Shri Shivaji Education Society, Amravati's

SCIENCE COLLEGE

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- **'A+' Grade** with 3.51 CGPA (3rd Cycle) Reassessment College by NAAC, Bangalore
- **A College with Potential for Excellence** identified by UGC, New Delhi
- **Member, APQN** (Asia Pacific Quality Network)
- Recognized Centre for Higher Learning & Research
- Mentor College under 'Paramarsh Scheme' UGC, New Delhi

Shri Harshvardhan P. Deshmukh
President

Prof. M. P. Dhore
Principal

Dr. Panjabrao alias
Bhausaheb Deshmukh
Founder President

Department of Electronics

Program Outcomes, Program Specific Outcomes and Course Outcomes

Program Outcomes: Bachelor of Science (B.Sc.)
❖ PO1: To introduce the fundamentals of Science Education ❖ PO2: To enrich students' knowledge in all basic sciences ❖ PO3: To develop interdisciplinary approach amongst students ❖ PO4: To inculcate sense of scientific responsibilities and social & environment awareness ❖ PO5: To help student to build-up a progressive and successful career in academics and industry ❖ PO6: To motivate the students to contribute in the development of Nation

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Science College, Congress Nagar, Nagpur

DEPARTMENT OF ELECTRONICS

PROGRAMME OUTCOMES: B.SC. ELECTRONICS	
Department of Electronics	After successful completion of three years degree program in the subject Electronics, the students are able to:
Program Outcomes	**PO1:** Ability to design and conduct electronics experiments, as well as to analyze and interpret data. **PO2:** Utilize the basic knowledge of science Electronics and Communication. **PO3:** To provide opportunity to students to learn the latest trends in Electronics. **PO4:** To satisfy the needs of the core Electronics Industry useful for the society in all walks of life. **PO5:** To provide opportunities to the students to formulate, analyze and resolve the problems in Electronics Industry.

Program Specific Outcomes	**PSO1:** After completing the program, interested students can pursue in research field or in development field.
	PSO2: Students can become entrepreneur and can work on multidisciplinary projects.

Course Outcomes for B. Sc. ELECTRONICS

Course Outcome for Semester-I

PAPER-I: BASIC CIRCUIT COMPONENTS & NETWORK ANALYSIS	CO1: To enrich the students with the basic requirement of electronic circuits.
	CO2: To describe the theorems useful for circuit operation.
	CO3: To explore the use of energy sources for circuit operations.
	CO4: To familiarize about the use of transducers in instrumentation systems
PAPER-II: FUNDAMENTALS OF DIGITAL ELECTRONICS	CO1: To enrich the students with the basic requirement of digital electronics.
	CO2: To describe the use of Boolean Algebra for circuit operations.
	CO3: To elaborate the use of flip flops as memory in data processing system.
	CO4: To explore the use of binary circuits in digital system.
	CO5: To familiarize about the basic building blocks required for digital system.

Course Outcome for Semester-II

PAPER-I: SEMICONDUCTOR DEVICES	CO1: To explain about semiconductors used for the fabrication of semiconductor devices.
	CO2: To acquire the knowledge of transistor used in many electronic circuits.
	CO3: To familiarize about the field effect transistor and its operation.
	CO4: To explore the use of power devices required in electronics circuits.
	CO5: To familiarize about the applications of diode, transistor and power devices.
PAPER-II: ADVANCED DIGITAL ELECTRONICS	CO1: To enrich the students with the digital ICS used in electronics circuits.
	CO2: To enhance the use of Flip-Flops in the construction of counters.
	CO3: To familiarize the use of Counters & Registers in data processing system.
	CO4: To explore the use of binary memory in digital system.
	CO5: To disseminate about the building blocks required for digital system.

Course Outcome for Semester-III

PAPER-I: ANALOG CIRCUITS	CO1: To illustrate applications of diode as clippers, clamper and rectifier.
	CO2: To describe the role of transistor in amplification, signal analysis and two port hybrid circuit for testing amplifier parameters.
	CO3: To elaborate the concept of feedback and construction of feedback amplifier and oscillators.
	CO4: To explore the use of power amplifier in electronics circuits.
	CO5: To familiarize about the applications of diode and transistor.

PAPER-II: LINEAR INTEGRATED CIRCUITS	CO1: To study DC & AC characteristics of operational amplifier. CO2: To elucidate and design linear and nonlinear circuits of OP-AMP. To study timer IC and its applications. CO3: To elaborate the role of filters in electronics circuits. CO4: To explore the knowledge of linear integrated circuits and its uses.
Course Outcome for Semester-IV	
PAPER-I: BASIC COMMUNICATION ELECTRONICS	CO1: To understand functioning of basic processes in communication systems. CO2: To understand analogue modulation & demodulation techniques. CO3: To Understand transmission and reception systems. CO4: To understand propagation of radio waves in communication systems. CO5: To understand the process of analogue signal communication system.
PAPER-II: ANALOGUE AND DIGITAL CIRCUITS	CO1: To study DAC and ADC used for data conversions in electronics system. CO2: To elucidate and design regulated DC power supply for operating electronic devices. CO3: To study PLL IC 565 and its applications. CO4: To elaborate the role of transducers in Bioelectronics circuits. CO5: To explore the knowledge of Analogue and Digital circuits and its uses.
Course Outcome for Semester-V	
PAPER-I: Modern Communication Systems	CO1: To understand the concept optical communication and its operation CO2: To understand various digital modulation and demodulation techniques. CO3: To analyse the performance of digital communication system in terms of error rate and spectral efficiency. CO4: To understand the telecommunication traffic, channel and cellular capacity CO5: To understand various application of cellular technology.
PAPER-II: INTRODUCTION TO MICROPROCESSOR	CO1: To understand importance of Microprocessors as a programmable digital system element in computer system. CO2: To understand architecture and features of 8085 Microprocessor. CO3: To explore some basic concepts of microprocessors through assembly language programming. CO4: To augmented the knowledge of interfacing the peripheral to increase the flexibility of microprocessor. CO5: To grown-up the in-depth understanding of the operation of microprocessors and machine language programming & interfacing techniques.
Course Outcome for Semester-VI	
Paper-I: Programming in "C"	CO1: After completion of course, Students are able to Develop their programming skills

	CO2: Familiar with elements of C language CO3: Understand operators, Expression and Preprocessors CO4: Understand different decision making and concept of looping in C CO5: Understand Array, Structure, Function and Pointers, their declaration and use
Paper-II: MICROCONTROLLER 8051 AND ITS APPLICATIONS	CO1: To understand architecture and features of 8051 Microcontroller. CO2: To learn Programming of 8051 microcontroller. CO3: To learn interfacing of 8051 Microcontroller with real world input and output devices. CO4: To understand the coding and interfacing of 8051 with various IO devices. CO5: To understand importance of Microcontrollers in atomization and control system

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