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 T.Y. B.Sc.
Program: B.Sc.
Course: Physics
Practial -II
Credit Based Semester and Grading System with the Effect from
Academic Year 2021-22

Syllabus for B.Sc. Physics (Theory and Practical)
As per credit based system
Third Year B.Sc.2021–2022.

The revised syllabus in Physics as per credit based system for the Third Year B.Sc. Course will be implemented from the academic year **2021–2022.**

Preamble: The systematic and planned curricula from these courses shall motivate and encourage learners to understandbasic 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.

SEMESTER VI				
Theory				
Course	**UNIT**	**TOPICS**	**Credits**	**Lectures per Week**
USPH601	I	Classical Mechanics	**2.5**	**4**
	II	Classical Mechanics		
	III	Classical Mechanics		
	IV	Classical Mechanics		
USPH602	I	Electronics	**2.5**	**4**
	II	Electronics		
	III	Electronics		
	IV	Electronics		
USPH603	I	Nuclear Physics	**2.5**	**4**
	II	Nuclear Physics		
	III	Nuclear Physics		
	IV	Nuclear Physics		
USPH604	I	Special Theory of Relativity	**2.5**	**4**
	II	Special Theory of Relativity		
	III	Special Theory of Relativity		
	IV	Special Theory of Relativity		
Practicals				
USPH605	Practicals of Course USPH601 + Course USPH602		**2.5**	**6**
USPH606	Practicals of Course USPH603 + Course USPH604		**2.5**	**6**
Project				
USPHPR2	USPH601 + USPH602 + USPH603 + USPH604		**1**	**4**

SEMESTER VI

The T. Y. B. Sc. Syllabus integrates the regular practical work with a series of demonstration experiments and the project. During the teaching and examination of Physics laboratory work, simple modifications of experimental parameters may be

attempted. Attention should be given to basic skills of experimentation which include:

i)	Understanding relevant concepts.
ii)	Planning of the experiments.
iii)	Layout and adjustments of the equipments
iv)	Understanding designing of the experiments
v)	Attempts to make the experiments open ended
vi)	Recording of observations and plotting of graphs
vii)	Calculation of results and estimation of possible errors in the observation of results.

Regular Physics Experiments: A minimum of **06** experiments of the practical course are to be performed and reported in the journal.

The certified journal must contain a minimum of **06** regular experiment.

There will be **THREE hours** for the examination of practical courses.

PRACTICAL COURSE: USPHP08	
Sr. No.	**Name of the Experiment**
1	IC 555 timer Astable multivibrator
2	Design and study of transistors Monostable multivibrator
3	Design and study of transistorized Bistable multivibrator
4	Application of open as window comparator
5	lm317 as a variable voltage source
6	Op-amp as a log amplifier
7	Application of IC 555 as voltage to frequency converter
8	Ramp generator
9	Shift register
10	Capacitance by parallel bridge
11	Self-Inductance by Anderson bridge
12	RC phase shift oscillator

References:

1.	Advanced course in Practical Physics: D. Chattopadhya, PC. Rakshit & B. Saha (8th Edition) Book & Allied (P) Ltd.
2.	BSc Practical Physics: Harnam 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.
5.	Practical Physics: C. L. Squires – (3rd Edition) Cambridge Univ. Press.
6.	University Practical Physics: D C Tayal, Himalaya Publication.
7.	Advanced Practical Physics: Worsnop & Flint.