

**AVANTHI INSTITUTE OF PHARMACEUTICAL SCIENCES**  
**Gunthapally (V), Hayathnagar (M) R. R. Dist.**

**Course Outcomes - B.Pharm**

<b>Sl. No.</b>	<b>Name of the Program</b>	<b>Name of the Course</b>	<b>Course Outcome</b>
1	<b>B. Pharm. I Year I Sem</b>	<b>HUMAN ANATOMY AND PHYSIOLOGY - I</b>	<p>Student would able to</p> <ul style="list-style-type: none"> <li>• Explain the gross morphology, structure, and functions of various organs of the human body.</li> <li>• Describe the various homeostatic mechanisms and their imbalances.</li> <li>• Identify the various tissues and organs of different systems of human body.</li> <li>• Perform the various experiments related to special senses and nervous system.</li> <li>• Appreciate coordinated working pattern of different organs of each system</li> </ul>
2		<b>PHARMACEUTICAL ANALYSIS - I</b>	<p>Student would able to</p> <ul style="list-style-type: none"> <li>• understand the principles of volumetric and electro chemical analysis</li> <li>• carryout various volumetric and electrochemical titrations</li> <li>• develop analytical skills</li> </ul>
3		<b>PHARMACEUTICS - I</b>	<p>Student would able to</p> <ul style="list-style-type: none"> <li>• Know the history of profession of pharmacy</li> <li>• Understand the basics of different dosage forms, pharmaceutical incompatibilities and</li> <li>• pharmaceutical calculations</li> <li>• Understand the professional way of handling the prescription</li> <li>• Preparation of various conventional dosage forms</li> </ul>
4		<b>PHARMACEUTICAL INORGANIC CHEMISTRY - I</b>	<p>Student would able to</p> <ul style="list-style-type: none"> <li>• know the sources of impurities and methods to determine the impurities in inorganic drugs and</li> </ul>

- PRINCIPAL  
 Avanthi's Institute of Pharmaceutical Sciences  
 Gunthapally (V), Hayath Nagar (M),  
 Ranga Reddy Dist.

**AVANTHI INSTITUTE OF PHARMACEUTICAL SCIENCES**  
**Gunthapally (V), Hayathnagar (M) R. R. Dist.**

			<ul style="list-style-type: none"> <li>pharmaceuticals</li> <li>understand the medicinal and pharmaceutical importance of inorganic compounds</li> </ul>
5		<b>COMMUNICATION SKILLS</b>	<p>Student would able to</p> <ul style="list-style-type: none"> <li>Understand the behavioral needs for a Pharmacist to function effectively in the areas of pharmaceutical operation</li> <li>Communicate effectively (Verbal and Non Verbal)</li> <li>Effectively manage the team as a team player</li> <li>Develop interview skills</li> <li>Develop Leadership qualities and essentials</li> </ul>
6		<b>REMEDIAL BIOLOGY</b>	<p>Student would able to</p> <ul style="list-style-type: none"> <li>know the classification and salient features of five kingdoms of life</li> <li>understand the basic components of anatomy &amp; physiology of plant</li> <li>know understand the basic components of anatomy &amp; physiology animal with special reference to human</li> </ul>
		<b>REMEDIAL MATHEMATICS</b>	<p>Student would able to:-</p> <ul style="list-style-type: none"> <li>Know the theory and their application in Pharmacy</li> <li>Solve the different types of problems by applying theory</li> <li>Appreciate the important application of mathematics in Pharmacy</li> </ul>



PRINCIPAL  
 Avanthi's Institute of Pharmaceutical Sciences  
 Gunthapally (V), Hayath Nagar (M),  
 Ranga Reddy Dist.

**AVANTHI INSTITUTE OF PHARMACEUTICAL SCIENCES**  
**Gunthapally (V), Hayathnagar (M) R. R. Dist.**


Sl. No.	Name of the Program	Name of the Course	Course Outcome
1	B. Pharm. I Year* II Sem	HUMAN ANATOMY AND PHYSIOLOGY - II	Student would able to <ul style="list-style-type: none"> <li>• Explain the gross morphology, structure, and functions of various organs of the human body.</li> <li>• Describe the various homeostatic mechanisms and their imbalances.</li> <li>• Identify the various tissues and organs of different systems of human body.</li> <li>• Perform the hematological tests like blood cell counts, hemoglobin estimation, bleeding/clotting time etc and also record blood pressure, heart rate, pulse and respiratory volume.</li> <li>• Appreciate coordinated working pattern of different organs of each system</li> <li>• Appreciate the interlinked mechanisms in the maintenance of normal functioning (homeostasis) of human body.</li> </ul>
2		PHARMACEUTICAL ORGANIC CHEMISTRY – I	Student would able to <ul style="list-style-type: none"> <li>• write the structure, name and the type of isomerism of the organic compound write the reaction, name the reaction and orientation of reactions</li> <li>• account for reactivity/stability of compounds,</li> <li>• identify/confirm the identification of organic compound</li> </ul>
3		BIOCHEMISTRY	Student would able to <ul style="list-style-type: none"> <li>• Understand the catalytic role of enzymes, importance of enzyme inhibitors in design of new</li> <li>• drugs, therapeutic and diagnostic applications of enzymes.</li> <li>• Understand the metabolism of nutrient molecules in physiological and pathological conditions.</li> </ul>

PRINCIPAL  
 Avanthi's Institute of Pharmaceutical Science  
 Gunthapally (V), Hayath Nagar (M),  
 Ranga Reddy Dist.




**AVANTHI INSTITUTE OF PHARMACEUTICAL SCIENCES**  
**Gunthapally (V), Hayathnagar (M) R. R. Dist.**

			<ul style="list-style-type: none"> <li>• Understand the genetic organization of mammalian genome and functions of DNA in the synthesis of RNAs and proteins.</li> </ul>
4		<b>PATHOPHYSIOLOGY</b>	<p>Student would able to</p> <ul style="list-style-type: none"> <li>• Describe the etiology and pathogenesis of the selected disease states;</li> <li>• Name the signs and symptoms of the diseases; and</li> <li>• Mention the complications of the diseases.</li> </ul>
5		<b>COMPUTER APPLICATIONS IN PHARMACY</b>	<ul style="list-style-type: none"> <li>• Student would able to</li> <li>• know the various types of application of computers in pharmacy</li> <li>• know the various types of databases</li> <li>• know the various applications of databases in pharmacy</li> </ul>

  
 PRINCIPAL  
 Avanthi Institute of Pharmaceutical Sciences  
 Gunthapally (V), Hayath Nagar (M),  
 Ranga Reddy Dist.


**AVANTHI INSTITUTE OF PHARMACEUTICAL SCIENCES**  
**Gunthapally (V), Hayathnagar (M) R. R. Dist.**

Sl. No.	Name of the Program	Name of the Course	Course Outcome
1	B. Pharm. II Year I Sem	<b>PHARMACEUTICAL ORGANIC CHEMISTRY –II</b>	Student would able to <ul style="list-style-type: none"> <li>• write the structure, name and the type of isomerism of the organic compound</li> <li>• write the reaction, name the reaction and orientation of reactions</li> <li>• account for reactivity/stability of compounds,</li> <li>• prepare organic compounds</li> </ul>
2		<b>PHYSICAL PHARMACEUTICS - I</b>	Student would able to <ul style="list-style-type: none"> <li>• Understand various physicochemical properties of drug molecules in the designing the dosage form</li> <li>• Know the principles of chemical kinetics &amp; to use them in assigning expiry date for formulation</li> <li>• Demonstrate use of physicochemical properties in evaluation of dosage forms.</li> <li>• Appreciate physicochemical properties of drug molecules in formulation research and development</li> </ul>
3		<b>PHARMACEUTICAL MICROBIOLOGY</b>	Student would able to; <ul style="list-style-type: none"> <li>• Understand methods of identification, cultivation and preservation of various microorganisms</li> <li>• Importance of sterilization in microbiology. and pharmaceutical industry</li> <li>• Learn sterility testing of pharmaceutical products.</li> <li>• Microbiological standardization of Pharmaceuticals.</li> <li>• Understand the cell culture technology and its applications in pharmaceutical industries.</li> </ul>
4		<b>PHARMACEUTICAL ENGINEERING</b>	Student would able: <ul style="list-style-type: none"> <li>• To know various unit operations used in Pharmaceutical industries.</li> <li>• To understand the material</li> </ul>

  
 PRINCIPAL  
 Avanthi Institute of Pharmaceutical Sciences  
 Gunthapally (V), Hayath Nagar (M),  
 Ranga Reddy Dist.

**AVANTHI INSTITUTE OF PHARMACEUTICAL SCIENCES**  
**Gunthapally (V), Hayathnagar (M) R. R. Dist.**

			<p>handling techniques.</p> <ul style="list-style-type: none"><li>• To perform various processes involved in pharmaceutical manufacturing process.</li><li>• To carry out various test to prevent environmental pollution.</li><li>• To appreciate and comprehend significance of plant lay out design for optimum use of resources.</li><li>• To appreciate the various preventive methods used for corrosion control in Pharmaceutical industries.</li></ul>
--	--	--	--

  
- PRINCIPAL  
Avanthi Institute of Pharmaceutical Sciences  
Gunthapally (V), Hayath Nagar (M),  
Ranga Reddy Dist.




**AVANTHI INSTITUTE OF PHARMACEUTICAL SCIENCES**  
**Gunthapally (V), Hayathnagar (M) R. R. Dist.**

Sl. No.	Name of the Program	Name of the Course	Course Outcome
1	B. Pharm. II Year II Sem	<b>PHARMACEUTICAL ORGANIC CHEMISTRY – III</b>	Student would able to <ul style="list-style-type: none"> <li>• understand the methods of preparation and properties of organic compounds</li> <li>• explain the stereo chemical aspects of organic compounds and stereo chemical reactions</li> <li>• know the medicinal uses and other applications of organic compounds</li> </ul>
2		<b>MEDICINAL CHEMISTRY – I</b>	Student would able to <ul style="list-style-type: none"> <li>• understand the chemistry of drugs with respect to their pharmacological activity</li> <li>• understand the drug metabolic pathways, adverse effect and therapeutic value of drugs</li> <li>• know the Structural Activity Relationship (SAR) of different class of drugs</li> <li>• write the chemical synthesis of some drugs</li> </ul>
3		<b>PHYSICAL PHARMACEUTICS - II</b>	Student would able to <ul style="list-style-type: none"> <li>• Understand various physicochemical properties of drug molecules in the designing the dosage form</li> <li>• Know the principles of chemical kinetics &amp; to use them in assigning expiry date for Formulation</li> <li>• Demonstrate use of physicochemical properties in evaluation of dosage forms.</li> <li>• Appreciate physicochemical properties of drug molecules in formulation research and Development</li> </ul>
4		<b>PHARMACOLOGY - I</b>	Student would able to <ul style="list-style-type: none"> <li>• Understand the pharmacological actions of different categories of drugs</li> <li>• Explain the mechanism of drug action at organ system/sub cellular/ macromolecular levels.</li> <li>• Apply the basic pharmacological</li> </ul>

**AVANTHI INSTITUTE OF PHARMACEUTICAL SCIENCES**  
**Gunthapally (V), Hayathnagar (M) R. R. Dist.**


			<p>knowledge in the prevention and treatment of various diseases.</p> <ul style="list-style-type: none"><li>• Observe the effect of drugs on animals by simulated experiments</li><li>• Appreciate correlation of pharmacology with other bio medical sciences</li></ul>
5		<p><b>PHARMACOGNOSY AND PHYTOCHEMISTRY - I</b></p>	<p>Student would able to</p> <ul style="list-style-type: none"><li>• know the techniques in the cultivation and production of crude drugs</li><li>• know the crude drugs, their uses and chemical nature</li><li>• know the evaluation techniques for the herbal drugs</li><li>• carry out the microscopic and morphological evaluation of crude drugs</li></ul>

  
- PRINCIPAL  
Avanthi's Institute of Pharmaceutical Sciences  
Gunthapally (V), Hayath Nagar (M),  
Ranga Reddy Dist.




**AVANTHI INSTITUTE OF PHARMACEUTICAL SCIENCES**  
**Gunthapally (V), Hayathnagar (M) R. R. Dist.**

Sl. No.	Name of the Program	Name of the Course	Course Outcome
1	<b>B. Pharm. III Year I Sem</b>	<b>PHARMACEUTICAL MICROBIOLOGY</b>	Student would be able to <ul style="list-style-type: none"> <li>• know the anatomy, identification &amp; cultivation of microorganisms</li> <li>• Perform sterilization of various pharmaceutical products, equipment, culture media etc.</li> <li>• Perform sterility testing of pharmaceutical products.</li> <li>• Perform microbiological assay of antibiotics, Vitamins and amino acids</li> <li>• Do microbiological analysis of air, water and milk</li> </ul>
2		<b>PHARMACEUTICAL TECHNOLOGY – I</b>	Student would know the preformulation parameters in designing the dosage form, ICH guidelines, preparation and evaluation of semisolids, ophthalmic and cosmetics.
3		<b>PHARMACOLOGY – I</b>	Student would Understand the pharmacological aspects of drugs, importance of pharmacology subject as a basis of therapeutics and correlate the knowledge therapeutically.
4		<b>PHARMACOGNOSY – II</b>	Student would be able to know about the phytopharmaceuticals of commercial significance and the various applications of the crude drugs in the preparation of formulations as medicaments and excipients (Flavors, perfumes, sweeteners and colorants).
5		<b>DRUG REGULATORY AFFAIRS (Open Elective – II)</b>	Student would be able to know the clear information about the regulations in India and abroad is gained by the students.
6		<b>PROFESSIONAL ETHICS</b>	The students would be able to understand the importance of Values and Ethics in their personal lives and professional careers. The students will learn the rights and responsibilities as an employee, team member and a global citizen.

  
 - PRINCIPAL  
 Avanthi's Institute of Pharmaceutical Sciences  
 Gunthapally (V), Hayath Nagar (M),  
 Ranga Reddy Dist.

**AVANTHI INSTITUTE OF PHARMACEUTICAL SCIENCES**  
**Gunthapally (V), Hayathnagar (M) R. R. Dist.**


Sl. No.	Name of the Program	Name of the Course	Course Outcome
1	<b>B. Pharm. III</b> <b>Year II Sem</b>	<b>MEDICINAL CHEMISTRY – I</b>	Student would able to gain good knowledge about the usage of medicinal substances, the synthesis and drug-drug interactions, so that they can get involved with confidence in the patient counseling.
2		<b>PHARMACEUTICAL TECHNOLOGY – II</b>	The students would able to know various aspects of pharmaceutical product preparations and evaluations of tablets, capsules etc.
3		<b>PHARMACOLOGY – II</b>	Student would able to Understands the pharmacological aspects of drugs, importance of pharmacology subject as a basis of therapeutics and correlate the knowledge therapeutically.
4		<b>CHEMISTRY OF NATURAL PRODUCTS</b>	Student would able to know The knowledge of the students is enhanced with the clear information about the natural products which are having medicinal importance.
5		<b>DRUG DESIGN AND DISCOVERY</b>	The students would be in a position to identify lead for new drug design, to design and discover the novel drus with the knowledge they gained through the study of the various topics of the syllabus.

  
 PRINCIPAL  
 Avanthi Institute of Pharmaceutical Sciences  
 Gunthapally (V), Hayath Nagar (M),  
 Ranga Reddy Dist.



**AVANTHI INSTITUTE OF PHARMACEUTICAL SCIENCES**  
**Gunthapally (V), Hayathnagar (M) R. R. Dist.**


Sl. No.	Name of the Program	Name of the Course	Course Outcome
1	<b>B. Pharm. IV Year I Sem</b>	<b>PHARMACOGNOSY- III</b>	Student would able to gain good knowledge about the therapeutically important crude drugs and phytopharmaceuticals also biologically important molecules from marine sources & neutraceuticals
2		<b>BIOPHARMACEUTICS AND PHARMACOKINETICS</b>	The students would able to get fundamental knowledge of Biopharmaceutics and Pharmacokinetics And also know how the adsorption , distribution , metabolism , excretion takes place .
3		<b>PHARMACOLOGY – III</b>	Student would able to understands the pharmacological aspects of drugs, therapeutics of various diseases and pathophysiology of common diseases and their management.
4		<b>MEDICINAL CHEMISTRY-II</b>	The students would be in a position to identify lead for new drug design and information about various antibiotic and their chemotherapeutic agents.
5		<b>PHARMACY ADMINISTRATION</b>	The students would be able to gain knowledge about aspect of business administration in new economic environment & know social and behaviour aspects of Pharmacy.

  
**PRINCIPAL**  
 Avanthi's Institute of Pharmaceutical Sciences  
 Gunthapally (V), Hayath Nagar (M),  
 Ranga Reddy Dist.



**AVANTHI INSTITUTE OF PHARMACEUTICAL SCIENCES**  
**Gunthapally (V), Hayathnagar (M) R. R. Dist.**

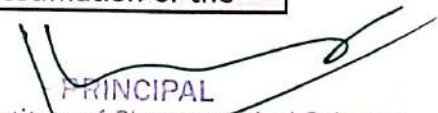
Sl. No.	Name of the Program	Name of the Course	Course Outcome
1	B. Pharm. IV Year II Sem	<b>NOVEL DRUG DELIVERY SYSTEMS &amp; REGULATORY AFFAIRS</b>	Student would able to gain knowledge on controlled drug delivery system and different regulatory agencies act on release of NDA & ANDA
2		<b>PHARMACEUTICAL BIOTECHNOLOGY</b>	The students would able to get fundamental knowledge various techniques employed in biotechnology
3		<b>PHARMACEUTICAL ANALYSIS-II</b>	Student would able to know various advanced instrumental techniques for analysis of various Pharmaceutical substances.
4		<b>HUMAN VALUES AND PROFESSIONAL ETHICS</b>	The students would able to understand the importance of Values and Ethics in their personal lives and professional careers.
5		<b>CLINICAL PHARMACY PRACTICE</b>	The students would be able to know the use of medicines and their therapeutics of disease management

  
 PRINCIPAL  
 Avanthi Institute of Pharmaceutical Sciences  
 Gunthapally (V), Hayath Nagar (M),  
 Ranga Reddy Dist.

**AVANTHI INSTITUTE OF PHARMACEUTICAL SCIENCES**  
**Gunthapally (V), Hayathnagar (M) R. R. Dist.**

**Course Outcomes - Pharm. D.**


Sl. No.	Name of the Program	Name of the Course	Course Outcome
1.1	Pharm.D. - First Year	Human Anatomy and Physiology	<ol style="list-style-type: none"> <li>1. They would have learnt the gross anatomy, histology and physiology of various organs of the human body.</li> <li>2. They would identify the various tissues and organs associated with the different organ systems with help of charts and specimens.</li> <li>3. They would have studied the coordination in functioning of different organs of each system.</li> <li>4. They would have understood the several physiological homeostatic mechanisms and their imbalances in human body.</li> <li>5. They would have learnt the interlinked mechanisms in the maintenance in normal and physical exercise conditions.</li> <li>6. They would have learnt and performed the hematological tests parameters, blood pressure recording, heart rate, pulse and respiratory volumes.</li> </ol>
1.2		Pharmaceutics	<ol style="list-style-type: none"> <li>1. Upon completion of this program the student will know the formulation aspects of different dosage forms do different pharmaceutical calculation involved in formulation and appreciate the importance of good formulation for effectiveness.</li> </ol>
1.3		Medicinal Biochemistry	<ol style="list-style-type: none"> <li>1. To understand the importance of metabolism of substrates.</li> <li>2. Will acquire chemistry and biological importance of biological macromolecules.</li> <li>3. To acquire knowledge in qualitative and quantitative estimation of the</li> </ol>

  
 PRINCIPAL  
 Avanthi Institute of Pharmaceutical Sciences  
 Gunthapally (V), Hayath Nagar (M),  
 Ranga Reddy Dist.



**AVANTHI INSTITUTE OF PHARMACEUTICAL SCIENCES**  
**Gunthapally (V), Hayathnagar (M) R. R. Dist.**

			<p>biological macromolecules.</p> <ol style="list-style-type: none"> <li>To know the interpretation of data emanating from a Clinical Test Lab.</li> <li>To know how physiological conditions influence the structures and reactivity's of biomolecules.</li> <li>To understand the basic principles of protein and polysaccharide structure.</li> </ol>
1.4	Pharmaceutical Organic Chemistry		<ol style="list-style-type: none"> <li>To be able to give systematic names to simple organic compounds and poly functional group.</li> <li>To achieve an understanding of the behavior of organic compounds and to establish a foundation for studies into natural and synthetic products of pharmaceutical interest.</li> <li>To acquire the knowledge and understanding of the basic experimental principles of pharmaceutical organic chemistry.</li> <li>To draw the structures and synthesize simple pharmaceutically active organic compounds.</li> <li>To describe detailed mechanisms for common reactions.</li> <li>To be able to run experimental techniques, procedures and safe laboratory practices.</li> </ol>
1.5	Pharmaceutical Inorganic Chemistry		<ol style="list-style-type: none"> <li>Well acquainted with the principles of limit tests.</li> <li>Understand the principles and procedures of analysis of drugs and also regarding the application of inorganic pharmaceutical.</li> <li>Knowledge about the sources of impurities and methods to determine the impurities in inorganic drugs and pharmaceuticals</li> <li>Appreciate the importance of inorganic pharmaceuticals in</li> </ol>

  
 PRINCIPAL  
 Avanthi Institute of Pharmaceutical Sciences  
 Gunthapally (V), Hayath Nagar (M),  
 Ranga Reddy Dist.



**AVANTHI INSTITUTE OF PHARMACEUTICAL SCIENCES**  
**Gunthapally (V), Hayathnagar (M) R. R. Dist.**

			<p>preventing and curing the disease.</p> <ol style="list-style-type: none"> <li>To have been introduced to a variety of inorganic drug classes.</li> <li>To know the analysis of the inorganic pharmaceuticals their applications.</li> </ol>
1.6	Remedial Mathematics		<ol style="list-style-type: none"> <li>Apply mathematical concepts and principles to perform computations for Pharmaceutical Sciences.</li> <li>Create, use and analyze mathematical representations and mathematical relationships</li> <li>Communicate mathematical knowledge and understanding to help in the field of Clinical Pharmacy</li> <li>Perform abstract mathematical reasoning</li> </ol>
	Remedial Biology		<p>The main aim of this course is to make aware the students to understand and learn about</p> <ol style="list-style-type: none"> <li>Cell biology ( Basic Nature of Plant cell and Animal cell)</li> <li>Classification System of both Plants &amp; Animals</li> <li>Various tissue system and organ system in plant and animals</li> <li>Theory of evolution</li> <li>Anatomy and Physiology of plants and animals</li> </ol>
2.1	Pathophysiology		<ol style="list-style-type: none"> <li>Students will define the basic pathogenesis of human disease</li> <li>Students will define and explore the most common etiologies and predisposing factors associated with human disease</li> <li>Students understands the basis for some laboratory tests and other diagnostic procedures</li> <li>Students will make correlations between pathophysiology and clinical skills they are learning in their allied health science programs.</li> <li>Students will understand how the</li> </ol>

- PRINCIPAL  
 Avanthi Institute of Pharmaceutical Sciences  
 Gunthapally (V), Hayath Nagar (M),  
 Ranga Reddy Dist.

**AVANTHI INSTITUTE OF PHARMACEUTICAL SCIENCES**  
**Gunthapally (V), Hayathnagar (M) R. R. Dist.**

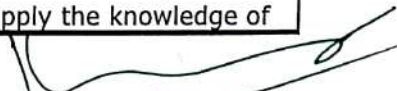
	Pharm.D.- Second Year		various organ systems are interrelated, and use this understanding to promote a holistic approach towards the evaluation and treatment of patients
2.2		Pharmaceutical Microbiology	<ol style="list-style-type: none"> <li>1. Students can able to demonstrate an understanding at an advanced level of microbial virulence mechanisms and host response to infection; application of molecular techniques to medical microbiology; microbial susceptibility and resistance to antimicrobial agents; replication of viruses, viral immunology and pathogenesis, detection of viruses</li> <li>2. Students can able to understanding of various infections (microbial causes, pathogenesis, transmission of infection, diagnosis, prevention and treatment) by being able to identify a unknown organisms in clinical samples, and describe the pathogenesis of important pathogens</li> <li>3. Students Demonstrate a basic understanding of the pathogenesis of some important fungal infections of humans, and be able to identify and isolate them from clinical samples</li> <li>4. Students Work cooperatively as part of a small group and Critically assess and interpret scientific literature</li> <li>5. Students can Analyze and report on complex research questions, and solve problems, plan a work program or diagnostic strategy and learn independently</li> <li>6. Students can able to demonstrate safe working practices in microbiology, adhere to microbiological requirements for safe work procedures</li> </ol>

- PRINCIPAL  
 Avanthi's Institute of Pharmaceutical Sciences  
 Gunthapally (V), Hayath Nagar (M),  
 Ranga Reddy Dist.



**AVANTHI INSTITUTE OF PHARMACEUTICAL SCIENCES**  
**Gunthapally (V), Hayathnagar (M) R. R. Dist.**

2.3		Pharmacognosy & Phytopharmaceuticals	<p>This course is one of the most advanced introductions in Herbal Medicines that is offered. Will learn and get experience about</p> <ol style="list-style-type: none"> <li>1. Herbs and their Science</li> <li>2. Classification of Medicinal Plants, Phytochemistry, Carbohydrates, Lipids,</li> <li>3. Terpenes, Polyphenols, Alkaloids, Pharmacology, Toxicity, Formulations and Preparations of Herbal Medicines</li> <li>4. How herbs influence our physiology and can be helpful against several disorders.</li> <li>5. Relations between Phyto-therapy and the Elderly, Phytotherapy and Children, Understanding Herbal Action, and Understanding the Materia Medica.</li> <li>6. The recognition of medicinal plants, identification of adulteration and Contamination.</li> <li>7. Ethnobotany &amp; Ethno pharmacology in drug discovery process.</li> <li>8. DNA Finger printing.</li> </ol>
2.4		Pharmacology - I	<ol style="list-style-type: none"> <li>1. The student would have learnt about the different drugs used with an emphasis on its classification, Pharmacodynamic and pharmacokinetic aspects, adverse effects, Therapeutic uses.</li> <li>2. They would have studied, dose, route of administration, precautions, and contraindications.</li> <li>3. They would have understood the pharmacological aspects of drugs used to treat ailment of different organ systems of the body.</li> <li>4. They would appreciate the importance of drug discovery by preclinical and clinical trials.</li> <li>5. They would appreciate the importance of pharmacology subject as a basis of therapeutics.</li> <li>6. They would apply the knowledge of</li> </ol>

  
 - PRINCIPAL  
 Avanthi Institute of Pharmaceutical Sciences  
 Gunthapally (V), Hayath Nagar (M),  
 Ranga Reddy Dist.

Avanthi Institute of Pharmaceutical Sciences  
 Gunthapally (V), Hayath Nagar (M),  
 Ranga Reddy Dist.



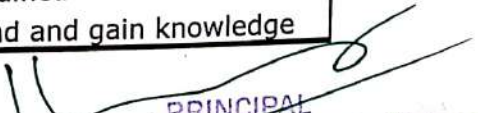
**AVANTHI INSTITUTE OF PHARMACEUTICAL SCIENCES**  
**Gunthapally (V), Hayathnagar (M) R. R. Dist.**

			drugs and its detailed description therapeutically in clinical case scenario.
2.5		Community Pharmacy	<ol style="list-style-type: none"> <li>1. Students will provide patient-centered care to diverse patients using the best available evidence and in consideration of patients' circumstances to devise, modify, implement, document and monitor pharmacotherapy care plans, either independently or as part of healthcare team</li> <li>2. Students will demonstrate knowledge of the business and professional practice management skills in community pharmacies.</li> <li>3. Students will educate patients through counseling &amp; provide health screening services to public</li> <li>4. Students will identify symptoms of minor ailments and provide appropriate medication</li> <li>5. Students will participate in prevention programs of communicable diseases</li> <li>6. Students will exhibit professional ethics by promoting safe and appropriate medication use throughout society</li> </ol>
2.6		Pharmacotherapeutics- I	<ol style="list-style-type: none"> <li>1. Students will be able to describe the pathophysiology and management of cardiovascular, respiratory and endocrine diseases</li> <li>2. Students will be developing Patient case based Assessment Skills</li> <li>3. Students will be able to describe the quality use of medicines issues surrounding the therapeutic agents in the treatment of these diseases</li> <li>4. Students will have developed clinical skills in the therapeutic management of these conditions</li> <li>5. Continue to develop communication skills.</li> <li>6. Students will provide patient -</li> </ol>

- PRINCIPAL  
 Avanthi Institute of Pharmaceutical Science  
 Gunthapally (V), Hayath Nagar (M),  
 Ranga Reddy Dist.

**AVANTHI-INSTITUTE OF PHARMACEUTICAL SCIENCES**  
**Gunthapally (V), Hayathnagar (M) R. R. Dist.**

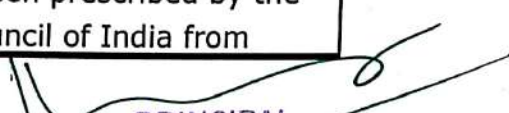
			centred care to diverse patients using the evidence based medicine
<b>3.1</b>	Pharm. D. - Third Year	Pharmacology -II	<ol style="list-style-type: none"> <li>1. In continuation with the previous year, this subject would have continued describing about the different drugs used for treatment of diseases.</li> <li>2. The students would have learnt about drugs used to cancer, inflammation, respiratory system, GIT, immune system and hormones.</li> <li>3. They would have understood the principles of animal toxicology and bioassay procedures.</li> <li>4. They would have learnt in depth knowledge on cell, macromolecules, cell signaling, DNA replication and cell cycle.</li> <li>5. They would appreciate the importance of gene and its structure, genome, gene expression, recombinant DNA technology and other associated aspects.</li> <li>6. They would have finally learnt to apply the knowledge of drugs practically using simulated pharmacological experiments.</li> </ol>
<b>3.2</b>		Pharmaceutical Analysis	<ol style="list-style-type: none"> <li>1. To understand the importance of analysis in pharmaceutical industry</li> <li>2. To understand the knowledge about assay of pharmaceutical substance and product</li> <li>3. To develop basic practical skills using instrumental techniques</li> <li>4. To inculcate theoretical knowledge on various instrumental techniques adopted for analysis of pharmaceuticals</li> <li>5. To develop various methodologies for assay of drugs and pharmaceuticals with the skills and knowledge gained</li> <li>6. To understand and gain knowledge</li> </ol>

  
 - PRINCIPAL  
 Avanthi Institute of Pharmaceutical Sciences  
 Gunthapally (V), Hayath Nagar (M),  
 Ranga Reddy Dist.



**AVANTHI INSTITUTE OF PHARMACEUTICAL SCIENCES**  
**Gunthapally (V), Hayathnagar (M) R. R. Dist.**

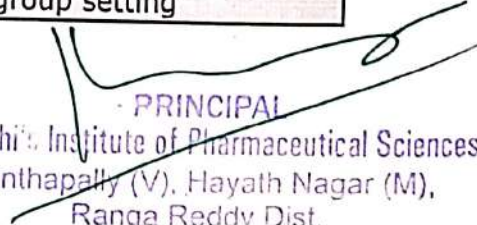
		on trouble shooting in adopting various methodologies using instrumental techniques
3.3	Pharmacotherapeutics - II	<ol style="list-style-type: none"> <li>1. Students will be able to describe the pathophysiology and management of cardiovascular, respiratory and endocrine diseases</li> <li>2. Students will be developing Patient case based Assessment Skills</li> <li>3. Students will be able to describe the quality use of medicines issues surrounding the therapeutic agents in the treatment of these diseases</li> <li>4. Students will have developed clinical skills in the therapeutic management of these conditions</li> <li>5. Continue to develop communication skills.</li> <li>6. Students will provide patient - centred care to diverse patients using the evidence based medicine</li> </ol>
3.4	Pharmaceutical Jurisprudence	<p>Upon Completion of the subject student learnt:</p> <ol style="list-style-type: none"> <li>1. About Professional ethics</li> <li>2. They understood the various concepts of the Pharmaceutical Legislation in India.</li> <li>3. They understood the various parameters in the Drug and Cosmetic Act and rules.</li> <li>4. They understood the various concepts of Drug policy, DPCO, Patent and Designing act.</li> <li>5. They came to know about the labelling requirements and packaging guidelines for Drugs and Cosmetics.</li> <li>6. They understood the concepts of Dangerous Drugs Act, Pharmacy Act and Excise duties Act.</li> <li>7. They came to know about the salient features of different laws which have been prescribed by the Pharmacy Council of India from</li> </ol>

  
**PRINCIPAL**  
 Avanthi Institute of Pharmaceutical Sciences  
 Gunthapally (V), Hayath Nagar (M),  
 Ranga Reddy Dist.



**AVANTHI INSTITUTE OF PHARMACEUTICAL SCIENCES**  
**Gunthapally (V), Hayathnagar (M) R. R. Dist.**

			time to time including International Laws.
3.5		Medicinal Chemistry	<ol style="list-style-type: none"> <li>1. To understand the chemistry of drugs with respect to their biological activity.</li> <li>2. To know the metabolism, adverse effect and therapeutic activity of drugs.</li> <li>3. To understand the different modern techniques of drug design.</li> <li>4. To appreciate the SAR of some important drug classes.</li> <li>5. To acquire knowledge in the chemotherapy for cancer and microbial diseases and different anti-viral agents.</li> <li>6. To have been introduced to a variety of drug classes and some pharmacological properties.</li> </ol>
3.6		Pharmaceutical Formulations	<ol style="list-style-type: none"> <li>1. Students will understand the principle involved in formulation of various pharmaceutical dosage forms, prepare various pharmaceutical formulation, perform evaluation of pharmaceutical dosage forms, understand and appreciate the concept of bioavailability and bioequivalence, their role in clinical situations.</li> </ol>
4.1		Pharmacotherapeutics -III	<ol style="list-style-type: none"> <li>1. Initiate drug therapy and the anticipated therapeutic goals by therapeutic intervention</li> <li>2. Know the effective use of non-pharmacological therapeutic interventions in the treatment of specific diseases, conditions and symptoms.</li> <li>3. Demonstrate the ability to effectively communicate and work collaboratively together with others in the small group setting</li> </ol>

  
**PRINCIPAL**  
 Avanthi's Institute of Pharmaceutical Sciences  
 Gunthapally (V), Hayath Nagar (M),  
 Ranga Reddy Dist.

**AVANTHI INSTITUTE OF PHARMACEUTICAL SCIENCES**  
**Gunthapally (V), Hayathnagar (M) R. R. Dist.**

			4. Have moral reasoning, ethical judgement and professionalism
4.2	Pharm.D.- Fourth Year	Hospital Pharmacy	<ol style="list-style-type: none"> <li>1. Know Various Drug Distribution Methods;</li> <li>2. Know The Professional Practice Management Skills In Hospital Pharmacies;</li> <li>3. Provide Unbiased Drug Information To The Doctors;</li> <li>4. Know The Manufacturing Practices Of Various Formulations In Hospital Set Up;</li> <li>5. Appreciate The Practice Based Research Methods; And</li> <li>6. Appreciate the stores management and inventory control.</li> </ol>
4.3		Clinical Pharmacy	<ol style="list-style-type: none"> <li>1. Monitor drug therapy of patient through medication chart review and clinical review;</li> <li>2. Obtain medication history interview and counsel the patients;</li> <li>3. Identify and resolve drug related problems;</li> <li>4. Detect, assess and monitor adverse drug reaction;</li> <li>5. Interpret selected laboratory results (as monitoring parameters in therapeutics) of specific disease states; and</li> <li>6. Retrieve, analyze, interpret and formulate drug or medicine information.</li> </ol>
4.4		Biostatistics & Research Methodology	<ol style="list-style-type: none"> <li>1. Know the various statistical methods to solve different types of problems</li> <li>2. Operate various statistical software packages</li> <li>3. Appreciate the importance of Computer in hospital and Community Pharmacy</li> <li>4. Appreciate the statistical technique in solving the pharmaceutical problems</li> </ol>

- PRINCIPAL  
 Avanthi Institute of Pharmaceutical Sciences  
 Gunthapally (V), Hayath Nagar (M),  
 Ranga Reddy Dist.



**AVANTHI INSTITUTE OF PHARMACEUTICAL SCIENCES**  
**Gunthapally (V), Hayathnagar (M) R. R. Dist.**

4.5	Biopharmaceutics & Pharmacokinetics	<ol style="list-style-type: none"> <li>1. Broader understanding about the concepts of biopharmaceutics and pharmacokinetics.</li> <li>2. Ability to calculate the various pharmacokinetic parameters by using various mathematical models.</li> <li>3. Ability to design a basic protocol for the conduct of BA/BE study and the interpretation of the BA/BE data</li> <li>4. Preparedness to use the concepts of pharmacokinetic principles in the clinical contexts.</li> <li>5. Ability to design and perform <i>in-vitro</i> dissolution studies for various drugs as per the standards of official monographs</li> <li>6. Basic understanding about the concepts of <i>in-vitro - in-vivo</i> correlations (IVIVC)</li> </ol>
4.6	Clinical Toxicology	<ol style="list-style-type: none"> <li>1. Developing general working knowledge of the principles and practice of clinical toxicology</li> <li>2. Demonstrating an understanding of the health implications of toxic exposures and commonly involved chemicals for toxicity</li> <li>3. Demonstrating and applying an understanding of general toxicology principles and clinical management practice</li> <li>4. Demonstrating and applying an understanding of the history, assessment, and therapy considerations associated with the management of a toxic exposure</li> <li>5. Demonstrating and apply an understanding of the characteristics of and treatment guidelines for specific toxic substances</li> <li>6. Proposing several preventive approaches to reduce unintentional poisonings</li> <li>7. Enabling the pharmacist to function as contributing health care team</li> </ol>




**AVANTHI INSTITUTE OF PHARMACEUTICAL SCIENCES**  
**Gunthapally (V), Hayathnagar (M) R. R. Dist.**

			member when faced with a toxic exposure experience, including emergencies.
4.7		Pharmacotherapeutics I & II	<ol style="list-style-type: none"> <li>1. The pathophysiology of selected disease states and the rationale for drug therapy.</li> <li>2. The therapeutic approach to management of these diseases.</li> <li>3. The controversies in drug therapy.</li> <li>4. The importance of preparation of individualized therapeutic plans based on diagnosis.</li> <li>5. Needs to identify the patient-specific parameters relevant in initiating drug therapy, and monitoring therapy (including alternatives, time-course of clinical and laboratory indices of therapeutic response and adverse effects).</li> <li>6. Describe the pathophysiology of selected disease states and explain the rationale for drug therapy.</li> <li>7. Summarize the therapeutic approach to management of these diseases including reference to the latest available evidence.</li> <li>8. Discuss the controversies in drug therapy.</li> <li>9. Discuss the preparation of individualized therapeutic plans based on diagnosis.</li> <li>10. Identify the patient-specific parameters relevant in initiating drug therapy, and monitoring therapy (including alternatives, time-course of clinical and laboratory indices of therapeutic response and adverse effects).</li> </ol>
5.1		Clinical Research	<ol style="list-style-type: none"> <li>1. Know the new drug development process.</li> <li>2. Understand the regulatory and ethical requirements.</li> <li>3. Appreciate and conduct the clinical</li> </ol>

PRINCIPAL  
 Avanthi Institute of Pharmaceutical Sciences  
 Gunthapally (V), Hayath Nagar (M),  
 Ranga Reddy Dist.

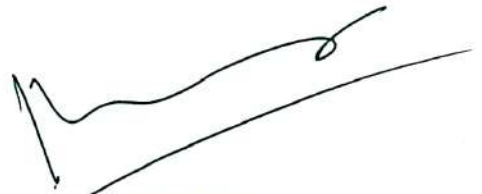
**AVANTHI INSTITUTE OF PHARMACEUTICAL SCIENCES**  
**Gunthapally (V), Hayathnagar (M) R. R. Dist.**

	Pharm.D.- Fifth Year		<p>trials activities</p> <ol style="list-style-type: none"> <li>4. Know safety monitoring and reporting in clinical trials</li> <li>5. Manage the trial coordination process</li> <li>6. Know the new drug development process.</li> <li>7. Understand the regulatory and ethical requirements.</li> <li>8. Appreciate and conduct the clinical trials activities</li> <li>9. Know safety monitoring and reporting in clinical trials</li> <li>10. Manage the trial coordination process</li> </ol>
5.2		Pharmacoepidemiology & Pharmacoeconomics	<ol style="list-style-type: none"> <li>1. Describe the methods used in Pharmacoepidemiology</li> <li>2. Demonstrate competency in the design, conduct and evaluation of Pharmacoepidemiology studies.</li> <li>3. Describe the methods used in Pharmacoeconomic analysis.</li> <li>4. Demonstrate competency in the design, conduct and evaluation of Pharmacoeconomic studies.</li> </ol>
5.3		Clinical Pharmacokinetics & Pharmacotherapeutic Drug Monitoring	<ol style="list-style-type: none"> <li>1. Ability to apply the concepts of Pharmacokinetics to individualize the drug dosage regimen in clinical settings.</li> <li>2. Ability to design a dosage regimen of a drug based on its route of administration</li> <li>3. Ability to design and implement pharmacokinetic services such as <ul style="list-style-type: none"> <li>• Intravenous to Oral conversion of dosage regimens</li> <li>• Therapeutic Drug Monitoring Services</li> </ul> </li> <li>4. Broader understanding about the significance of altered pharmacokinetics, Pharmacogenetics and</li> </ol>

  
 PRINCIPAL  
 Avanthi Institute of Pharmaceutical Sciences  
 Gunthapally (V), Hayath Nagar (M),  
 Ranga Reddy Dist.

**AVANTHI INSTITUTE OF PHARMACEUTICAL SCIENCES**  
**Gunthapally (V), Hayathnagar (M) R. R. Dist.**

			<p>Pharmacometrics.</p> <ol style="list-style-type: none"><li>5. Ability to adjust the dosage regimen for patients with renal / hepatic impairments</li><li>6. Ability to assess the drug interaction issues in the clinical settings</li><li>7. Ability to design and implement therapeutic drug monitoring services for various drugs</li></ol>
--	--	--	---



- PRINCIPAL  
Avanthi Institute of Pharmaceutical Sciences  
Gunthapally (V), Hayath Nagar (M),  
Ranga Reddy Dist.



**AVANTHI INSTITUTE OF PHARMACEUTICAL SCIENCES**  
**Gunthapally (V), Hayathnagar (M) R. R. Dist.**

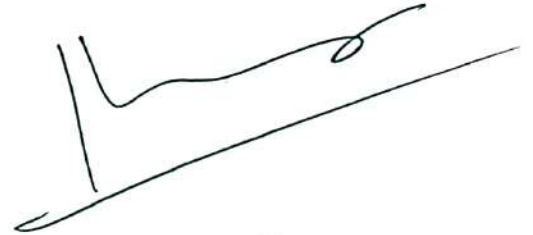
**Course Outcomes - M. Pharmacy**  
**PHARMACEUTICS**

Sl. No.	Name of the Program	Name of the Course	Course Outcome
1	M. Pharm. I Year I Sem	<b>ADVANCED PHYSICAL PHARMACEUTICS</b>	The students will learn particle size analysis method, solid dispersion, physics of tablets, polymer classification and its applications, student will also practice the stability calculations, shelf life calculations and accelerated stability studies. They also understand the rheology, absorption related to liquids and semi-solid dosage forms with advances. They also know the factors affecting the dissolution and solubility in related to invitro/invivo correlations.
2		<b>MODERN PHARMACEUTICS – I</b>	Students shall explain the preformulation parameters, apply ICH guidelines, and evaluate drug, drug excipients compatibility. Students also explain about formulation and development, use of excipients in tablets, powders, capsules, micro-encapsules and coating techniques. They also learn and apply the statistical design in different formulations.
3		<b>APPLIED BIOPHARMACEUTICS AND PHARMACOKINETICS</b>	students will be able to express factors affecting the bioavailability and stability of dosage form; they also learn the bioequivalence studies and protocols for bioequivalent studies. They also evaluate the parameters for the disposition, absorption and Michaelis-Menton constants for nonlinear kinetics.
4		<b>MODERN PHARMACEUTICAL ANALYTICAL TECHNIQUES</b>	The appreciable knowledge will be gained by the students in the Modern Analytical Techniques and can apply the theories in the Analysis of various bulk drugs and their formulations. The students will also be in a position to apply their knowledge in developing the new methods for the determination and validate the procedures
5		<b>PHARMACEUTICAL MANAGEMENT</b>	<b>Course Outcomes:</b> These topics are useful for the students to know how to manage a pharma industry and its various departments viz QA, QC, RA, Production etc. Along with this it aids the students to develop leadership qualities, communication & interpersonal skills, decisions making, motivation, organization & various managerial functions & professional skills

PRINCIPAL  
 Avanthi Institute of Pharmaceutical Sciences  
 Gunthapally (V), Hayathnagar (M)  
 Ranga Reddy Dist.

**AVANTHI INSTITUTE OF PHARMACEUTICAL SCIENCES**  
**Gunthapally (V), Hayathnagar (M) R. R. Dist.**

			required for a dynamic professional. Management helps to understand the concept of managerial control, its levels &role, importance in pharma industry
--	--	--	---

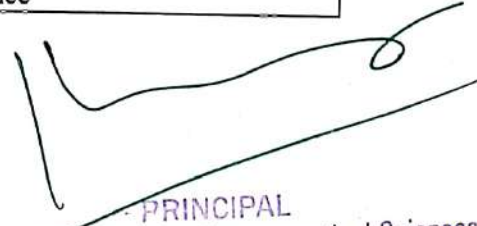


**PRINCIPAL**  
Avanthi's Institute of Pharmaceutical Sciences  
Gunthapally (V), Hayath Nagar (M),  
Ranga Reddy Dist.



**AVANTHI INSTITUTE OF PHARMACEUTICAL SCIENCES**  
**Gunthapally (V), Hayathnagar (M) R. R. Dist.**

<b>Sl. No.</b>	<b>Name of the Program</b>	<b>Name of the Course</b>	<b>Course Outcome</b>
1	M. Pharm. I Year II Sem	<b>ADVANCED DRUG DELIVERY SYSTEMS</b>	Students will know the fabrication, design, evaluation and application of above drug delivery systems.
2		<b>INDUSTRIAL PHARMACY</b>	The students will explain the machinery involved in milling, mixing, filtration, drying and packing material constructions used in the production of pharmaceutical materials. They also learn salient features of GMP, TQM applicable in industry. They also understand the effluent treatments and prevent the pollution. They also should evaluate the validation of analytical methods and processes
3		<b>MODERN PHARMACEUTICS - II</b>	students will understand the planning of pilot plant techniques used for all pharmaceutical dosage forms such as tablets, capsules, parenterals, aerosols, cosmetics and neutraceuticals.
4		<b>STABILITY OF DRUGS AND DOSAGE FORMS</b>	The students should describe the evaluation of stability of solutions, solids, and formulations against adverse conditions. The students should be able to suggest the measures to retain stability and storage conditions for retaining the efficacy of the products.
5		<b>CLINICAL RESEARCH AND PHARMACOVIGILANCE</b>	Upon completion of the course, the student shall be able to, Explain the regulatory requirements for conducting clinical trial Demonstrate the types of clinical trial designs Explain the responsibilities of key players involved in clinical trials Execute safety monitoring, reporting and close-out activities Explain the principles of Pharmacovigilance Detect new adverse drug reactions and their assessment Perform the adverse drug reaction reporting systems and communication in pharmacovigilance

  
**PRINCIPAL**  
 Avanthi Institute of Pharmaceutical Sciences  
 Gunthapally (V), Hayath Nagar (M),  
 Ranga Reddy Dist.

Course Outcomes - M. Pharmacy  
PHARMACEUTICAL ANALYSIS

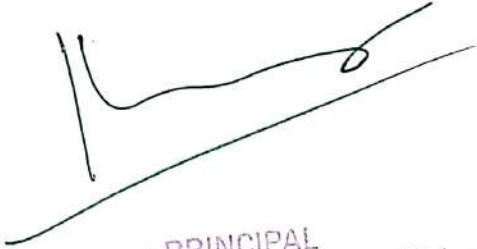
Sl. No.	Name of the Program	Name of the Course	Course Outcome
1	M. Pharm. I Year I Sem	ADVANCED PHARMACEUTICAL ANALYSIS	The quantitative determination of various organic compounds is clearly understood. The spectral analysis, dissolution parameters and microbial assays are also learned.
2		FOOD ANALYSIS	At completion of this course student shall be able to understand various analytical techniques in the determination of <input type="checkbox"/> Food constituents <input type="checkbox"/> Food additives <input type="checkbox"/> Finished food products <input type="checkbox"/> Pesticides in food And also student shall have the knowledge on food regulations and legislations
3		MODERN PHARMACEUTICAL ANALYTICAL TECHNIQUES	Upon completion of the subject student shall be able to <input type="checkbox"/> Explain the aspect of validation <input type="checkbox"/> Carryout validation of manufacturing processes <input type="checkbox"/> Apply the knowledge of validation to instruments and equipments <input type="checkbox"/> Validate the manufacturing facilities
4		PHARMACEUTICAL VALIDATION	The appreciable knowledge will be gained by the students in the Modern Analytical Techniques and can apply the theories in the Analysis of various bulk drugs and their formulations. The students will also be in a position to apply their knowledge in developing the new methods for the determination and validate the procedures
5		PHARMACEUTICAL MANAGEMENT	<b>Course Outcomes:</b> These topics are useful for the students to know how to manage a pharma industry and its various departments viz QA, QC, RA, Production etc. Along with this it aids the students to develop leadership qualities, communication & interpersonal skills, decisions making, motivation, organization & various managerial functions & professional skills required for a dynamic professional. Management helps to understand the concept of managerial control, its levels & role, importance in pharma industry

Avanthi Institute of Pharmaceutical Sciences  
Gunthapally (V), Hayath Nagar (M)  
Rangareddy Dist.




**AVANTHI INSTITUTE OF PHARMACEUTICAL SCIENCES**  
**Gunthapally (V), Hayathnagar (M) R. R. Dist.**

Name of the Program	Name of the Course	Course Outcome
M. Pharm. I Year II Sem	<b>ADVANCED INSTRUMENTAL ANALYSIS</b>	By the completion of topics the students will come out with the thorough knowledge of various spectral aspects of X-Ray, IR, SEM, ORD etc which help them in further projects works and also industrial opportunities.
	<b>QUALITY CONTROL AND QUALITY ASSURANCE</b>	The study of this subject builds the confidence in the minds on the students to develop and formulate high quality pharmaceutical products.
	<b>MODERN BIO-ANALYTICAL TECHNIQUES</b>	Upon completion of the course, the student shall be able to understand <input type="checkbox"/> Extraction of drugs from biological samples <input type="checkbox"/> Separation of drugs from biological samples using different techniques <input type="checkbox"/> Guidelines for BA/BE studies
	<b>SPECTRAL ANALYSIS</b>	By the completion of topics the students will come out with the thorough knowledge of various spectral aspects of X-Ray, IR, SEM, ORD etc which help them in further projects works and also industrial opportunities.
	<b>STABILITY OF DRUGS AND DOSAGE FORMS</b>	The students should describe the evaluation of stability of solutions, solids, and formulations against adverse conditions. The students should be able to suggest the measures to retain stability and storage conditions for retaining the efficacy of the products.

  
 - PRINCIPAL  
 Avanthi's Institute of Pharmaceutical Sciences  
 Gunthapally (V), Hayath Nagar (M),  
 Ranga Reddy Dist.

**AVANTHI INSTITUTE OF PHARMACEUTICAL SCIENCES  
Gunthapally (V), Hayathnagar (M) R. R. Dist.**

Sl. No.	Name of the Program	Name of the Course	Course Outcome
1	M. Pharm. I Year II Sem	<b>ADVANCED INSTRUMENTAL ANALYSIS</b>	By the completion of topics the students will come out with the thorough knowledge of various spectral aspects of X-Ray, IR, SEM, ORD etc which help them in further projects works and also industrial opportunities.
2		<b>QUALITY CONTROL AND QUALITY ASSURANCE</b>	The study of this subject builds the confidence in the minds on the students to develop and formulate high quality pharmaceutical products.
3		<b>MODERN BIO-ANALYTICAL TECHNIQUES</b>	Upon completion of the course, the student shall be able to understand <input type="checkbox"/> Extraction of drugs from biological samples <input type="checkbox"/> Separation of drugs from biological samples using different techniques <input type="checkbox"/> Guidelines for BA/BE studies
4		<b>SPECTRAL ANALYSIS</b>	By the completion of topics the students will come out with the thorough knowledge of various spectral aspects of X-Ray, IR, SEM, ORD etc which help them in further projects works and also industrial opportunities.
5		<b>STABILITY OF DRUGS AND DOSAGE FORMS</b>	The students should describe the evaluation of stability of solutions, solids, and formulations against adverse conditions. The students should be able to suggest the measures to retain stability and storage conditions for retaining the efficacy of the products.

  
 - PRINCIPAL  
 Avanthi's Institute of Pharmaceutical Sciences  
 Gunthapally (V), Hayath Nagar (M),  
 Ranga Reddy Dist.