Academic Council Item No:_____

Devrukh Shikshan Prasarak Mandal's

Nya. TATYASAHEB ATHALYE ARTS, Ved. S.R. SAPRE COMMERCE & Vid. DADASAHEB PITRE SCIENCE COLLEGE, DEVRUKH [AUTONOMOUS]

Syllabus for F.Y. B.Sc.
Program: B.Sc.
Course: Physics
Credit Based Semester and Grading System with the Effect from
Academic Year 2020-21

Syllabus for B.Sc. Physics (Theory and Practical)
As per credit based system
First Year B.Sc.2020–2021.

The revised syllabus in Physics as per credit based system for the First Year B.Sc. Course will be implemented from the academic year **2020–2021.**

Preamble:

The systematic and planned curricula from these courses shall motivate and encourage learners to understand basic concepts of Physics.

Objectives:

- To develop analytical abilities towards real world problems
- To familiarize with current and recent scientific and technological developments
- To enrich knowledge through problem solving, hands on activities, study visits, projects etc.

Course code	Title	Credits
Semester I		
USPHT11		2
USPHT12		2
USPHP1	Practical I	2
		Total – 06
Semester II		
USPHT21		2
USPHT22		2
USPHP2	Practical II	2
		Total - 06

Semester I: physics practical -I

Name of the Programme	Duration	Semester	Subject
B.Sc. In Physics	Six Semesters	I	Physics
Course Code	**Title**	**Credits**	
USPHP2	physics practical -II	2	

Learning Outcomes:

After successful completion of this course students will be able to

1. Know the concepts behind all the demo experiments.
2. Calculate the probable errors involved in the result.
3. Explain the principle of each of the experiments.
4. Use all the basic instruments in the Physics laboratory.

Course Content

List of Experiments

1) Helmholtz Resonator
2) Flywheel
3) Y by Bending
4) Total Internal Reflection
5) Transistor CE characteristics
6) Diode Characteristics
7) Lens Combination
8) Wedge shaped film
9) Charging and Discharging of capacitor
10) De-Morgan laws
11) Thevenin's Theorem
12) Maximum Power Transfer Theorem

Demonstrations

1) Faraday's laws
2) Fiber optics
3) Transformer demo
4) Use and handling of Signal Generator
5) Use of CRO and charging discharging
6) Use of speaker as a mike

7) Demo of mutual induction
8) Magnetic lines of force
9) Demo of Mutual inductance
10) Laser beam profile

References:

1. CR: D. Chattopadhyay, P C Rakshit , Electricity and Magnetism 7th Ed. New Central Book agency.
2. TT :B.L. Theraja and A.K. Theraja , A Textbook of Electrical Technology Vol. I , S. Chand Publication.
3. VKM: V K Mehta and R Mehta Electronics Principals, Multicoloured Revised11th Ed. reprint in 2012 ,S Chand.
4. Arthur Beiser, Perspectives of Modern Physics : Tata McGraw Hill.