



SRI DHARMASTHALA MANJUNATHESHWARA COLLEGE (AUTONOMOUS)

Re-Accredited by NAAC at A++ Grade

UJIRE - 574 240

TEACHER'S WORK DIARY

NAME : RAGHAVENDRA S.

DESIGNATION : Associate Professor & Head

DEPARTMENT : Physics (PG)

ACADEMIC YEAR : 2023 - 2024

PERSONAL PROFILE

NAME : *Raghavendra S.*
DESIGNATION : *Associate Professor*
DEPARTMENT : *PG Physics*
RESIDENTIAL ADDRESS :

PHONE NUMBER : (R) (O)
CELL NUMBER :
e-mail ID : *raghavendras @ sdmcuyire. in*

COLLEGE MOTTO

सम्यग् दर्शनं ज्ञानं चरित्राणी

COLLEGE VISION

- ❖ Empowerment through competency development with ethical foundation.

COLLEGE MISSION

- ❖ Providing infrastructural facilities to meet the contemporary needs.
- ❖ Inculcating the spirit of Inquiry.
- ❖ Adopting learner centered approach.
- ❖ Enhancing teaching learning and evaluation through effective ICT use.
- ❖ Practicing fair and just methods of assessment and evaluation.
- ❖ Enhancing growth opportunities for employability.
- ❖ Sustaining transparency in institutional governance.
- ❖ Fostering value practices and social responsibility.
- ❖ Focusing on continuous improvement through comprehensive feedback.

QUALITY POLICY

- ❖ We will practice participatory teaching learning methods for empowering students.
- ❖ We will optimally use ICT for better learning experience.
- ❖ We will continuously upgrade our knowledge and skills.
- ❖ We will make all efforts to provide a strong value base.
- ❖ We will firmly believe that national interest is more important than personal accomplishments.

DEPARTMENT VISION :

- * Empowering higher education in Physics.
- * Training quality teachers/researchers.
- * Provide a platform for all-round growth & development of students.

DEPARTMENT MISSION :

- * Catering to Master-degree level Physics education in this rural set-up.
- * Developing professional Physics teachers & researchers.

DETAILS OF 40 HOURS OF WEEKLY WORKLOAD OF THE STAFF

Sl.No.	TASKS	WORKLOAD (without Practical)	WORKLOAD (with Practical)
1.	Teaching	16 hrs.	16 hrs.
2.	Practical		04 hrs.
3.	Tests / Exams	02 hrs.	02 hrs.
4.	Tutorial Classes	04 hrs.	02 hrs.
5.	Class Preparation / Lab Setting	10 hrs.	10 hrs.
6.	Co-Curricular Activity	04 hrs.	02 hrs.
7.	Administrative Work	04 hrs.	04 hrs.

TERM - I

TEACHING TIME TABLE

SEMESTER - I / III / V

DAY	PERIODS							
	I 9:15-10:10	II 10:15-11:10	III 11:15-12:10	IV 12:15-1:10	V 1:15-2:05	VI 2:10-3:05	VII 3:10-4:05	VIII 4:10-5:05
MON		I sem PHP 405				I sem PHH 401		
TUE		III sem PHH 502				IV sem PHP 508		
WED	I sem PHH 403			III sem PHH 502			III sem PHP 508	
THU		I sem PHP 405				I sem PHH 402		
FRI				III sem PHH 502				
SAT		I sem PHH 402						

TOTAL WORKLOAD : 23 hrs per week

THEORY : 11 hrs per week

PRACTICAL : 6 + 6 = 12 hrs per week

Sl.No.	Class	Subject / Paper	Hours per Week	No. of Students
1.	III sem	PHH 502: Thermodynamics & Statistical Physics	04	26
2.	III sem	PHP 508/510 - CMP Lab	06	16
3.	I sem	PHH 401: Methods of Mathematical Physics - I	02	15
4.	I sem	PHH 402: Quantum Mechanics - I	04	15
5.	I sem	PHH 403: Classical Mechanics	01	15
6.	I sem	PHP 405 - Physics Practical - I (Lab)	06	7 + 8 = 15



Signature of the
STAFF



Signature of the
H.O.D.



Signature of the
DEAN / PRINCIPAL

ASSIGNMENTS FOR THE ACADEMIC YEAR

1. Co-Curricular :

1. Proposed Research / Projects undertaken :

*Co-investigator in DST-funded Project - CURIE
with PI - Dr. Prarthana J. (Biotech Dept.)*

2. Students' Research Projects :

3. Mentorship :
(Class/Roll No.s)

** II MSc - 6 students (also project students)
* I MSc - 3 students.*

2. Extra Curricular :

1. Association in Charge :

2. Committee Membership :
(Dept./College Level)

*(i) BoE/BoS in-charge - Dept.
(ii) Library & Learning Resources
Committee (PG)
(iii) Perspective Plan - Research Publication
& Project Proposal committee : R&D Cell
(iv) NAAC Criterion - IV - Member
(Infrastructure & Learning Resources) }*

UNITWISE LESSON PLAN

Academic Year	2023-24	Programme	MSc	Semester	FIRST
				Department	

PHH 401 Methods of Mathematical Physics I

Unit(s)	Contents	Objectives & Outcomes	Teaching activities	Review of outcomes	References
Unit III Partial differential equations	Review of differential equations. First order partial differential equations for a function of two variables. Linear second order partial differential equations. Classification into elliptic, parabolic and hyperbolic types. Boundary value problems - solutions by method of separation of variables - 1, 2 & 3 dimensional wave equation and diffusion equation in different coordinates.	Objectives: 1.To acquaint the students with various mathematical techniques used in Physics 2.To familiarize the notations, symbols & terminologies associated with (Mathematical) Physics 3.To teach the mathematical principles involved in solving problems in Physics 4.To acclimatize the various applications of mathematical methods of Physics Outcomes: 1:Understand that mathematics can be used as an effective tool in solving physical problems. 2:Appreciate the utility and ingenuity of various mathematical theorems when applied to physical principles. 3:Be familiar with the abstraction of physical concepts when codified in mathematical language. 4:Understand and apply mathematical formulation in various branches of Physics	Class discussion, seminars on related topics, review of recent advances.	Tests & assignments, class questions & discussion	1. Arfken & Weber, 'Mathematical Methods for Physicists' (Academic Press) 2. Harper C, 'Introduction to Mathematical Physics' (PHI, 1978) 3. Harry Lass, 'Vector and Tensor Analysis' (McGraw Hill, 1950) 4. ML Boas, 'Mathematical Methods in the Physical sciences' (John Wiley) 5. Spiegel M R, 'Vector Analysis' (Schaum series, McGraw Hill, 1997) 6. Chattopadhyaya P K, 'Mathematical Physics' (Wiley Eastern, 1990) 7. Ayres F, 'Differential Equations' (Schaum series, McGraw Hill) 8. Sneddon I A, 'Elementary Partial Differential Equations' (McGraw Hill) 9. Bose A K and Joshi, 'Methods of Mathematical Physics' (McGraw Hill) 10. Kreysig E, 'Advanced Engineering Mathematics' (Wiley Eastern, 1969) 11. Mathews & Walker, 'Mathematical Methods of Physics' (W A Benjamin). 12. Joglekar.S, 'Mathematical Physics Vol 1&2' (Universities Press, 2005). 13. Shankar Rao, "Partial Differential Equations" (PHI Learning Pvt. Ltd.).
Unit IV Special Functions	Beta and gamma functions, their properties and applications. Power series method for solving ordinary differential equations. Legendre differential equation and solutions, Legendre		Class discussion, seminars on related topics, review of recent advances.	Tests & assignments, class questions & discussion	1. Arfken & Weber, 'Mathematical Methods for Physicists' (Academic Press) 2. Harper C, 'Introduction to Mathematical Physics' (PHI, 1978) 3. Harry Lass, 'Vector and Tensor Analysis' (McGraw Hill, 1950) 4. ML Boas, 'Mathematical Methods in the Physical sciences' (John

DAILY RECORD

Date : 16-12-'23

Day : Sat

Hour	Class	Topics covered / Activities Conducted (Online / Offline Classes)
I	I sem	PHH 402
II		Gen. uncertainty, meaning & interpretation
III		Ehrenfest theorem & implication.
IV		
V	II sem	PHH 502 - SPECIAL CLASS.
VI		No. fluctuations in quantum gases, Random walk prob. - Brownian motion
VII		
VIII		



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Date : 18-12-'23

Day : Mon

Hour	Class	Topics covered / Activities Conducted (Online / Offline Classes)
I	I sem	PHP 405
II		Gen Physics Lab
III		- Practical B1 Repetition cycle, record correction etc:-
IV		
V	I sem	PHH 401
VI		Bound & scattering states, delta func & soln for Dirac delta pot.
VII	4:15 pm onwards	Staff Association meeting (@ PG Sem. Hall-2)
VIII		



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CERTIFICATE

(To be entered at the end of Semester)

Certified that

- 1) I have engaged the classes as per the time table for the I / III/~~VI~~ Semester 20~~23~~-24
- 2) I have completed all the portions as per the lesson plan during the Semester.
- 3) I have engaged special / ~~tutorial~~ classes during this semester itself to complete the portions which could not be covered due to loss of class hours.
- 4) I have made all the necessary preparations for the classes, assisted in the administration, conducted class tests, conducted tutorial classes and co-curricular activities as per the schedule.



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CERTIFICATE

(To be entered at the end of Semester)

Certified that

- 1) I have engaged the classes as per the time table for the II/ IV/~~VI~~ Semester 20~~23~~-24
- 2) I have completed all the portions as per the lesson plan during the Semester.
- 3) I have engaged special / ~~tutorial~~ classes during this semester itself to complete the portions which could not be covered due to loss of class hours.
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