
23	22019132040	Bushra S	Mathematics
24	22019132041	Dakshina C. R.	Mathematics
25	22019132048	NITHIN S	Mathematics

Ajesh
 Aromal K B
 Arsha
 Aswathy
 Athira
 Bilal
 Darshana
 Mayukha
 Meenakshi
 Nandu kuttan R
 Akhil Raj
 Amrutha
 Anandan
 Ananthu
 Anjana
 Apama Raj
 Arjun Krishna
 Arun Jacob
 Arunima
 Athira
 Athul
 Athulya
 Bushra
 Dakshina C.R.
 Nithin

SREE NARAYANA COLLEGE

KOLLAM

DEPARTMENT OF MATHEMATICS

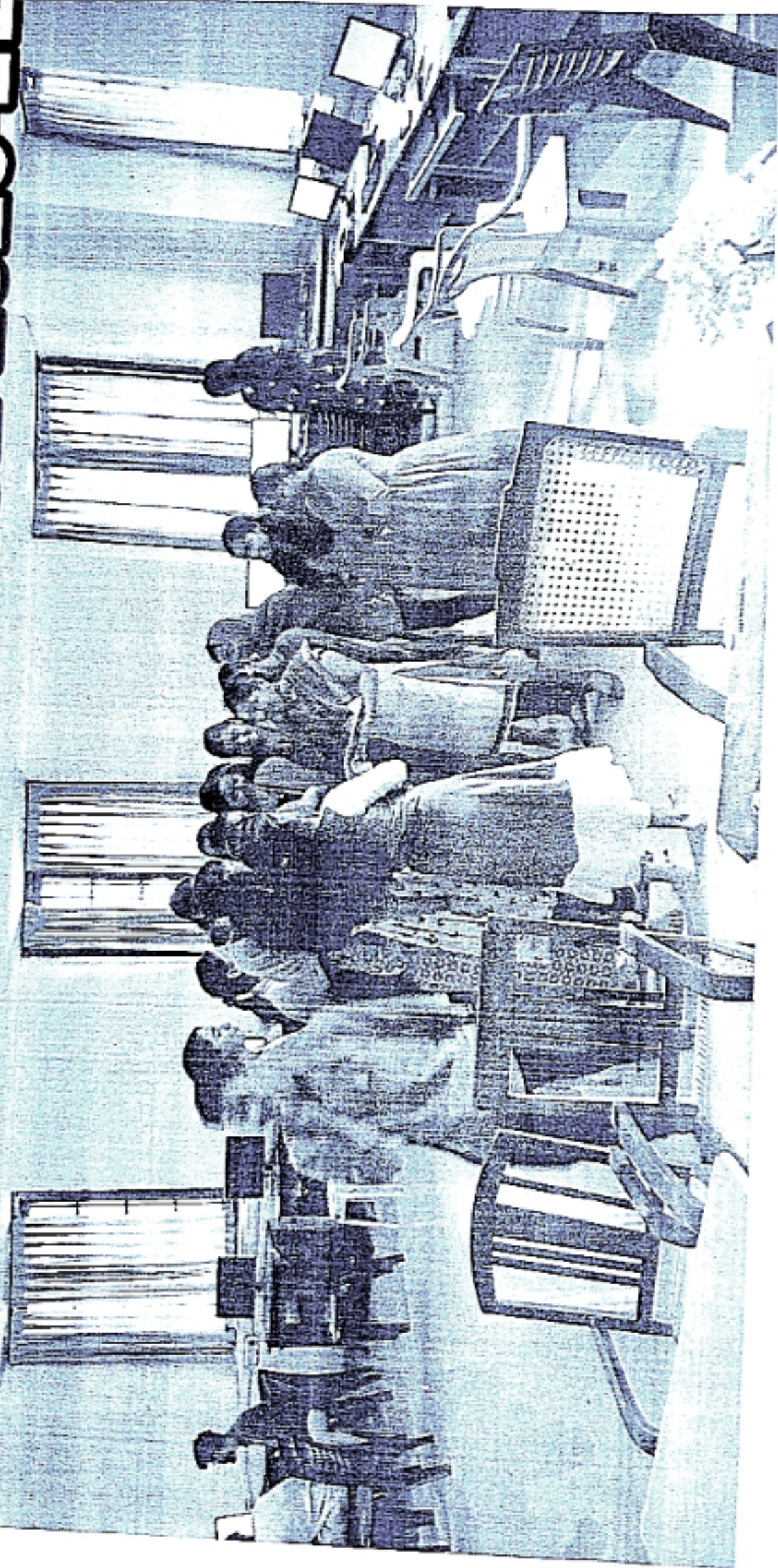
CERTIFICATE COURSE (2020-2021)

LATEX:- A Mathematical Software

LIST OF TEACHERS HANDLING THE COURSE

1. Ravivarma B (Assistant Professor , Department of Mathematics)

CERTIFICATE COURSE 2020-21



SREE NARAYANA COLLEGE KOLLAM

DEPARTMENT OF MATHEMATICS

CERTIFICATE COURSE 2021-2022

Latex :- A Mathematical Software

TIME TABLE

Ravivarma B	DAY	TIME	THEORY/LAB
	MONDAY	8.30 to 9.30	THEORY
	3.15 4.15	Lab	
TUESDAY	8.30 to 9.30	THEORY	
	3.15 4.15	THEORY	
WEDNESDAY	8.30 to 9.30	THEORY	
	3.15 4.15	THEORY	
THURSDAY	8.30 to 9.30	Lab	
	3.15 4.15	THEORY	
FRIDAY	8.30 to 9.30	THEORY	
	3.15 4.15	THEORY	
SATURDAY	10 am to 1pm	Lab	

SREE NARAYANA COLLEGE KOLLAM
DEPARTMENT OF MATHEMATICS
CERTIFICATE COURSE 2020-2021
LATEX - A Mathematical Software

DATE	DAY	PRACTICAL EXAM TIME TABLE TIME
24/03/2021	wednesday	1.30pm to 3.30pm

CERTIFIED COURSE STUDENTS LIST & ATTENDANCE STATEMENT 2020-2021 (PRACTICAL)

Sl no	Name	Class	15/5/21	22/5/21	12/6/21
1	Ajesh.A	Mathematics	p	P	P
2	AROMAL K B	Mathematics	p	P	P
3	Arsha A.S	Mathematics	p	P	P
4	Aswathy A	Mathematics	p	P	P
5	Athira A	Mathematics	p	P	P
6	Bilal J	Mathematics	p	P	P
7	Darshana.D.S	Mathematics	p	P	P
8	Mayukha	Mathematics	p	P	P
9	Meenakshi.s	Mathematics	p	P	P
10	Nandu kuttan R	Mathematics	p	P	P
11	AkhilRaj A R	Mathematics	p	P	P
12	Amrutha J.	Mathematics	p	P	P
13	ANANDAN.A	Mathematics	p	P	P
14	Ananihu S	Mathematics	p	P	P
15	Anjana L	Mathematics	p	P	P
16	Aparna Raj	Mathematics	p	P	P
17	Arjun Krishna M	Mathematics	p	P	P
18	ARUN JACOB	Mathematics	p	P	P
19	Arunima Ignatius	Mathematics	p	P	P
20	ATHIRA AM	Mathematics	p	P	P
21	Athul S	Mathematics	p	P	P
22	Aihulya G R	Mathematics	p	P	P
23	Bushra S	Mathematics	p	P	P
24	Dakshina C. R.	Mathematics	p	P	P
25	NITHIN S	Mathematics	p	P	P

CERTIFIED COURSE STUDENTS MARK LIST 2020-2021					
Sl no	Name	Class	TOTAL MARKS	MARKS OBTAINED	Passed/Failed
1	Ajesh.A	Mathematics	50	49	Passed
2	AROMAL K B	Mathematics	50	45	Passed
3	Arsha A.S	Mathematics	50	50	Passed
4	Aswathy A	Mathematics	50	50	Passed
5	Athira A	Mathematics	50	40	Passed
6	Bilal.j	Mathematics	50	48	Passed
7	Darshana.D.S	Mathematics	50	50	Passed
8	Mayukha	Mathematics	50	48	Passed
9	Meenakshi.s	Mathematics	50	48	Passed
10	Nandu kuttan	Mathematics	50	50	Passed
11	AkhilRaj A R	Mathematics	50	50	Passed
12	Amrutha J.	Mathematics	50	48	Passed
13	ANANDAN.A	Mathematics	50	47	Passed
14	Ananthu S	Mathematics	50	48	Passed
15	Anjana L	Mathematics	50	49	Passed
16	Aparna Raj	Mathematics	50	50	Passed
17	Arjun Krishna	Mathematics	50	50	Passed
18	ARUN JACOB	Mathematics	50	50	Passed
19	Arunima Ignat	Mathematics	50	50	Passed
20	ATHIRA AM	Mathematics	50	50	Passed
21	Athul S	Mathematics	50	50	Passed
22	Athulya G R	Mathematics	50	49	Passed
23	Bushra S	Mathematics	50	49	Passed
24	Dakshina C. P	Mathematics	50	48	Passed
25	NITHIN S	Mathematics	50	50	Passed
26	Ajesh.A	Mathematics	50	50	Passed

Sree Narayana College, Kollam

Department of Mathematics

2020-2021

Certificate Course Report

Title of the Course: Latex :-A Mathematical Software

A meeting was held on 28/01/2021 at 1.30 pm in the computer lab, Department of Mathematics to discuss about the commencement of certificate course on Latex :-A Mathematical Software.

The members of the board of studies for certificate course were present in the meeting. Chairman :-Ravivarma B. presided the meeting. All together 25 students applied for the course. The classes were handled by Ravivarma B., Assistant professor, Department of mathematics S.N.C. Kollam. The class commenced on 01/02/2021 . Both theory and practical classes were conducted for this students.

After successfully completing the classes practical exam was conducted on 24/08/2021 from 1.30 pm to 3.30 pm. All this students attended the exam and the pass percentage was 100%.

Thus the certificate course helped students to gain practical knowledge in this field, also this was an added advantage for the students to enhance their skill development as well as their curriculum vitae.

SREE NARAYANA COLLEGE, KOLLAM
 Department of Mathematics
 2020-21


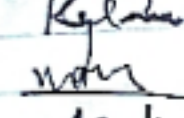




Title of course : MATLAB PROGRAMMING,
 Latex : A mathematical software
 Meeting held on : 28/1/2021 at computer lab
 Department of Mathematics

Minutes Report

Department has decided to commence classes
 on 1/2/2021

The Board of studies has approved the syllabus.
 The course coordinator has scheduled the programme
 details and timetable of the classes.
 The Board of studies has decided to conduct
 external examination at the end of the year.

Attendance statement of the meeting

Sl. No.	Name of faculty	Signature
1	Ravivarma B	
2	Kuleena Das	
3	Mithun A T	
4	Aswathy S	
5	Adeesh V K	
6	Dr. Aswathy M R	

SREE NARAYANA COLLEGE, KOLLAM
 Department of Mathematics
 2020-21

Title of course : MATLAB PROGRAMMING.







Lafex: A mathematical software


Meeting held on: 26/3/2021 at computer lab
 Department of Mathematics

Minutes Report

The Board of studies has decided to publish
 the result on 31/3/2021.

Attendance statement of the meeting

Sl.No	Name of faculty	Signature
1.	Ravivarma B	
2.	Kuleena Das	
3.	Mithun A T	
4.	Aswoathy S	
5.	Adersh V K	
6.	Dr. Aswoathy MR	


 Principal
 Sree Narayana College
 Kollam.

