

B.Sc. Electronics, General (ELTG) (under Choice Based Credit System)

Program Specific Outcomes:

- To prepare students with good knowledge of fundamentals of Electronics, who can make contribution towards advancement in science and technology by pursuing higher studies or to succeed in industry/technical career through comprehensive education.
- To train students with good technical and scientific extent so that they become capable to comprehend, analyze, design and produce novel products and solutions for real life problems.
- To prepare students for graduate studies through competitive examinations, enabling them to reach higher levels of excellence.
- To develop abilities in students to design and develop innovative solutions for benefits of society, by meticulousness, leadership, team work and lifelong learning.
- To inculcate in students professional and ethical attitude, soft skills and effective communication skills, teamwork skills, multidisciplinary approach and an ability to relate science and engineering issues to broader social context.
- To provide students with skills that enable them to get employment in industries or pursue higher studies or research projects or turn as entrepreneurs.

Course Outcomes:

CC-1A / GE-1: Network Analysis and Analog Electronics

By the end of this course, the students will be able to:

Understand different concepts of circuit analysis and the working of different basic semiconductor devices used in analog electronic circuits.

CC-2A / GE-2: Linear and Digital Integrated Circuits

By the end of this course, the students will be able to:

Understand the basics of opamp, its various important applications and concepts of digital electronics by learning combinational and sequential circuits.

CC-3A / GE-3: Communication Electronics

By the end of this course, the students will be able to:

Understand the basics of electronics communication and its different types.

CC-4A / GE-4: Microprocessors and Microcontrollers

By the end of this course, the students will be able to:

Understand the basic architecture, different modes of operation and interfacing techniques of 8085 microprocessor and 8051 microcontroller.

DSE 1A-1: Semiconductor Devices Fabrication

By the end of this course, the students will be able to:

Understand the basic fabrication techniques of semiconductor devices and concepts of VLSI processing and MEMS devices.

DSE 1A-2: Photonic Devices and Power Electronics

By the end of this course, the students will be able to:

Understand the basics of opto-electronic and power electronic devices and their applications.

DSE-1B-1: Electronic Instrumentation

By the end of this course, the students will be able to:

Understand the measurement systems of basic measurement instruments like ammeter, voltmeter and oscilloscopes, signal generators, transducers etc and bio medical applications.

DSE-1B-2: Transmission Lines, Antenna and Radio Wave Propagation

By the end of this course, the students will be able to:

Understand the basics of electromagnetic waves and radiation, transmission lines and waveguides, fundamentals of antenna and radio wave propagation

SEC-A-1: Computational Physics

By the end of this course, the students will be able to:

Understand the importance of computation methods in various physics problems and concepts of programming languages.

SEC-A-2: Renewable Energy and Energy Harvesting

By the end of this course, the students will be able to:

Understand the basics of different renewable energy sources like solar, wind, ocean, geothermal, hydro and energy harvesting.

SEC-B-1: Electrical Circuits and Network Skill

By the end of this course, the students will be able to:

Understand the basic electricity principles, fundamentals of basic electrical circuits and devices.

SEC-B-2: Technical drawing

By the end of this course, the students will be able to:

Understand the basics of technical drawing and concepts of CAD and Auto-CAD drawing.