

Mathematics:

- CO1: To recognize the type of given differential equation and able to solve that D.E.
- CO2: Finding the orthogonal trajectories of given family of curves by using differential equations.
- CO3: To get awareness on applications of differential equations in various fields.
- CO1: To find the location of objects in space.
- CO2: To know the properties of lines, planes, sphere, cylinder and cone.
- CO3: To get awareness about application of solid geometry in various fields like astronomy Antennas etc.
- CO1: Generalization of arithmetic operations addition and multiplication of the real numbers.
- CO2: To recognize similar groups by using the concept of isomorphism.
- CO3: To recognize whether a group is normal sub group (or) cyclic group (or) abelian group (or) Permutation group.
- CO4: To understand every group is nothing but a permutation group.
- CO5: To get awareness about group theory applications in brain scanning, solving quintic equations etc.
- CO1: To know the properties of real numbers.
- CO2: To find whether a sequence (or) series is convergent (or) divergent.
- CO3: To recognize whether a function is continuous, derivable, integrable (or) not.
- CO4: To find the rate of change, slope of a curve by using derivatives and to find areas by Using integration.
- CO1: To recognize the types of rings like commutative ring, Integral domain, Boolean ring, field, ideals etc.
- CO2: To find the properties of algebraic structures with two binary operations by using rings.
- CO3: To solve the given system of equations and find whether the system has infinitely many Solutions (or) unique solution (or) no solution.
- CO4: To find the characteristic equation, characteristic .roots, characteristic vectors of a given square matrix

CO1: By generalizing the properties of vectors we get vector space and by using this vector Space to find the properties of vectors.

CO2: To recognize whether two vector spaces are similar or not by using isomorphism.

CO3: To know every homomorphic image of a vector space is nothing but a quotient group of the vector space.

CO4: To find some inequalities in real numbers and complex numbers by using Cauchy Schwartz inequality.

Physics:

- The students would learn about the behaviour of physical bodies it provides the basic concepts related to the motion of all the objects around us in our daily life. The course builds a foundation of various applied field in science and technology; especially in the field of mechanical engineering. The course comprises of the study vectors, laws of motion, momentum, energy, rotational motion, gravitation, fluids, elasticity and special relativity.
- Students would perform basic experiments related to mechanics and also get familiar with various measuring instruments would learn the importance of accuracy of measurements.
- It gives an opportunity for the students to learn about one of the fundamental interactions of electricity and magnetism, both as separate phenomena and as a singular electromagnetic force.
- Students would gain practical knowledge about electricity and magnetism and measurements such as: Resistance, Voltage, current etc.
- The course makes the students able to understand the basic physics of heat and temperature and their relation with energy, work, radiation and matter. The students also learn how laws of thermodynamics are used in a heat engine to transform heat into work.

Students would gain practical knowledge about heat and radiation, **Computer Science:**

- Ability to analyze software requirements with existing tools.
- Ability to gather and specify requirements of the software projects.
- Able to differentiate different testing methodologies.
- Able to understand and apply the basic project management practices in real life projects.
- Ability to work in a team as well as independently on software projects.
- Ability to Design, model, store and retrieve data in database.
- Apply logical skills to analyze a given problem.
- Develop an algorithm for solving a given problem.
- Understand C language constructs like iterative statements, Array processing, Pointers etc
- Apply C language constructs to the algorithms to write a C language program.

- To explore basic knowledge on computers and Photoshop's beauty from the practical to the painterly artistic and to understand how Photoshop will help you create your own successful images.
- Appreciate and understand the working of a digital computer
- Analyze a given problem and develop an algorithm to solve the problem
- Improve upon a solution to a problem
- Use the 'C' language constructs in the right way
- Design, develop and test programs written in 'C'
- Understand the concept and underlying principles of Object-Oriented Programming
- Understand how object-oriented concepts are incorporated into the Java programming language
- Develop problem-solving and programming skills using OOP concept
- Understand the benefits of a well structured program
- Develop the ability to solve real-world problems through software development in high-level programming language like Java
- Develop efficient Java applets and applications using OOP concept
- Become familiar with the fundamentals and acquire programming skills in the Java language.
- Analyze the concepts of processes in operating system and illustration of the scheduling of processor for a given problem instance.

- Identify the dead lock situation and provide appropriate solution so that protection and security of the operating system is also maintained.
- Analyze memory management techniques, concepts of virtual memory and disk scheduling.
- Understand the implementation of file systems and directories along with the interfacing of IO devices with the operating system.
- The course comprises of the study of superposition of harmonic oscillations, waves motion (general), oscillators, sound, wave optics, interference, diffraction, polarization. The course is important for the students to make their career in various branches of science and engineering, especially in the field of photonic engineering.
- The practical knowledge of wave motion doing experiments: Tuning fork, electric vibrations. They would also learn optical phenomena such as interference, diffraction and dispersion and do experiments related to optical devices: Prism, grating, spectrometers.