

# FIRST-YEAR OF MASTER OF SCIENCE IN PHYSICS REVISED SYLLABUS ACCORDING TO CBCS NEP2020

COURSE TITLE:-MAJOR PRACTICAL SEMESTER – I W.E.F. 2023-2024

# RECOMMENDED BY THE BOARD OF STUDIES IN PHYSICS AND APPROVED BY THE ACADEMIC COUNCIL

Devrukh Shikshan Prasarak Mandal's

Nya. Tatyasaheb Athalye Arts, Ved. S. R. Sapre Commerce, and Vid. Dadasaheb Pitre Science College (Autonomous), Devrukh. Tal.Sangmeshwar, Dist. Ratnagiri-415804, Maharashtra, India

# Academic Council Item No: 03 dated 8 July 2023

Institute  Commerce, and Vid. Dadasaheb Pitre Science College (Autonomous), Devrukh. Tal. Sangmeshwar, Dist. Ratnagiri-415804,  Name of the Parent University  i University of Mumbai  Name of the Programme  Master of Science  Name of the Department  i Physics  Name of the Class  i First Year  Semester  i First  No. of Credits  i 02  Title of the Course  Major Practical  Course Code  i S504PHP  Name of the Vertical in adherence to NEP 2020  Eligibility for Admission  i BSc in Physics  Passing Marks  i 40%  Mode of Assessment  i Summative at the end of semester  Level  Pattern of Marks Distribution for SEE  Status  i NEP-CBCS  To be implemented from Academic  i 2023-2024	Name of the Implementing	:	Nya. Tatyasaheb Athalye Arts, Ved. S. R. Sapre
Sangmeshwar, Dist. Ratnagiri-415804,  Name of the Parent University : University of Mumbai  Name of the Programme : Master of Science  Name of the Department : Physics  Name of the Class : First Year  Semester : First  No. of Credits : 02  Title of the Course : Major Practical  Course Code : S504PHP  Name of the Vertical in adherence to NEP 2020  Eligibility for Admission : BSc in Physics  Passing Marks : 40%  Mode of Assessment : Summative at the end of semester  Level : PG  Pattern of Marks Distribution for SEE  Status : NEP-CBCS  To be implemented from Academic : 2023-2024	Institute		Commerce, and Vid. Dadasaheb Pitre Science
Name of the Parent University : University of Mumbai  Name of the Programme : Master of Science  Name of the Department : Physics  Name of the Class : First Year  Semester : First  No. of Credits : 02  Title of the Course : Major Practical  Course Code : S504PHP  Name of the Vertical in adherence : Major  to NEP 2020  Eligibility for Admission : BSc in Physics  Passing Marks : 40%  Mode of Assessment : Summative at the end of semester  Level : PG  Pattern of Marks Distribution for SEE  Status : NEP-CBCS  To be implemented from Academic : 2023-2024			College (Autonomous), Devrukh. Tal.
Name of the Programme : Master of Science  Name of the Department : Physics  Name of the Class : First Year  Semester : First  No. of Credits : 02  Title of the Course : Major Practical  Course Code : S504PHP  Name of the Vertical in adherence : Major  to NEP 2020  Eligibility for Admission : BSc in Physics  Passing Marks : 40%  Mode of Assessment : Summative at the end of semester  Level : PG  Pattern of Marks Distribution for SEE  Status : NEP-CBCS  To be implemented from Academic : 2023-2024			Sangmeshwar, Dist. Ratnagiri-415804,
Name of the Department : Physics  Name of the Class : First Year  Semester : First  No. of Credits : 02  Title of the Course : Major Practical  Course Code : S504PHP  Name of the Vertical in adherence : Major  to NEP 2020 : BSc in Physics  Passing Marks : 40%  Mode of Assessment : Summative at the end of semester  Level : PG  Pattern of Marks Distribution for SEE  Status : NEP-CBCS  To be implemented from Academic : 2023-2024	Name of the Parent University	:	University of Mumbai
Name of the Class  Semester  Semeste	Name of the Programme	:	Master of Science
Semester : First  No. of Credits : 02  Title of the Course : Major Practical  Course Code : S504PHP  Name of the Vertical in adherence to NEP 2020  Eligibility for Admission : BSc in Physics  Passing Marks : 40%  Mode of Assessment : Summative at the end of semester  Level : PG  Pattern of Marks Distribution for SEE  Status : NEP-CBCS  To be implemented from Academic : 2023-2024	Name of the Department	:	Physics
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to NEP 2020  Eligibility for Admission : BSc in Physics  Passing Marks : 40%  Mode of Assessment : Summative at the end of semester  Level : PG  Pattern of Marks Distribution for : 100 %  SEE  Status : NEP-CBCS  To be implemented from Academic : 2023-2024	Course Code	:	S504PHP
Eligibility for Admission : BSc in Physics  Passing Marks : 40%  Mode of Assessment : Summative at the end of semester  Level : PG  Pattern of Marks Distribution for : 100 %  SEE  Status : NEP-CBCS  To be implemented from Academic : 2023-2024	Name of the Vertical in adherence	:	Major
Passing Marks : 40%  Mode of Assessment : Summative at the end of semester  Level : PG  Pattern of Marks Distribution for : 100 %  SEE  Status : NEP-CBCS  To be implemented from Academic : 2023-2024	to NEP 2020		
Mode of Assessment : Summative at the end of semester  Level : PG  Pattern of Marks Distribution for : 100 %  SEE  Status : NEP-CBCS  To be implemented from Academic : 2023-2024	Eligibility for Admission	:	BSc in Physics
Level : PG  Pattern of Marks Distribution for : 100 %  SEE : NEP-CBCS  To be implemented from Academic : 2023-2024	Passing Marks	:	40%
Pattern of Marks Distribution for : 100 %  SEE  Status : NEP-CBCS  To be implemented from Academic : 2023-2024	Mode of Assessment	:	Summative at the end of semester
SEE  Status : NEP-CBCS  To be implemented from Academic : 2023-2024	Level	:	PG
Status : NEP-CBCS  To be implemented from Academic : 2023-2024	Pattern of Marks Distribution for	:	100 %
To be implemented from Academic : 2023-2024	SEE		
•	Status	:	NEP-CBCS
V.	To be implemented from Academic	:	2023-2024
Year	Year		

# **Syllabus for First Year of Master of Science in Physics**

(With effect from the academic year 2023-2024)

SEMESTER - I Paper No-Practical

Course Title: Major Practical-I No. of Credits - 02

Type of Vertical: Major COURSE CODE: S504PHP

### **Learning Outcomes Based on BLOOM's Taxonomy:**

After completing the course, the learner will be able to			
Course Learning Outcome No.	Blooms Taxonomy	Course Learning Outcome	
CLO-01	Remember	Recall the concepts behind the experiments in this course	
CLO-02	Understand	Understand calculation of possible errors involved in the expt.	
CLO-03	Create	Design small electronics experiments	
CLO-04	Create	Construct a regulated power supply using LM317	

## Syllabus for First Year of Master of Science in Physics

(With effect from the academic year 2023-2024)

SEMESTER - I Paper No-Practical

Course Title: Major Practical-I No. of Credits - 02

Type of Vertical: Major COURSE CODE: S504PHP

#### **COURSE CONTENT**

#### **List of Practicals**

- 1. Active filter circuits (second order)
- 2. LM317 & 1C LM 337 voltage regulator ICs
- 3. h/e by vacuum photocell
- 4. Study of He-Ne laser-Measurement of divergence and wavelength
- 5. Constant current supply using IC 741 and LM317
- 6. Carrier lifetime by pulsed reverse method
- 7. Coupled Oscillations
- 8. Diac Triac phase control circuit
- 9. Delayed linear sweep using 1C 555
- 10. Regulated power supply using 1C LM 317

#### **Access to the Course**

The course is available for all the students admitted for Master of science with Physics.

#### **Methods of Assessment**

Vocational Skill Courses, Skill Enhancement Courses and the courses having laboratory sessions shall be assessed at the end of each semester.