S.T.S.N. Govt. Degree College

KADIRI - 515591

Sri Sathya Sai Dist., A.P.

DEPARTMENT OF MATHEMATICS

Certificate course - **Partial Differentiation**

2022-23

Permission letter to conduct **Partial Differential Equations Certificate Course – 2022-23**

From
P.SivaPrasad
Lecturer in Mathematics
Department of Mathematics
S.T.S.N GDC,
Kadiri,

To
The Principal,
S.T.S.N GDC,
Kadiri,

Respected Principal,

Subject: Permission to conduct **Certificate Course** on **Partial Differential Equations Fundamentals** for I B.Sc., (MPCS) - 2022-23

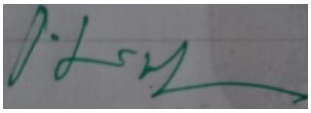
The Department of Mathematics at S.T.S.N. Government Degree College, Kadiri, kindly requests your permission to conduct a **Certificate** Course in **Partial Differential Equations** subject for the newly admitted 1st year B.Sc., (MPCS) batch of the academic year 2022-23.

The purpose of this Certificate Course is to help our student's transition smoothly into the college environment and to provide them with essential foundational knowledge in Partial Differential Equations. The course will introduce them to our department's curriculum, faculty members, and resources, ensuring a confident start to their academic journey.

The proposed schedule for the Certificate Course is 20.11.2022 to 19.12.2022, and we plan to hold the sessions within the college premises. We seek your approval to utilize the college facilities for this purpose, and we assure you that we will adhere to all college regulations and guidelines.

Thank you for considering our request. Your support in this endeavor is highly appreciated.

Yours faithfully,



P.Sviaprasad
Department of MatheMatics.
S.T.S.N GDC, Kadiri.

Permission letter to conduct **Certificate Course – 2022-23**

From
D.P.Sviaprasad,
Lecturer in Mathematics
Department of Mathematics
Kadiri.

To
Dr. S. Smitha
Principal,
S.T.S.N GDC,
Kadiri,

Respected Principal,

Subject: Permission to Conduct Certificate Course in Mathematics for 1st Year B.Sc., (Mpcs)

2022-23 Batch

I kindly request your permission to conduct a **Certificate Course** in the subject **Mathemaics** for 1st year B.Sc (MPCS) batch of the academic year **2022-23**

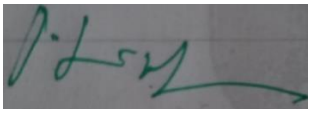
As a Lecturer in the Department of Partial Differential Equations at S.T.S.N. Government Degree College, Kadiri, I believe that a Certificate Course will greatly benefit the new students by helping them adapt to the college curriculum and establish a strong foundation in the subject. The course aims to bridge any gaps between their previous studies and the requirements of the B.Sc., (MPCS) program.

The proposed schedule for the Certificate Course is **20.11.2022** to **19.12.2022**, and the sessions will be held within the college premises. The course will cover essential topics in Partial Differential Equations and introduce students to the department's resources and faculty members.

I assure you that I will ensure the smooth organization of the Certificate Course and will adhere to all college guidelines and regulations. Your approval for conducting this course would be invaluable in ensuring a successful academic transition for our students.

Thank you for your consideration.

Yours faithfully,



P.Sviaprasad,

Lecturer in Mathematics,
Department of Mathematics,
S.T.S.N. GDC, Kadiri.

MATHEMATICS - Certificate Course: 2022-23

Certificate Course (For I **Mathematics** students)

Syllabus:

The syllabus for a "bridge course" in partial differential equations can vary depending on the educational institution and the specific goals of the course. However, I can provide you with a general outline of topics that are commonly covered in introductory courses on partial differential equations. Keep in mind that the depth and complexity of each topic can vary based on the course level and the institution offering the course.

1. **Introduction to Partial Differential Equations:**
   - Definitions and classifications of partial differential equations.
   - Derivation and basic examples of partial differential equations from physical and engineering contexts.

2. **First-Order Partial Differential Equations:**
   - Classification of first-order PDEs (linear vs. nonlinear, quasilinear, etc.).
   - Method of characteristics for solving first-order PDEs.
   - Transport equations and the concept of characteristics.

3. **Second-Order Linear Partial Differential Equations:**
   - Classification of second-order linear PDEs (elliptic, parabolic, hyperbolic).
   - The heat equation (parabolic) and its solutions.
   - The wave equation (hyperbolic) and its solutions.
   - Laplace's equation (elliptic) and harmonic functions.

4. **Boundary Value Problems:**
   - Introduction to boundary value problems and boundary conditions.
   - Dirichlet, Neumann, and mixed boundary conditions.
   - Eigenfunction expansions and separation of variables.
   - Sturm-Liouville theory and eigenvalue problems.

5. **Finite Difference and Finite Element Methods:**
   - Introduction to numerical methods for solving PDEs.
   - Finite difference approximations and discretization.
   - Basics of finite element methods and mesh generation.

6. **Nonlinear Partial Differential Equations:**
   - Introduction to nonlinear PDEs and their importance in various fields.

- Methods for solving certain types of nonlinear PDEs (e.g., shock waves, solitons).

7. **Applications:**
   - Applications of PDEs in physics, engineering, and other sciences (e.g., heat conduction, fluid dynamics, electromagnetic fields).
   - Introduction to modeling and real-world problem-solving using PDEs.

8. **Advanced Topics (Optional, Depending on Course Level):**
   - Higher-order PDEs and their properties.
   - Green's functions and integral transform methods.
   - Nonlocal and fractional PDEs.

Remember that the syllabus can vary, and instructors may choose to emphasize certain topics based on the course's objectives and the background of the students. It's always a good idea to consult the official course materials or contact the instructor directly for the most accurate and up-to-date information about the course syllabus.

Department of Mathematics,
STSN GDC, KADIRI,
Sri Sathya Sai Dist.

Circular

To,

All 1st Year B.Sc (MPCS) Students, STSN Government Degree College, Kadiri

Subject: Partial Differential Equations Certificate Course - Mandatory Attendance

Dear Students,

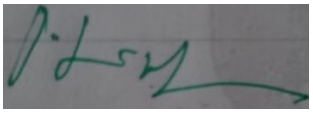
We are excited to inform you about the Partial Differential Equations Certificate Course organized by the Department of Mathematics. The course is scheduled from 20.11.2022 to 19.12.2022

Mandatory Attendance: Attendance for all sessions of the Partial Differential Equations Certificate Course is mandatory. This course is designed to provide you with a strong foundation in Mathematics and help you transition smoothly into your academic journey.

Purpose: The course will introduce you to essential concepts and resources. It will equip you with the necessary skills to excel in your studies.

We look forward to your active participation and a fruitful learning experience.

Best regards,



Lecturer in Mathematics,

Department of Mathematics,

STSN G D C, Kadiri.

STSN GDC, KADIRI.

S.T.S.N. GDC, KADIRI
Date: 09.11.2022

Department of Mathematics - Minutes of the Meeting:

Present:

- P.SivaPrasad,Lecturer in Mathematics.

Agenda:

1. Conduct of Partial Differential Equations Certificate Course
2. Syllabus - Paper allocation
3. Strict Attendance Guidelines

Resolutions for the mentioned topics:

1. Resolutions for Conduct of Certificate Course:

a) Resolved: The Department of Mathematics will conduct a Partial Differential Equations Certificate Course for the 1st year B.Sc. students from 20.11.2022 to 19.12.2022.

b) Resolved: Faculty members will actively participate in the planning, organization, and delivery of the Partial Differential Equations Certificate Course. The course content will be designed to cover essential concepts and topics to facilitate students' integration into college life.

2. Resolutions for Syllabus Paper Allocation: (Theory)

a) Resolved: The syllabus for the academic year 2022-23 has been reviewed and finalized. Topics will be allocated to each faculty member based on their expertise and availability.

b) Resolved: The faculty members will collaborate to ensure a balanced distribution of topics and a cohesive progression of the syllabus throughout the year.

3. Resolutions for Strict Attendance Guidelines:

Resolved: Strict attendance guidelines will be implemented for both the Partial Differential Equations Certificate Course and regular classes. Faculty members will take accurate attendance for all sessions and maintain records accordingly.

These resolutions will guide the Department of Mathematics in conducting the Partial Differential Equations, Certificate Course, allocating syllabus topics, and maintaining attendance rigorously. Adapt these resolutions as needed to align with the institution's policies and procedures.

List of Students in Certificate Course:

S.NO.	Student Name	Roll Number	Start date	End Date
1	ChintalakuntaKushidha	2242005050001	20.11.2022	19.12.2022
2	Dadithota Devendra	2242005050002	20.11.2022	19.12.2022
3	Derangula Meenakshi	2242005050003	20.11.2022	19.12.2022
4	Derangula Sree Lakshmi	2242005050004	20.11.2022	19.12.2022
5	K Rajasekhar	2242005050005	20.11.2022	19.12.2022
6	Nallabothula Madhu	2242005050006	20.11.2022	19.12.2022
7	Shaik Arshiya Banu	2242005050007	20.11.2022	19.12.2022
8	Shaik Shafiya	2242005050008	20.11.2022	19.12.2022

Activity Photos

STSN GOVERNMENT DEGREE COLLEGE

KADIRI, SRI SATHYASAI Dt.AP.

Re-Accredited With 'B' Grade by NAAC

An ISO 9001:2015 Institution

DEPARTMENT OF MATHEMATICS

CERTIFICATE OF COURSE COMPLETION

This is to certify that Mr/Miss_____ I B.Sc has successfully completed 30 days certificate course on "Partial Differentiation" Organised by Department of Mathematics from 20.11.2022 to 19.12.2022.

Mr.P.Siva Prasad
HOD of Mathematics

Dr.S.Smitha
Principal

From 20-11-2022 to 19-18-2022

REGISTER OF STUDENTS ATTENDANCE

FOR THE MONTH OF 1st 20

SRI MAHESWARA BOOK DEPOT
PRODDATUR

Name of the Institution

Class 1 Mpcs Section

Sl. No.	Admission No	NAME	CASTE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	No. of days Present	Date of Birth	Remarks
1		D. Devendra		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
2		N. Madhu		X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
3		Rajashekhar		X	a	a		a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a			
4		C. Rushidha		X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	a	X	X	X	X	X	X	X	X	X	a	X	X	a	a			
5		D. Meenakshi		X	X	X		X	X	X	a	X	X	X	X	X	X	X	X	X	X	X	a	a	X	X	X	X	X	a	X	X	X	X			
6		S. Shafiya		X	a	X		a	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	a	X	X	X	X	X	X	X			
7		S. Aashiya Banu		X	X	X		X	X	X	a	X	X	X	X	X	X	X	a	X	X	X	X	X	X	X	a	X	X	X	X	X	X	X			
8		Sree Lakshmi		X	a	X		X	X	X	X	X	a	X	X	X	X	X	X	X	X	X	X	X	X	X	X	a	X	X	X	X	X	X			

SUNDAY — SUNDAY — SUNDAY — SUNDAY

No. of Working Days

STSN Govt Degree College, Kadiri
Department of Mathematics

Attendance Statement

Group: MPCs **Date:**

S.No	Name of the Student	Regd. No	Signature of the Student
1	CHINTALAKUNTA KUSHIDHA	2242005050001	C. Jushidha
2	DADITHOTA DEVENDRA	2242005050002	D. Devendra
3	DERANGULA MEENAKSHI	2242005050003	D. Meenakshi
4	DERANGULA SREE LAKSHMI	2242005050004	D. Sree Lakshmi
5	K RAJASEKHAR	2242005050005	K. Rajasekhar
6	NALLABOTHULA MADHU	2242005050006	N. Madhu
7	SHAIK ARSHIYA BANU	2242005050007	S. Arshiya Banu
8	SHAIK SHAFIYA	2242005050008	S. Shafiya