

MAR AUGUSTHINOSE COLLEGE RAMAPURAM

Department of Electronics

POs, PSOs and COs of Under Graduate B.Sc. Electronics Programme

PROGRAMME OUTCOMES (POs)

Upon completion of the B.Sc. Electronics Degree Programme, the student will be able to

PO1	Provide the skills necessary to gather information from sources and use them by reading, understanding and interpreting physical information such as verbal, mathematical and graphical.
PO2	Provide need-based education in physics at the highest standard at the undergraduate level.
PO3	Perform experiments and interpret observational results, including assessment of experimental uncertainties.
PO4	To develop skills and enthusiasm of students to the best of their potential by providing an intellectually stimulating environment.
PO5	Enable students to use Information Communication Technology to gather knowledge at will.

PROGRAMME SPECIFIC OUTCOMES (PSOs)

PSO1	Provide in depth knowledge of scientific and technological aspects of Electronics
PSO2	Familiarize with current and recent technological developments
PSO3	Enrich knowledge through programmes such as project lab and seminars
PSO4	Train students in skills related to electronics industry and market.
PSO5	Create foundation for research and development in Electronics
PSO6	Develop analytical abilities towards real world problems.
PSO7	Help students to build-up a progressive and successful career in Electronics
PSO8	Produce electronic professionals who can be directly employed or start his/her own work as Electronic circuit Designer, Electronics consultant, testing professional, Service engineer and even an entrepreneur in electronic industry.
PSO9	Train students to a level where they can readily compete for seats for advanced degree courses like MSc (Electronics) and other related disciplines.

COURSE OUTCOME

Semester -1

Course Code	Course	Course outcome
EN1CCT01	English-1- Fine-tune Your English	On completion of the course, the student should be able to: 1. Confidently use English in both written and spoken forms. 2. Use English for formal communication effectively.
EL1CRT01	Basic Electronics	This course aims to get a pre-requisite knowledge on basic electrical technology and to familiarise with basic electronic devices.
EL1CRT02	Methodology of Science	On completion of the course, in general so as to enable the students to systematically pursue his particular discipline in science in relation to other disciplines that come under the rubric of sciences
EL1CRP01	Basic Electronics Lab	1. To get a basic knowledge on Electronic components and their characteristics 2. To get a basic knowledge on Logic gates and truth tables.
PH1CMT03	Solid State Physics	1. To provide the students of B.Sc. Electronics programme the bare minimum knowledge in Solid State Physics which is the basis of electronic devices. 2. It aims at developing a taste for solid state physics where the real advances in electronic device technology happens. 3. To enable students to catch up with the new areas related to electronics which include quantum computing, nanotechnology etc. 4. Miniaturization has made the physics of devices more demanding. One requires the application of the methods of quantum mechanics to tackle them.
MM1CMT07	Mathematics – 1 - Calculus and Trigonometry	To achieve a thorough knowledge of Differential Calculus and Trigonometry which will complement the core subjects in the subsequent semesters.

Semester -2

Course Code	Course	Course outcome
EN2CCT03	English -2 – Issues That Matter	By the end of the course, the learner is able to <ul style="list-style-type: none"> • identify major issues of contemporary significance • respond rationally and positively to the issues raised • internalise the values imparted through the excerpts • re-orient himself/ herself as conscious, cautious, concerned, conscientious and concerned human being and • articulate these values in error free English.
EL2CRT03	Electronic Circuits	To equip the students with circuit level application concepts of electronic devices.
EL2CRT04	Network Theory	This course equips the students to excel in the field of circuit theory, network theorems, circuit analysis, and filter theory
EL2CRT05	Digital Electronics	To equip the students with the concepts of Boolean algebra, digital logic gates, combinational and sequential digital circuits
EL2CRP02	Digital Electronics Laboratory	To equip the student with expert in handling digital ICs, logic gates, and digital circuit designing
MM2CMT07	Mathematics – 2 - Linear Algebra and Differential Equations	To equip the student with a thorough knowledge on Vector spaces, Linear Algebra and Differential Equations

Semester -3

Course Code	Course	Course outcome
EL3CRT06	Analog Communication	To get a thorough knowledge of modulation and analog communication techniques
EL3CRT07	Analog ICs and Applications	To get a thorough knowledge of analog ICs
EL3CRT08	Electromagnetic Theory	To equip the student to understand the theory of electromagnetic waves and their propagation
EL3CRT09	8085 Microprocessor	This course aims to give a strong background in the field of Microprocessor 8085 and to expertise in assembly level programming
EL3CRP03	Analog Electronics Circuits Lab	To equip the students with the practical knowledge of Amplifiers, Oscillators, Analog ICs and their circuits
ST3CMT01	Statistics-	To get an in-depth knowledge of probability theory and statistics which will complement the studies in Electronics and communication theory.

Semester - 4

Course Code	Course	Course outcome
EL4CRT10	Programming in C	This course introduces the student with high level computer programming concepts and enables the student to acquire sufficient skills for programming in C language.
EL4CRT11	Microwave Electronics	To equip the student with the theory of wave guides, transmission lines, microwave components, microwave tubes and devices
EL4CRT12	Digital Communication	To equip the student to understand basics of Digital communication
EL4CRT13	Instrumentation Electronics	This course aims to impart an in-depth knowledge in the field of transducers, Signal Conditioners and electronic instruments.
EL4CRP04	Programming in C Lab	To introduce computer programming using C language. Also trains students to develop program and to acquire sufficient programming skills.
EL4CRP05	Microprocessor Lab	To equip the student with a practical knowledge of 8085 programming, its interfacing and applications

Semester -5

Course Code	Course	Course outcome
EL5CRT14	Microcontrollers and Applications	To equip the student with the architecture and programming of microcontrollers
EL5CRT15	Environmental Awareness and E-Waste Management	<p>1. Environmental Education encourages students to research, investigate how and why things happen, and make their own decisions about complex environmental issues by developing and enhancing critical and creative thinking skills. It helps to foster a new generation of informed consumers, workers, as well as policy or decision makers.</p> <p>2. Environmental Education helps students to understand how their decisions and actions affect the environment, builds knowledge and skills necessary to address complex environmental issues, as well as ways we can take action to keep our environment healthy and sustainable for the future. It encourages character building, and develops positive attitudes and values.</p> <p>3. To develop the sense of awareness among the students about the environment and its various problems and to help the students in realizing the inter-relationship between man and environment and helps to protect the nature and natural resources.</p> <p>4. To help the students in acquiring the basic knowledge about environment and the social norms that provide unity with environmental characteristics and create positive attitude about the environment.</p> <p>5. To impart awareness on, Human rights and E-waste management</p>
EL5CRT16	Computer Hardware	To get an in-depth knowledge of computer hardware and hence to create a confidence in using and assembling PC
EL5CRP06	Microcontroller Lab	Help students about 8051 microcontroller and its interfacing through assembly and embedded c programming methods
EL5CRP07	Communication Lab	Help students to experiments on different communication circuits in analog and digital modes of operations
EL5CBT01	Open Course - Computer Assembling	To get an in-depth knowledge of computer hardware and hence to create a confidence in using and assembling PC

Semester -6

Course Code	Course	Course outcome
EL6CRT17	Optoelectronics	This course aims to give an in-depth knowledge in the field of lasers, optical semiconductor devices, optical display devices and optical wave guides.
EL6CRT18	Computer Networks	This course aims to give an in-depth knowledge in the field of computer networks and the protocols involved in data communication
EL6CRT19	Digital Signal Processing	To study the fundamentals of DFT, Digital filter design and DSP hardware
EL6CBT01	Choice Based Course - Power Electronics	To have fundamental knowledge in power devices, circuits and its applications.
EL6SMP01	Presentation Skill Practice	Helps students to study and present new developments in electronics outside the syllabus.
EL6PRP01	Project Lab	To help practical, industrial and professional experience to develop his/her own electronic circuits for study, develop or new innovations.