# GPAT Complete Syllabus (As per Official NTA Pattern)

This document contains the complete and detailed GPAT syllabus strictly aligned with the official syllabus released for the Graduate Pharmacy Aptitude Test. Subject-wise weightage is based on multi-year GPAT question trend analysis and expert preparation insights.

| Subject | Approx. Weightage (%) | Expected Questions (125) |
|---|---|---|
| Pharmaceutical Chemistry | 25–30% | 30–35 |
| Pharmaceutics | 25–30% | 30–35 |
| Pharmacology | 20–25% | 22–28 |
| Pharmacognosy | 10–12% | 12–15 |
| Pharmaceutical Analysis | 8–10% | 10–12 |
| Biochemistry & Pathophysiology | 4–6% | 5–7 |
| Microbiology & Biotechnology | 4–6% | 5–7 |
| Pharmaceutical Jurisprudence | 3–4% | 3–5 |
| Clinical / Hospital Pharmacy & Others | 3–4% | 3–5 |

## Pharmaceutical Chemistry

- Physical Chemistry: states of matter, colligative properties, thermodynamics, electrochemistry, kinetics
- Organic Chemistry: reaction mechanisms, stereochemistry, heterocycles, pericyclic reactions
- Medicinal Chemistry: SAR, synthesis, metabolism, QSAR, therapeutic drug classes
- Inorganic Chemistry: impurities, limit tests, radiopharmaceuticals, dental products

## Pharmaceutics

- Physical pharmacy,micromeritics, rheology, surface chemistry
- Dosage forms: tablets, capsules, parenterals, suspensions, emulsions, aerosols
- Preformulation, stability studies, GMP, validation
- Novel drug delivery systems and packaging materials

## Pharmacology

- Generalpharmacology and pharmacokinetics
- ANS, CNS, CVS, endocrine and respiratory pharmacology
- Chemotherapy, autacoids, toxicology, chronopharmacology

## Pharmacognosy

- Crudedrugclassification, cultivation and evaluation
- Phytochemistry and biosynthesis
- Herbal drugs, alkaloids, glycosides, volatile oils, resins

## Pharmaceutical Analysis

- Titrimetricanalysis, electrochemical methods
- Spectroscopy (UV, IR, NMR, MS)
- Chromatography (TLC, HPLC, GC) and validation

## Biochemistry & Pathophysiology

- Carbohydrate,lipid, proteinandnucleicacid metabolism
- Enzymes, vitamins, biological oxidation
- Pathophysiology of major diseases

## Microbiology & Biotechnology

- Sterilization,disinfection,vaccines
- Industrial microbiology and fermentation
- Recombinant DNA technology and biopharmaceuticals

## Jurisprudence & Clinical Pharmacy

- Drugs & Cosmetics Act,PharmacyAct, NDPSAct
- Clinical pharmacy, pharmacovigilance, therapeutics