

# AP PGECET 2025 Pharmacy Syllabus

## Pharmacognosy & Phytochemistry Syllabus

Pharmacognosy & Phytochemistry	<ul style="list-style-type: none"><li>• Sources of Crude Drugs of natural origin and their Classification</li><li>• Factors affecting the cultivation of medicinal and aromatic plants</li><li>• Plant growth regulators</li><li>• Adulteration and types of adulterants</li><li>• Methods of evaluation of crude drugs</li><li>• Definition, classification, properties, general methods of extraction</li><li>• Chemistry</li><li>• Tests for detection of the following classes of phytoconstituents: Alkaloids/ Glycosides/ Terpenoids/ Tannis/ Carbohydrates/ Lipids/ Proteins/ Enzymes</li><li>• Pharmacognostic aspects of crude drugs containing aforesaid classes of phytoconstituents covering their biological source/ diagnostic features/ chemical constituents/ tests for identification/ uses/ adulterants/ substituents/ allied drugs</li><li>• Study of fibers used in pharmacy: Cotton/ silk/ wool/ nylon/ polyesters/ glass wool/ asbestos</li><li>• Plant tissue culture: types of culture/ nutritional requirements/ growth and maintenance/ applications of plant tissue culture</li></ul>
--------------------------------	--

## Pharmaceutical Chemistry Syllabus

Pharmaceutical Chemistry	<ul style="list-style-type: none"><li>• Introduction to drug design</li><li>• Stereochemistry of drug molecules</li><li>• Structure/ nomenclature/</li></ul>
--------------------------	--

	<p>classification/ synthesis/ SAR/ metabolism of the following category of drugs which are official in Indian and British pharmacopeia</p> <ul style="list-style-type: none"> <li>● Hypnotics &amp; sedatives/neuroleptics/ antidepressants/ anxiolytics/ anticonvulsants/ local anesthetics</li> <li>● Cardiovascular drugs/ antianginal agents/ vasodilators/ adrenergic &amp; cholinergic drugs/ cardiostatic agents/ diuretics/ antihypertensive drugs/ antilipidemic agents</li> <li>● Antihistaminics</li> <li>● Analgesics</li> <li>● NSAIDS</li> <li>● Hypoglycemic agents</li> <li>● Anticoagulants</li> <li>● Antiplatelet agents</li> <li>● Chemotherapeutic agents: antibiotics/ antibacterials/ antifungal/ antiviral/ antimalarial/ anticancer/ antiamoebic drugs</li> <li>● Indian pharmaceuticals: gastrointestinal agents/ electrolytes/ haematinics/ topical agents/ dental products/</li> <li>● Limit tests for arsenic/ iron/ lead/ barium/ chloride/sulfate</li> </ul>
--	---

### Pharmaceutics Syllabus

Physical Pharmacy	<ul style="list-style-type: none"> <li>● Matter and properties of matter</li> <li>● Micromeritics and power rheology</li> <li>● Surface and interfacial phenomenon</li> <li>● Viscosity and rheology</li> <li>● Dispersion systems</li> <li>● Complexation</li> <li>● Kinetics and drug stability</li> </ul>
Pharmaceutical Technology	<ul style="list-style-type: none"> <li>● Formulation studies</li> <li>● Pharmaceutical calculations</li> <li>● Formulation/ development/</li> </ul>

	<p>packaging/ evaluation of liquid dosage forms, tablets, capsules, semisolid dosage forms, aerosols, micro-encapsulation, parenteral products, suppositories, ophthalmic preparations/ blood products/ plasma substitutes/ surgical products</p> <ul style="list-style-type: none"> <li>• Cosmetic preparations: Skin/ nails/ hair/ eyes/ lips/ baby care products/ dentifrices</li> </ul>
<p>Biopharmaceutics and Pharmacokinetics</p>	<ul style="list-style-type: none"> <li>• Passage of drugs across a biological barrier</li> <li>• Factors influencing absorption: biological/ physico chemical/ physiological/ pharmaceutical</li> <li>• Basic principles of pharmacokinetics</li> <li>• Compartment kinetics: One-compartment model with reference to intravascular and oral drug administration</li> <li>• Concept of clearance</li> <li>• Non-linear pharmacokinetics with reference to one compartment model after IV drug administration</li> <li>• Bioavailability and bioequivalence</li> </ul>

### Pharmacology Syllabus

<p>Pharmacology</p>	<ul style="list-style-type: none"> <li>• General pharmacological principles including toxicology</li> <li>• Pharmacology of drugs acting on the central nervous system</li> <li>• Cardiovascular system</li> <li>• Autonomic nervous system</li> <li>• Gastrointestinal system and respiratory system</li> <li>• Pharmacology of autacoids: histamine/ antihistaminic drugs</li> <li>• 5-HT its agonists and antagonists/ prostaglandins/ thromboxanes/ leukotrienes</li> </ul>
---------------------	---

	<ul style="list-style-type: none"> <li>● Steroidal and non-steroidal anti-inflammatory drugs</li> <li>● Pharmacology of endocrine system: Thyroid hormones and antithyroid drugs</li> <li>● Insulin</li> <li>● Oral hypoglycemics</li> <li>● Estrogens</li> <li>● Progesterone and oral contraceptives</li> <li>● Androgens and anabolic steroids</li> <li>● Chemotherapeutic agents</li> <li>● Bioassays / Immune Pharmacology</li> <li>● Drugs acting on the blood and blood-forming organs</li> <li>● Clinical pharmacy: therapeutic drug monitoring/ dosage regimen in renal and hepatic impairment</li> <li>● Drug: drug interactions/ drug-food interactions</li> <li>● Adverse drug reactions</li> <li>● Medication history/ interview/ patient counseling</li> </ul>
--	--

### Pharmaceutical Analysis and Quality Assurance Syllabus

<p>Pharmaceutical Analysis and Quality Assurance</p>	<ul style="list-style-type: none"> <li>● Concepts of qualitative and quantitative analysis</li> <li>● Fundamentals of volumetric analysis</li> <li>● Methods of expressing concentration</li> <li>● Primary and secondary standards</li> <li>● Acid-base/ oxidation-reduction/ precipitation/ non-aqueous/ complexometric titrations</li> <li>● Gravimetric analysis</li> <li>● Concept of error/ precision/ accuracy/ specificity/ sensitivity/ detection limit/ linearity/ range</li> <li>● Ruggedness/ standards/ standardization/ calibration of analytical equipment</li> </ul>
--	--

- |  |   |
|--|---|
|  | <ul style="list-style-type: none"><li>• Principles/ instrumentation/ applications of the following: absorption spectroscopy/ fluorimetry/ flame photometry/ potentiometry/ conductometry/ polarography</li><li>• Chromatographic methods</li><li>• Pharmacopoeial assays</li><li>• Quality assurance and quality control methods</li><li>• Concepts of GMP and GLP</li><li>• Forensic Pharmacy - Pharmacy Act 1948, drugs and Cosmetics Act 1940 and Rules 1945 and amendments thereto</li><li>• Narcotic drugs &amp; psychotropic substances Act 1985 &amp; Rules</li><li>• Drug price control order</li></ul> |
|--|---|



CollegeDekho