



FIRST-YEAR OF BACHELOR OF SCIENCE MAJOR PHYSICS REVISED SYLLABUS ACCORDING TO CBCS NEP2020

COURSE TITLE - LAB SKILLS IN PHYSICS-I
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.Sanameshwar, Dist. Ratnagiri-415804, Maharashtra, India

Academic Council Item No: **03 dated 8 July 2023**

Name of the Implementing Institute	:	Nya. Tatyasaheb Athalye Arts, Ved. S. R. Sapre Commerce, and Vid. Dadasaheb Pitre Science College (Autonomous), Devrukh. Tal. Sangmeshwar, Dist. Ratnagiri-415804,
Name of the Parent University	:	University of Mumbai
Name of the Programme	:	Bachelor of Science
Name of the Department	:	Physics
Name of the Class	:	First Year
Semester	:	First
No. of Credits	:	02
Title of the Course	:	Lab skills in Physics-I
Course Code	:	S103PHP
Name of the Vertical in adherence to NEP 2020	:	Vocational Skill Course
Eligibility for Admission	:	Any 12 th Pass seeking Admission to Degree Programme in adherence to Rules and Regulations of the University of Mumbai and Government of Maharashtra
Passing Marks	:	40%
Mode of Assessment	:	Summative at the end of semester
Level	:	UG
Pattern of Marks Distribution for SEE	:	100 %
Status	:	NEP-CBCS
Implemented from Academic Year	:	2023-2024
Ordinances /Regulations (if any)		

Syllabus for First Year of Bachelor of Science in Physics

(With effect from the academic year 2023-2024)

SEMESTER-I

Paper No.– Physics Practical

Course Title: Lab skills in Physics-I

No. of Credits - 02

Type of Vertical: Major and Minor

COURSE CODE: S103PHP

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	Know the concepts behind all the demo experiments
CLO-02	Understand	Understand the proper way of plotting various graphs
CLO-03	Apply	Demonstrate the use of instruments like Vernier, Micrometer, Travelling Microscope etc.
CLO-04	Apply	Complete all the listed experiments
CLO-05	Analyze	Explain the principle of each of the experiments

Syllabus for First Year of Bachelor of Science in Physics

(With effect from the academic year 2023-2024)

SEMESTER-I

Course Title: Lab skills in Physics-I

Type of Vertical: Major and Minor

Paper No.– Physics Practical

No. of Credits - 02

COURSE CODE: S103PHP

Course Content

List of Experiments

1. Plotting of graphs – bell shaped curve, simple straight line, Y/X-intercept, polar graphs
2. Vernier, micrometer, Travelling Microscope, angle measurement
3. DMM, Basic devices, components and values
4. Density of various liquids
5. Torsional Oscillations
6. Poiseuille's Method
7. Image formation by a lens
8. Newton's Rings
9. Frequency of AC mains
10. Basic logic gates
11. Universal building blocks
12. CVAT

Demonstrations

1. Use of scientific calculator
2. f by Auto-collimation, pendulum time period
3. study of optical instruments – telescope, microscope and prism
4. laser experiments – reflection, refraction, TIR
5. Light experiments - Dispersion of light, Biprism, Thin film colours

Access to the Course

The course is available for all the students admitted for Bachelor of Science.

Methods of Assessment

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