DEPARTMENT OF PHYSICS AND ELECTRONICS
St. Thomas College, Bhilai, Chhattisgarh

PROGRAM: *BACHELOR OF SCIENCE*
(ELECTRONICS)
(2021-2022)

Program Outcomes (PO)

PO1: The students will enrich their knowledge in electronics.

PO2: They will be given deep exposure and knowledge about various concepts, circuits and methods to study circuits which we are using in almost every electronic device.

PO3: They will get knowledge and motivation to compete in national level tests like JAM, NGPE, etc.

PO4: They will be prepared to accept challenges in broad areas of the theoretical and experimental world of electronics.

PO5: They will be able to recognize and implement the importance of continuous learning for self learning and develop throughout the academic career.

Program Specific Outcomes (PSO)

PO1: Students will be familiar with the core concepts and be aware about the recent trends in the electronics community.

PO2: They will be conceptually and technically skilled enough to carry out their further studies with an idea and sense of academic and social ethics.

PO3: They will be capable enough of taking up higher studies in electronics and to get jobs in the industries..

Course Outcome (CO)

B.Sc. (ELECTRONICS) Part I

Paper - I: ELB-101: Network Analysis And Analog Electronics

After successful completion of this course the student will be able to

PO1: Understand basic circuit concepts, AC Circuit analysis, Types of filters and uses of network theorems,

PO2: Understand Junction diode and its applications,

PO3: Study bipolar junction transistor, Field Effect Transistors, Power devices,

PO4: Learn about Amplifiers, their types and characteristics, Cascaded amplifiers

PO5: Understand feedback concept in amplifiers, Sinusoidal Oscillators.

Paper - II: ELB-102: Linear And Digital Integrated Circuits

After successful completion of this course the student will be able to

PO1: Understand Operational Amplifiers their characteristics and applications,

PO2: Learn Number system and Codes, various types of Logic gates and Boolean algebra,

PO3: Understand the Combinational Logic Analysis and Design, Data processing circuits, basics of IC-555,

PO4: Learn about Sequential circuits i.e. Flip-Flops, Shift registers, Counters,

PO5: Get knowledge of D-A and A-D conversion.

B.Sc. (ELECTRONICS) Part II

Paper - I: ELB-201: Communication Electronics

After successful completion of this course the student will be able to

PO1: Understand electronic communication system, frequency allocation for radio communication systems, EM spectrum, concept of Noise,

PO2: Understand Analog Modulation: AM, FM and PM, Analog pulse Modulation, PAM,PWM, and PPM, multiplexing,

PO3: Understand Digital Pulse Modulation, concept of Amplitude Shift Keying (ASK), Frequency Shift Keying (FSK), Phase Shift Keying (PSK) and Binary Phase Shift Keying (BPSK), Optical Communication system.

PO4: Understand Communication and Navigation systems: Satellite Communication,

PO5: Understand Mobile Telephony Systems, get the ideas of GSM, CDMA, TDMA and DMA technologies, 2G, 3G, 4G concepts, GPS navigation system.

Paper - II: ELB-202: Microprocessor And Microcontrollers

After successful completion of this course the student will be able to

PO1: Understand Microcomputer Organization, 8085 Programming,

PO2: Understand architecture and overview of 8051 family, assembly language programming,

PO3: Understand 8051 I/O port programming, addressing and accessing memory locations

PO4: Learn 8051 programming in C, architecture, classifications and purpose of embedded systems.

B.Sc. (ELECTRONICS) Part III

Paper I: EL301: Industrial Electronics

After successful completion of this course the student will be able to

PO1: Understand thyristor, SCR, DIAC, TRIAC and other switches, ON/OFF mechanism,

PO2: Understand applications of SCR,

PO3: Learn about types of inverters, Step up and down choppers, other applications viz. Induction heating, Resistance welding, Over voltage protection and many more.

PO4: Understand PCB Fundamentals, Schematic & Layout Design, Testing and quality controls. PCB Technology,

PO5: Understand the usage of Analog/Digital Multimeters,.

Paper - II: EL302: Mobile Application Programming and Introduction to VHDL

After successful completion of this course the student will be able to

PO1: Understand about mobile Application Programming, different Platforms, architecture and working of different mobile operating systems, Android Development Environment, SDK etc,

PO2: Work on Android Software Development Platform, and understand the Android Framework Overview,

PO3: Manage the Views and Layouts, Buttons, Menus, and Dialogs, Graphics Resources in Android, and handle the user Interface Events,

PO4: Work as a Content Provider, understand the Intents and Intent Filters, Advanced Android, iOS Development Environment, Windows phone Environment.

PO5: Understand *Very High Speed Integrated Circuit (VHSIC) Hardware* ***Description Language (VHDL),*** Structure of HDL Module, structure and applications.