



**THIRD YEAR BACHLOR OF SCIENCE MAJOR
PHYSICS REVISED SYLLABUS ACCORDING TO
CBCS NEP 2020**

COURSE TITLE: Physics Practical II
SEMESTER: VI
W.E.F. 2025-2026

**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: 02/2025

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	:	Third Year
Semester	:	Sixth
Paper	:	I
No. of Credits	:	02
Title of the Course	:	Physics Practical II
Course Code	:	S314PHP
Name of the Vertical in adherence to NEP 2020	:	Major
Eligibility for Admission	:	Any student admitted to Third year of B. Sc, degree programme in adherence to Rules and Regulations of the University of Mumbai and Government of Maharashtra
Passing Marks	:	40%
Mode of Assessment	:	Formative and Summative
Level	:	5.5
Pattern of Marks Distribution for TE and CIA	:	100%
Status	:	NEP-CBCS
To be implemented from Academic Year	:	2025-2026
Ordinances /Regulations (if any)		

Syllabus for Third Year of Bachelor of Science in Physics

(With effect from the academic year 2025-2026)

Semester -VI

Paper No.– 1

Course Title: Physics Practical-II

No. of Credits - 02

Type of Vertical: Major

Course Code: S314PHP

After completing the course, the learner will be able to.....

Course Outcome	Course Learning Outcome
CO-01	Students will comprehend the underlying physical principles governing various phenomena, including optics
CO-02	Students will develop hands-on experience with various experimental techniques to measure physical quantities
CO-03	Students will learn to analyze, design, and implement electronic circuits using various components, including op-amps, IC 555 timers, and JK flip-flops,

1. The certified journal must contain a minimum of **12** experiments in semester–VI.
2. A separate index and certificate in journal is must for each semester course .

Syllabus for Third Year of Bachelor of Science in Physics

(With effect from the academic year 2025-2026)

Semester -VI

Paper No.– 1

Course Title: Physics Practical-II

No. of Credits - 02

Type of Vertical: Major

Course Code: S314PHP

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| <ol style="list-style-type: none">1. R. P. of Prism2. Surface tension of mercury by Quincke's method3. Energy band gap by Four probe method4. To determine wavelength of Mercury light using plane diffraction Grating5. Lloyd's Mirror6. Fresnel Biprisam7. Thermistor temperature sensor8. Positive and Negative regulated supply using 78XX and 79XX9. To study Lissajous Figures10. Digital to Analog Converter11. LM317 as a variable voltage source12. Op-amp as a log amplifier13. Ramp generator using IC 555 timer14. IC 555 timer monostable multivibrator15. Decade Counter using JK FF(IC 7473) |
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References:

1. Advanced course in Practical Physics: D. Chattopadhyaya, PC. Rakshit & B. Saha (8th Edition) Book & Allied Pvt. Ltd.
2. BSc Physics: Harnam Practical Singh. S. Chand & Co. Ltd. – 2001.
3. A Text book of Practical Physics: Samir Kumar Ghosh New Central Book Agency (4th edition).
4. B Sc. Practical Physics: C. L. Arora (1st Edition) – 2001 S. Chand & Co. Ltd.
5. Practical Physics: Gupta Kumar Apragati Publication .
6. University Practical Physics: D C Tayal. Himalaya Publication.
7. Advanced Practical Physics: Worsnop & Flint.
8. Practical Physics: Indu Prakash , Ram Krishna, A.K.Jha Kitab Mahal Publication

Access to the Course

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

Methods of Assessment

The assessment pattern would be 100 %, for Semester End Examination (SEE) and for Continuous Internal Assessment (CIA). The structure of the SEE and CIA would be as recommended by the Board of Studies and approved by the Board of Examination and the Academic Council of the college.

Pattern of Evaluation

The Examination/Evaluation pattern shall be framed by the Board of Examination with its final approval from the Academic Council of the College.