

DEPARTMENT OF PHYSICS

ANANDIBAI RAORANE ARTS, COMMERCE AND SCIENCE COLLEGE, VAIBHAVWADI

PROGRAM OUTCOMES (POs) AND COURSE OUTCOMES (COs) DETAILS

Course Outcomes (COs):

On successful completion of various courses in BSc Physics, following outcomes are expected.

Sr. No.	Class	Course title	Course code	Course Outcomes
1.	FYBSC	Classical Physics	USPH101	<ol style="list-style-type: none"> It will develop students ability to analyze various concepts such as force of motion, friction, elasticity etc. in practical world. Students will be able to employ concepts of lens system
2.	FYBSC	Modern Physics	USPH102	<ol style="list-style-type: none"> This course will make students aware of structure of nuclei and importance of nuclear energy. This course will introduce the origin of quantum physics and built up the foundation for importance of X-ray production and its applications.
3.	FYBSC	Practical 1	USPHP1	<p>On successful completion of this course, students will be able to :</p> <ol style="list-style-type: none"> Understand and demonstrate the practical skills Correlate their physics theory concepts through practical.
4.	FYBSC	Mathematical Physics	USPH201	Students will learn about applications of mathematical concepts in physical situations.
5.	FYBSC	Electricity and Electronics	USPH202	Students will learn about basic concepts & applications of electricity and digital electronics
6.	FYBSC	Practical 2	USPHP2	<p>On successful completion of this course, students will be able to :</p> <ol style="list-style-type: none"> Understand and demonstrate the practical skills Correlate their physics theory concepts through practical.
7.	SYBSC	Mechanics and Thermodynamics	USPH301	<ol style="list-style-type: none"> This course is designed to introduce students to various phenomena and applications of thermodynamics and cryogenics It will also provide the foundation for mechanics and its applications.
8.	SYBSC	Vector calculus and Analog electronics	USPH302	<ol style="list-style-type: none"> Students are expected to learn vector calculus and its applications This will provide solid base for analog electronics and its real time applications
9.	SYBSC	Applied Physics - I	USPH303	This course will provide students the proper insight about optical fiber, lasers , acoustics, crystal physics and material properties
10.	SYBSC	Practical course 3	USPHP3	<p>On successful completion of this course, students will be able to :</p> <ol style="list-style-type: none"> Understand and demonstrate the practical skills

				and error estimations 2. Correlate their physics theory concepts through practical.
11.	SYBSC	Optics & Digital Electronics	USPH401	Through deep insight of this course students will be introduced to the interferometers, polarizers, digital electronics and their applications.
12.	SYBSC	Quantum Mechanics	USPH402	The introduction of theory of quantum mechanics will enable students to understand the wide applications and phenomena in Physics.
13.	SYBSC	Applied Physics - II	USPH403	1. Students are expected to learn about Microprocessor programming and radio communication systems. 2. Introduction to geophysics will help understand students about our planet earth and solar system.
14.	SYBSC	Practical Course 4	USPHP4	On successful completion of this course, students will be able to : 1. Understand and demonstrate the practical skills and error estimations 2. Correlate their physics theory concepts through practical.
15.	TYBSC	Mathematical and statistical physics	USPH501	Through this course students will be able to apply the knowledge of Statistics & Mathematics in physical and thermodynamic systems.
16.	TYBSC	Solid State Physics	USPH502	This course is designed to introduce the various material properties and crystal physics. In this course students will encounter the new state of matter i.e. superconductivity and its applications.
17.	TYBSC	Atomic and Molecular Physics	USPH503	1. After studying this course, students may learn about various spectra and coupling schemes. 2. Students may learn about the Raman Effect and its research applications.
18.	TYBSC	Electrodynamics	USPH504	This course is an extension of electrostatics and deals with the dynamics of charged particles.
19.	TYBSC	Practical Course 5	USPHP05 and USPHP06	1. With hands on experiment, students can learn importance of various components and correlate their theory with the practicals. 2. The error analysis can bring more accuracy and skills among students.
20.	TYBSC	Analog Circuits, Instruments and Consumer Appliances.	USACEI501	This paper is designed to introduce the students to sensors ,transducers, signal conditioning, data acquisition systems and measuring instruments used in the laboratory.
21.	TYBSC	Applied Component practical 1	USACEI5P1	1. Students will get acquainted with the measuring instruments used in laboratory. 2. It will develop the programming skills among students.
22.	TYBSC	Classical Mechanics	USPH601	This course will develop the interest of students towards central force, fluid dynamics, rigid body motion and the non-linear dynamics.
23.	TYBSC	Electronics	USPH602	Through this course, students will be introduced to field effect transistors, SCRs, IC 555 timers, OPAMPs and their real time applications.
24.	TYBSC	Nuclear Physics	USPH603	This course will make students aware of detailed structure of nuclei ad importance of nuclear energy.
25.	TYBSC	Theory of Relativity	USPH604	Students can learn basics of relativity and how relativity affects the space and time travel
26.	TYBSC	Practical Course 6	USPHP07 and USPHP08	1. With hands on experiment, students can learn importance of various components and correlate

				<p>their theory with the practicals.</p> <p>2. The error analysis can bring more accuracy and skills among students.</p>
27.	TYBSC	Digital Electronics, Microprocessor, Microcontroller And OOP	USACEI601	<p>1. Students will be able to analyze/design and implement combinational logic circuits.</p> <p>2. Develop assembly language, programming skills and real time applications of microprocessor.</p>
28.	TYBSC	Applied Component practical 2	USACEI6P1	<p>1. Students will get acquainted with the measuring instruments used in laboratory.</p> <p>2. It will develop the programming skills among students.</p>

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