

## Program Specific Outcomes:

### Department of Botany

- **UG**
  - To provide thorough knowledge about various plant groups from primitive to highly evolved.
  - To make the students aware of applications of different plants in various industries.
  - To highlight the potential of these studies to become an entrepreneur
  - To equip the students with skills related to laboratory as well as field based studies.
  - To make the students aware about conservation and sustainable use of plants.
  - To create foundation for further studies in Botany.
  - To address the socio-economical challenges related to plant sciences.
  - To facilitate students for taking up and shaping a successful career in Botany.
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### Department of Chemistry

- **UG**
  - The course helps the students in improving their diverse skills in various areas such as laboratory skills, numerical and computing skills, ability to approach to the problems both analytically and logically, time management skills, etc.
  - As a Chemist in the Sugar, Pharmaceutical, Chemical, Soap, Detergent, Surfactant, Cement, Fermentation, Textile Dyeing and Printing, Rubber, Petroleum, Pesticide, Food industries.
  - As a Chemist in Municipal Corporation, Water treatment plant.
  - For Research and Development department of Pharmaceutical, Chemical, Soap, Detergent, Surfactant, Cement, Fermentation, Textile Dyeing and Printing, Rubber, Petroleum, Pesticide, Food, Plastic, Ceramic, Perfumery, Agrochemical industries.
  - In the Q.C. department of pharmaceutical, chemical, soap, detergent, surfactant, cement, fermentation, dye, rubber, petroleum and pesticides industries.
  - In the Q.A. Executive in Pharmaceutical, Chemical, Soap, Detergent, Surfactant, Cement, Fermentation, Textile Dyeing and Printing, Rubber, Petroleum, Pesticide, Food industries.
  - In the Production section and plant operator in Pharmaceutical, Chemical, Soap, Detergent, Surfactant, Cement, Fermentation, Textile Dyeing and Printing, Paper Rubber, Petroleum, Pesticide, Food industries.
  - As an analyst in synthetic labs, Forensic Science Department, etc.
  - As a Marketing Representative (M.R.) for the Pharmaceutical, Chemical, Soap, Detergent, Surfactant, Cement, Fermentation, Textile Dyeing and Printing, Paper, Rubber, Petroleum, Pesticide, Food products.
  - As a Analytical Chemist, Biomedical Chemist, Chemical Engineering Assistant, Industrial Research Scientist, Lab Chemist, Materials Technologist, Production Chemist, Production Officer, Quality Controller, R&D Chemist, Research & Development, Safety Health And Environment Specialist, Teacher.

### Department of Mathematics

- **UG**
  - Understand the foundations of Mathematics.
  - Be able to perform basic computations in Higher Mathematics
  - Be able to write and understand basic proofs
  - Develop and maintain problem solving skills
  - Use mathematical ideas to model real-world problems
  - Acquire knowledge of the History of Mathematics
  - Be able to communicate mathematical ideas with othersStudents are trained in an effective manner to attend the competitive exams in order to brighten their future

### Department of Zoology

- **UG**
  - Zoology is study of animals, but along with this it concern with basic knowledge of physiology and anatomy of animal including human. It also deals with study of diseases and causative agents and prophylaxis as well as environmental sciences. Biochemistry and biostatistics help to obtained analytical view. One can better understand the importance of the nature by studying these courses. This subject also plays role in understanding public health and hygiene.
  - Various activities and programs are arranged by the department during this tenure due to that one can develop certain qualities in his or her personality such as stage daring, presentation skills, report writing, leadership qualities which will help him in his career.
  - With this background and education, the Zoologist has many employment opportunities. Some of the exciting career opportunities in Various Faculties are as follows:

- **Government Services:**
  - Zoological Survey of India
  - Civil Services
  - District Malaria Officer (DMO)
  - Regional Forest Officer (RFO)
  - Pest Control Officer in Railway
  - Lab Technicians
  - Food Inspector
  - Various posts in Sericulture Department
  - Various posts in Fishery Department
  - Various posts in Apiculture Department
  - Various posts in Poultry Department
  - Various posts in Health Ministry
- **Self-Employment after Zoology Graduation**
  - Poultry Farm
  - Aquaculture
  - Pest Control Firm
  - Honey Production
  - Pig Farm
  - Goat Farm
  - Vermiculture
  - Dairy Firm
  - Animal Supplier
  - Sericulture
- There are job opportunities in Federal, State or Local Governments with assignments in food and animal production, disease control and eradication; meat inspection, public health, animal disease research and administrative positions.
- Public health: Zoologists are employed by several agencies for formulating and reforming many food and sanitary laws related to public and animals.
- Teaching and Research: Graduate students can join the teaching field, and can serve as a teacher in primary and secondary schools. They can join the research institutes or laboratories as lab attendant, or after the post-graduation they can take admissions to Research courses such as Ph.D.
- They are employed in various veterinary and Medical faculties Research Institutes. Veterinary / Biological production and Animal Research institutes, Veterinary Biological product and animal diseases investigation centers and in schools training livestock diseases, investigation centers and in School training Livestock Assistance farm personnel.
- Industry: The industries dealing with development and production of pharmaceuticals and food to both human and pets can recruit these students in their quality control and marketing.
- Private Practice: With increase in number of companion animals (dogs, cats, birds) being reared by people, Commercial livestock production in private and public sectors is increased, private veterinary and animal supplier practice has become the most lucrative avenue for self-employment.
- Zoo and Wild Life Medicine: With the establishment of more wild life reserves and zoos and there is increased scope of employment for students in these

areas.

- Police Force: With increase in the number of mounted troops and police dogs, more veterinarians are recruited by the Police Force to cater for the welfare of these animals.
- Marketing: Medical representative in Pharmaceutical Industries

### Department of Physics

- UG

**On completion of the B. Sc. (Physics) program, students will be able to**

- Demonstrate a rigorous understanding of the core theories & principles of physics, which include mechanics, electromagnetism, thermodynamics, & quantum mechanics.
- Learn the Concept of Quantum Mechanics, Relativity, introduced at degree level in order to understand nature at atomic levels.
- Provide knowledge about material properties and its application for developing technology to ease the problems related to society.
- Understand the set of physical laws, describing the motion of bodies, under influence of system of forces.
- Understand the relationship between particles & atom, as well as their creation & decay.
- Relate the structure of atoms & subatomic particles.
- Understand physical properties of molecule the chemical bonds between atom as well as molecular dynamics.
- Analyze the application of mathematics to problem in physics & development of mathematical method suitable for such application & for formulation of physical theories.
- Learn the structure of solid materials & their different physical properties along with metallurgy, cryogenics, electronics, & material science.
- Understand fundamental theory of nature at small scale & energy levels of atom & sub-atomic particles.

### Department of Electronics

- UG

**On completion of the B. Sc. (Electronics) program, students will be able to**

- Understand Basic Circuits using Active Devices.
- Understand Basic Analog Circuits and their applications using Active Devices.
- Learn basic test instruments such as power supply, function generator, DFM and CRO and their construction and working principle.
- Understand Basic differential amplifier and their applications in linear Integrated circuits.
- Design & conduct experiments as well as to analyze data and its interpretation.
- Design a system components or process to meet desired needs within realistic constraints such as economic environmental, social, political, ethical, health & safety.
- Understand the fundamental concept of semiconductor like crystal structure, energy band gap, charge carrier statistics.