1. Post Graduate (PG) Program

Programme Outcomes (PO's)

PHARM D and Pharm D (Post Baccalaureate)

- Preparation of individualized therapeutic plans based on diagnosis, monitoring therapy, through identification of alternatives, time-course of clinical and laboratory indices of therapeutic response and adverse effects
- To know various drug distribution methods, know the professional practice management skills in hospital pharmacies, provide unbiased drug information to the doctors, appreciate practice based research methods, and appreciate stores management and inventory control .
- To detect, assess, and monitor adverse drug reactions, interpret selected laboratory results of specific disease states, retrieve, analyze, interpret and formulate drug or medicine information
- To apply the pharmaco-epidemiological methods like drug utilization review, cohort studies, meta-analysis, prescription event monitoring and study on vaccine safety, risk management and drug induced birth defects, pharmacoeconomic evaluation for cost-minimization, cost-benefit, cost-effectiveness, and cost-utility evaluations
- To establish industry institute partnership cell to bridge the gap between the industrial requirements and the academic curriculum.
- To improve patient care in performing medication history, interpretations of laboratory data of biological samples, identifying potential-drug related influences of Pharmacotherapy.
- To establish systems management as an entrepreneur through inventory control, distribution systems, documentation, analysis of financial resources, utilizing management theories, and information technology in industrial Pharmacy and Business Management .
- To train the students and develop their technical skill knowledge for handling sophisticated analytical instruments .
- To create a talent pool by involving students in research projects and to make students undertake research projects under faculty guidance for publication

Programme Outcomes (PO's) (M. Pharm.)

- Postgraduate of pharmaceutics is fully equipped with the knowledge of all the method, processes, and techniques for manufacturing and evaluation of the drugs and all types of drug formulations whether solids, liquids, semisolids and novel drug delivery systems.
- Postgraduate of Pharmaceutics can deal with all the problems come across manufacturing and stability of the product due to physical and chemical degradation.
- Postgraduate of Pharmaceutics has the complete knowledge of Unit operations taking place in Pharmaceutical industry which can be efficiently applied to the production of quality products.
- Postgraduate of pharmaceutics has the complete knowledge of Bio-pharmaceutics and Pharmacokinetics which can be applied to the development of the new formulations by evaluating them for ADME in order to decide their dose, frequency and also correlating pharmacokinetics and pharmacodynamics. Students will have excellent opportunity in the Research and Development centers of the pharmaceutical industry.
- Postgraduate of pharmaceutics has various opportunities in the area of Packaging the pharmaceutical products. The doors are open for developing suitable novel packing material and design for the different kinds of dosage forms. This is one of the important criteria of enhancing the sale of the products.
- Postgraduate of pharmaceutics is capable to deal with any of the area of manufacturing of pharmaceutical products whether concern with product development, bulk manufacturing, evaluating, packaging and finally marketing. Such exhaustive knowledge will make the student expert in the pharmaceutical industry to deal with any simple and complex problems of manufacturing.

M. Pharm Programme Outcomes (PO'S)

Branch- Pharmacology

- Postgraduate with pharmacology is fully equipped with the knowledge of anatomy and physiology, general pharmacology and pharmaceutical use and toxic effects of all the active pharmaceutical ingredients. This makes the students equipped with the knowledge to find out the diseases and their treatment.
- They are having the knowledge of pathophysiology of diseases and mechanisms of action of various drugs which enhance their importance in the research and development to work on the reducing the toxic effect and suggesting to the lead

molecules scientist to develop new molecules with minimum toxic effects and maximum therapeutic effect providing great opportunities to students in R & D Department of Pharmaceutical Industry.

- Postgraduate students with Pharmacology are expert in pharmacological screening of the drugs, development of newer animal models for preclinical studies, in-vivo drug interactions, Pharmacovigilance which enhance the scope of student with this subject in the area of preclinical trials
- Postgraduate students with pharmacology are having full knowledge of clinical trials, and bioavailability and bioequivalence studies of new as well as existing formulations with their regulatory requirements providing a great scope in the companies conducting the Clinical Trials

M. Pharm Programme Outcomes (PO'S)

Branch- Pharmaceutical Quality Assurance

- Postgraduate with Pharmaceutical Quality Assurance is fully equipped with the knowledge of systematic activity implemented in the quality system so that quality requirement for a product or service will be fulfilled.
- Students will learn the component of the quality assurance like goals, benchmarks, leadership and motivation.
- Students will learn about the quality management trends of industries standards like ISO, ICH, NABL, WHO-GMP, and Six Sigma in order to manufacture quality pharmaceutical products.
- Students will learn about the quality control trends of industries standards like cGMP, GLP, Schedule M, USFDA (inclusive of CDER and CBER), WHO and EMEA, which provide the students a great opportunities in Quality Assurance Department .
- Students can contribute their skill and knowledge to improve the performance and quality of the products with cost effectiveness..
- Great opportunities are available to the students in the academics to train the students about the quality management during the manufacturing of the products and the producing the good quality of products maintaining the in process control systems.
- Provides the knowledge of technology transfer from R & D to the actual manufacturing area by sorting out various data obtained during R & D.
- Provides the knowledge of New Product development process.
- Provides the knowledge of process for auditing in pharmaceutical industries considering cGMP regulation, Quality assurance functions, Quality system approach, essentials of warehouse and vendor eligibility and requirement of engineering

department looking after the critical systems of industry like; HVAC, Water for injection systems and Effluent Treatment Plant (ETP).

R. NO	NAME OF THE PG PROGRAM
1.	Doctor of Pharmacy (Pharm. D)
2.	Doctor of Pharmacy (Post Baccalaureate)
3.	Master of Pharmacy (M. Pharm.) in Pharmaceutics
4.	Master of Pharmacy (M. Pharm.) in Pharmacology
5.	Master of Pharmacy (M. Pharm.) in Pharmaceutical Quality Assurance

Program Outcomes (PO's) (M. Pharm)

Branch-Pharmaceutics

- Provides the knowledge of Physical, chemical and physicochemical characteristics of drugs and additives along with the methods and processes to develop not only the conventional efficacious dosage forms like; Tablets, Capsules, liquids and semisolids but also many novel drug delivery systems to target the drugs to the receptors in order to protect healthy human cells in case of disease like Cancer and other deadly diseases.
- Provides knowledge to develop ability to coordinate with multidisciplinary departments in the pharmaceutical industries.
- Provides knowledge to manage all the documents related to National and International Regulatory authorities and production processes.
- Provides knowledge to develop team-based research work for developing innovative pharmaceutical products, analytical methods and implementation of norms for quality assurance and technology transfer
- Provides complete knowledge to set up a pharmaceutical industry
- Provides knowledge to work with ethical practices and moral values in the professional life to gain recognition in the Pharmaceutical society

R. NO	NAME OF THE PG PROGRAM
1.	Doctor of Pharmacy (Pharm. D)
2.	Doctor of Pharmacy (Post Baccalaureate)
3.	Master of Pharmacy (M. Pharm.) in Pharmaceutics
4.	Master of Pharmacy (M. Pharm.) in Pharmacology
5.	Master of Pharmacy (M. Pharm.) in Pharmaceutical Quality Assurance

2. Under Graduate (UG) Program (B. Pharm)

Graduates in pharmacy after the completion of their programme with their knowledge they can serve in pharmaceutical industry, sales, marketing, clinical trials, drug inspector, hospital pharmacist, production unit of pharmaceutical industry, part of research and development unit, can open his own drug store and work as an entrepreneur, can serve as an academician in institutions.

SR. NO	NAME OF THE UG PROGRAM
1.	Bachelor of Pharmacy (B. Pharm.)

3. PhD Program

- **Programme Outcomes for PhD**
- The scholastic educational module and research programs have been structured with refreshed information with the essential concentration to rudiments and developing fields of Pharmacy.
- Research regions in the division essentially centre around different pharmaceutical medication conveyance frameworks, novel medication conveyance frameworks, photochemistry, institutionalization and quality control of home grown medications, and other push regions of Pharmaceutical Research.
- The programme consistently distributes their exploration research in reputed national and international journals.
- The course concentrates on research and coursework identifying with the improvement, creation and portrayal of measurement shapes, just as the aura and activity of medications in the body.

- The group based way to deal with medication conveyance, grasping an assortment of exercises in the wide region of medication definition and conveyance.
- The department works towards promoting multidisciplinary, team-based approach to drug delivery, embracing a variety of activities in the broad area of drug formulation and delivery.
- Major areas of emphasis include quality education with professionalism by considering the recent demands in different aspect of pharmaceutical fields. Programme Specific Outcomes
- The ultimate destination for quality education, practical based training and research in pharmaceutical technology and allied areas for the well-being of people.
- Provide qualified personnel who can take up responsibilities as pharmaceutical sciences professionals, suitable for community, industries and institutions.
- Provide infrastructure and research facilities to disseminate the advanced knowledge to the students in various branches pharmaceutical sciences through innovative teaching learning processes with inter-disciplinary approach such that they grow their wisdom to acquire all kinds of knowledge and generate new ideas.
- Educate and train manpower for the development of the country and establish linkages with industries for the promotion of science and technology.
- Develop the spirit of internationalism and competitiveness in students such that they develop new original ideas and make new discoveries and inventions to make a strong society.
- Encourage students for, acquiring self-confidence, self- respect and self-dependence and instill moral values in students making them well disciplined and pay special attention to the improvement of the social and economic conditions

SR.NO	DOCTORATE PROGRAM
1.	PhD in Pharmaceutical Science

4. Diploma program

PROGRAM NAME: DIPLOMA IN PHARMACY (D.PHARM)

PROGRAM OUTCOME OF D.PHARM PROGRAM

At the end of the D.Pharm Program, the graduate with pharmacy degree shall be able to

- Work successfully in Pharmaceutical industry, educational institutes, hospitals and pharmaceutical marketing agencies. And provide Patient Counselling /education.
- Provide the services to dispense the drugs by opening the medical shops and serving in hospital as pharmacist with work profile including , Review Prescriptions, Dispense Prescription / Non-Prescription Medicines , And Provide Patient Counselling / Education.
- The student should be able to manage the drug distribution system as per the policies and guidelines of the hospital pharmacy, good community pharmacy practice and the recommendations of regulatory agencies. Also, be able to manage the procurement, inventory, and distribution of medicines in hospital / community pharmacy settings.
- Design and develop quality dosage form and also constantly improving the existing dosage form while working in formulation department of pharmaceutical companies.
- Contributing in all government health programme, improving quality of life by giving educational knowledge to rural and urban population as community pharmacist.
- The student should be able to provide an expert opinion on medications to health care professionals on safe and effective medication- use, relevant policies and procedures based on available evidences.
- The student should be able to deliver professional services in accordance with legal, ethical, and professional guidelines with integrity.
- The student should be able to acquire the entrepreneurial skills in the dynamic professional environments. Also, be able to achieve leadership skills through teamwork and sound decision- making skills.

SR. NO	NAME OF THE DIPLOMA PROGRAM
1.	Diploma in Pharmacy (D. Pharm.)

Courses with intake Capacity

No.	Programs	Under Graduate/ Post Graduate (PG Diploma)/ Other Certificate Courses	Intake Capacity
1.	**B.Pharm**	UG Degree	100
2.	**M.Pharm (Pharmaceutics)**	PG Degree	15
3.	**M.Pharm(Quality Assurance)**	PG Degree	15
4.	**M.Pharm (Pharmacology and Clinical Research)**	PG Degree	15
5.	**Pharm D**	PG Degree	30
6.	**Pharm D (Post baccalaureate)**	PG Degree	10
7.	**D Pharm**	Diploma	60
8.	**PhD**	Doctorate Degree	

6. List of Certification courses

Sr.No.	Courses
1	Computer aided drug Design
2	Biostatistics & Design of Experiments
3	Pharmacovigilance
4.	Molecular Biology Training

1. **Computer Aided Drug Design**

Objective of Course:

The main objective of course to teach fundamental techniques of insilico drug design and its applicability in various stages of drug discovery process.

About the Course:

The course will cover basic techniques of computer aided drug design which includes structure and target based design, molecular modeling, quantum mechanics, drug likeness properties, QSAR , docking etc. The hands on training of some useful software used for insilico drug discovery will also be provided. The course will be taught by the faculty who have expertise in insilico techniques.

Need of Course:

In the era of modern drug discovery various technologies/ software used that reduce time and cost of drug discovery process. CADD and bioinformatics tools provide benefits like cost saving, time to market, insight knowledge of drug receptor interactions, speed up drug discovery and development. So the knowledge and skills of insilico drug discovery methods is very essential for drug discovery and development process.

2. **Biostatistics & Design of Experiments**

Objective of Course:

The main objective of course to study statistical experimental design and experimental methods used in science, technology and medicine. You will learn how to design and conduct experiments, and analyse data generated from experiments.

About the Course:

Biostatistics & Design of Experiments is a statistical tool which helps you to design any experiment properly toward right conclusions. In this beginner online course, you learn by examples and you will know first what is design of experiment and the aim behind it, then you will go deeper thus learning how to plan, execute and analyse any experiment properly using this powerful tool. You will also encounter both types of factorial designs here (Full Factorial Design and Fractional Factorial Design). This course will allow any newbie fully learn how to plan, execute and analyse any experiment properly, thus making the right conclusions out it.

Need of Course:

Learn modern experimental strategy, including factorial and fractional factorial experimental designs, designs for screening many factors, designs for optimization experiments, and designs for complex experiments such as those with hard-tochange factors and unusual responses. There is thorough coverage of modern data analysis techniques for experimental design, including software. Applications include chemical and process industries, pharmaceutical and bio-pharm, medical devices and many others.

3. **Pharmacovigillance**

About the course:

Pharmacovigilance has been defined as the process of identifying and responding to drug safety issues. The aim of Pharmacovigilance is to protect patients from unnecessary harm by identifying previously unrecognized adverse drug reactions and related hazards, elucidating pre-disposing factors, refuting false safety signals and quantifying risk in relation to benefit.

Objectives of the course:

The program objective is to understand the key concepts of Pharmacovigilance. It would help candidates to gain in-depth knowledge on the best way to collect and report adverse events, store drug safety data, manage the risk associated with risk to medicinal products. Its unique format will provide the key skills and knowledge needed to operate a fast, effective drug safety or Pharmacovigilance program.

Need of the Course:

Pharmacovigilance is highly demanded area in healthcare as well as in pharma industry, so the candidates will have good opportunity in this area if they are certified with this course.

4. **Molecular Biology Training**

Need of course

Molecular biotechnology is exciting! The tools of molecular biotechnology can be applied to develop and improve drugs, vaccines, therapies, and diagnostic tests that will improve human and animal health. The sector, with its immense growth potential, will continue to play a significant role as an innovative manufacturing hub. The sector is one of the most significant sectors in enhancing India's global profile as well as contributing to the growth of the economy.

Molecular Biotechnology provides excellent employment opportunities. Biomedicine. The biotechnology sector of India is highly innovative and is on a strong growth trajectory. With the country offering numerous comparative advantages in terms of R&D facilities, knowledge, skills, and cost effectiveness, the biotechnology industry in India has immense potential to emerge as a global key player. It has been predicted that the biotechnology sector will add plentiful new jobs in the coming years. The government has to invest US$ 5 billion to develop human capital, infrastructure and research initiatives if it is to realize the dream of growing the sector into a US$ 100 billion industry by 2025, as per Union Minister for Science and Technology. As the impact of molecular biotechnology on our lives expands, the need for individuals with the knowledge and experience base for technical and leadership positions in various bioscience/biotechnology-oriented settings will continue to grow.

Objective of the course are,

- The primary goal of the Research training program is to provide students with necessary skills making with employable and enhance their research skills.
- We trains students with the enhanced skills required for them to excel in jobs in biotechnology, pharmaceuticals, Biotech and related industry sectors.
- This training course would also make them capable of being successful independent researcher, able to handle tough research questions.

7.Internship Details

Objectives for Internship

i) To provide patient care in cooperation with patients, prescribers, and other members of an interprofessional health care team based upon sound therapeutic principles and evidence-based data, taking into account relevant legal, ethical, social cultural, economic, and professional issues, emerging technologies, and evolving biomedical, pharmaceutical, social or behavioral or administrative, and clinical sciences that may impact therapeutic outcomes.

ii) To manage and use resources of the health care system, in cooperation with patients, prescribers, other health care providers, and administrative and supportive personnel, to promote health; to provide, assess, and coordinate safe, accurate, and time-sensitive medication distribution; and to improve therapeutic outcomes of medication use.

iii) To promote health improvement, wellness, and disease prevention in co-operation with patients, communities, at-risk population, and other members of an interprofessional team of health care providers.

iv) To demonstrate skills in monitoring of the National Health Programmes and schemes, oriented to provide preventive and promotive health care services to the community.

v) To develop leadership qualities to function effectively as a member of the health care team organised to deliver the health and family welfare services in existing socio-economic, political and cultural environment.

vi) To communicate effectively with patients and the community.

Internship Goal

The goal of the practical training for the students is to provide a real-time, supervised experience on the professional tasks emphasised in their course of study. Further, it helps them to apply their acquired knowledge and skills in the professional working environment. The practical training intensively prepares the students with adequate competencies and qualifications required for the career opportunity in the future.