

DEPARTMENT OF ELECTRONICS

Programme Outcome	<p>On successful completion of the Program the students will be able to:</p> <ol style="list-style-type: none">1. Get familiar with current and recent scientific and technological developments2. Understand fundamentals of electronics.3. Develop in depth knowledge of scientific and technological aspects of electronics4. Develop the practical skills related to electronic industries and market.5. Develop analytical abilities towards real world problems6. Build up a progressive and successful career in electronics.7. Foundation for research culture in electronics.
Programme specific outcome	<ol style="list-style-type: none">1 Gain the knowledge of Electronics through theory and practical2. Get familiar with current and recent scientific and technological developments3 Understand the fundamentals of electronics.4. Understand the functioning of Electronic gadgets.5. Develop in depth knowledge of scientific and technological aspects of electronics6. Develop the practical skills related to electronic industries and market.7 Make aware of and handle the sophisticated equipments8. Develop analytical abilities towards real world problems9. Build up a progressive and successful career in electronics.10. Foundation for research culture in electronics.

Course outcome

Name of the course: **Electronics**

COURSE	COURSE OUTCOMES
F.Y B.Sc 1.1 Fundamentals of Electronics	Students are able to understand <ul style="list-style-type: none"> ➤ Transient Analysis of RC and RL Circuits ➤ RC,RL and RLC circuits excited by DC and AC. ➤ RLC series and parallel resonance ➤ DC circuit theorems and their use in circuit analysis ➤ Understand the basic concept of ideal and practical voltage and current sources.
	<ul style="list-style-type: none"> ➤ Characteristics features of semiconductor devices and Opto semiconductor devices
	<ul style="list-style-type: none"> ➤ Recognize the role of power electronics and get strong foundation for further study of power electronics applications
	<ul style="list-style-type: none"> ➤ Able to identify coded and uncoded form of numbers.
2.1 CIRCUIT ANALYSIS	<ul style="list-style-type: none"> ➤ Understand theoretically and experimentally the construction of powersupplies and regulators and their applications in electronic gadgets ➤ Study the construction and operation of controlled rectifiers and switch mode power supplies ➤ Able to understand the need of biasing circuits in amplifiers and oscillators ➤ Able to understand the Classification of amplifiers on the basis of coupling, frequency response, bandwidth and their applications ➤ Classification of power amplifiers on the basis of operating point ➤ Tuned amplifiers and their applications
S.Y B.Sc 3.1 ELECTRONIC CIRCUITS AND APPLICATIONS	<ul style="list-style-type: none"> ➤ Able to design and construct the linear and nonlinear circuits ➤ Able to observe the waveforms practically and

	<p>understand their applications</p> <ul style="list-style-type: none"> ➤ Able to understand the advantages of negative feedback in amplifiers ➤ Able to understand classification of oscillators, Barkhusen criteria ➤ Able to construct low frequency and high frequency oscillators practically
	<ul style="list-style-type: none"> ➤ Able to learn opamp Ideal characteristics ➤ Able to understand vast applications of operational amplifier like integrater,differentiater,adder,sustractor,log and antilogarithmic amplifiers,wave form generators schimit trigger,multivibrater and oscillator etc.
4.1 DIGITAL ELECTRONICS	<ul style="list-style-type: none"> ➤ Able to understand the basic building blocks for any digital circuit logic gates ➤ Simplification of Boolean expressions using Boolean algebra and Karnaugh map ➤ Able to understand the construction, working and truth table of combinational circuits theoretically using basic gates ➤ Able to construct practically and verify the truth table ➤ Construction of sequential circuits using logic gates and their applications and their applications ➤ Able to construct all Flipflops practically and verify
	<ul style="list-style-type: none"> ➤ Able to understand the construction and working of synchronous and asynchronous counters using logic diagram,truth table and waveforms ➤ Classification of shift registers their working and applications ➤ Comparison of counters and shift register counters
	<ul style="list-style-type: none"> ➤ Able to understand types of ADC and DAC ➤ Able to understand working and advantages and disadvantages of ADC & DAC by comparison ➤ Performance parameters & Applications of ADC and DAC

	<ul style="list-style-type: none"> ➤ Able to learn Digital IC logic families characteristics
T.Y B.Sc 5.1 ELECTRONIC COMMUNICATION-1	<ul style="list-style-type: none"> ➤ Able to understand types of transmission lines ➤ Distributed parameters of T-Line ➤ Frequency and phase distortion ➤ Types of antennas ➤ Parameters of antennas
	<ul style="list-style-type: none"> ➤ Able to understand why modulation is necessary ➤ Able to understand AM,FM and PM ➤ Various modulator circuits ➤ AM and FM Transmitter ➤ Types of Detectors ➤ AM and FM Receivers ➤ Comparison of AM and FM
5.2DIGITAL ELECTRONICS AND MICROPROCESSOR	<ul style="list-style-type: none"> ➤ Able to understand Data selectors MUX and DEMUX by comparative study ➤ Types of ADC and DAC ➤ Performance parameters
	<ul style="list-style-type: none"> ➤ Able to understand classification of memories
	<ul style="list-style-type: none"> ➤ Memory organization of ROM &RAM
	<ul style="list-style-type: none"> ➤ Concept of basic Principle and operation of Charge coupled device memory
	<p>Able to understand</p> <ul style="list-style-type: none"> ➤ Architecture of intel 8085 Microprocessor ➤ How to use Instruction set and addressing modes of microprocessor ➤ How to develop assembly language programming skills ➤ Interface memory and IO devices
6.1COMMUNICATION ELECTRONICS -II	<ul style="list-style-type: none"> ➤ Students are able to understand ➤ Elements of broadcasting, TV standard systems ➤ Camera tube construction and working ➤ Monochrome TV Transmission and Reception ➤ Colour Tv principle, working compatability

	<ul style="list-style-type: none"> ➤ PAL System Transmission and Reception <p>Students will come to know thoroughly</p> <ul style="list-style-type: none"> ➤ Concept of Digital communication system ➤ Different modulation techniques like PAM,PWM,PPM,PCM and Delta modulation and their applications ➤ Theory of digital carrier systems like ASK,FSK,PSK,DPSK,QPSK <p>Students are able to understand about</p> <ul style="list-style-type: none"> ➤ Principle and operation of Fiber optical communication system ➤ Optical fibre types and sources
<p>6.2: INSTUMENTATION AND MICROCONTROLLER</p>	<p>Students are able to understand</p> <ul style="list-style-type: none"> ➤ Different types of sensors and their advantages, disadvantages and applications ➤ Operation and applications of Various signal conditioners using operational amplifiers. ➤ Able to learn Architecture of Microcontroller 8051 comparing with 8085 Microprocessor ➤ Instruction set,Addressing modes Skill of writing assembly language program ➤ Able to understand Timer/counter programming interfacing