COURSE OBJECTIVES AND COURSE OUTCOMES

S. Y. B. Sc. SEMESTER - III

PHYSICS PAPER - II

SUBJECT: VECTOR AND ANALOG ELECTRONICS (USPH302)

Sr. No.	Course Objectives	Course Outcomes
1)	To elaborate the concepts in vector algebra and discuss the related applications in physical phenomena	Improve the calculation skills in vector algebra and understand its significance in physical applications
2)	To elucidate different coordinate systems of axes	Develop the ideas from systems of axes and understand the importance
3)	To introduce the transistor biasing and discuss biasing methods	Understand the basic concepts in transistor biasing and study the biasing methods
4)	To develop general concepts from amplifier characteristics and describe different parameters such as feedback, gain etc.	Explore the ideas in amplifier characteristics and understand the meanings of different parameters such as gain, feedback, the corresponding notations etc.
5)	To discuss practical transistor amplifier circuits and the corresponding terms	Study the practical amplifier circuit and correspondingly different terms
6)	To introduce oscillators circuits, positive feedback, and study types of oscillators	Comprehend positive feedback and its use in oscillator circuits and experiments for different types of oscillator circuits
7)	To introduce operational amplifier and discuss different functional circuits using operational amplifier	Ability to demonstrate experimental skills by studying functional circuits using operational amplifiers
8)	To solve problems on different topics in vector algebra and electronics	Develop problem-solving abilities and practice numerical and theoretical problems in different topics

COURSE OBJECTIVES AND COURSE OUTCOMES

F. Y. B. Sc. SEMESTER - IV

PHYSICS PAPER - II

SUBJECT: QUANTUM PHYSICS (USPH402)

Sr. No.	Course Objectives	Course Outcomes
1)	Terminologies used and their significance in quantum mechanics	Expression for normalization, expectation value, Eigen value, Eigen functions, wave function and their meaning. Postulates of quantum mechanics
2)	Deduce quantum mechanical equations	Operators, Deduce STDE and STIE and the importance of potential
3)	Solve STIE to simple one dimensional problem and analyze the results	Solve the STIE for infinite 1-D potential well, the resultant wave function the significance of the results
4)	STIE for different potentials and analysis of its result	Solve STIE for a step potential, potential barrier. Compare the results with that inferred using classical approach
5)	Quantum mechanics as a tool	Quantum mechanics as a tool to explain various atomic and subatomic phenomena as alpha decay, tunneling diode etc.