

Pharmacy curriculum at the Goethe-University Frankfurt/Main

FIRST PROFESSIONAL YEAR	
<p>First Semester</p> <p><u>Courses in Pharmaceutical Biology:</u> Seminar on Fundamentals of Plant Morphology Exercise course: Medicinal Plant Identification Lecture in General biology, Systematic Classification and Physiology of Pathogenous and Drug-producing Organisms I</p> <p><u>Courses in Pharmaceutical Chemistry:</u> Lecture in Pharmaceutical/Medicinal chemistry – General Chemistry Seminar on Toxicology of Auxiliary and Harmful Agents Seminar on Introduction to the General Chemistry of Auxiliary and Pharmaceutical Agents Lab course: General and Qualitative Analytical Chemistry of Inorganic Pharmaceutical, Auxiliary and Harmful Agents</p> <p><u>Other courses:</u> Lecture in History of Sciences with Particular Consideration of Pharmacy Lecture in Pharmaceutical and Medical Terminology Lecture in Fundamentals in Physical Chemistry Lecture in General Physics Lecture in Mathematical and Statistical Methods</p> <p><i>Rotation in Community Pharmacy Practice</i></p>	<p>Second Semester</p> <p><u>Courses in Pharmaceutical Biology:</u> Lecture in General Biology, Systematic Classification and Physiology of Pathogenous and Drug-producing Organisms II Lecture in Fundamentals of Biology – Morphology and Anatomy Lecture in Fundamentals of Biology – Genetics Lab course: Pharmaceutical Biology I</p> <p><u>Courses in Pharmaceutical Chemistry:</u> Lectures in Organic Chemistry I Lecture in Pharmaceutical/Medicinal Chemistry – Quantitative Methods Lab course: Quantitative Analytical Determination of Pharmaceutical, Auxiliary and Harmful Agents</p> <p><u>Courses in Pharmaceutics:</u> Lecture in Basic Pharmaceutics Lab course: Pharmaceutics I</p> <p><u>Courses in Pharmacology:</u> Lecture in Human Anatomy and Physiology</p> <p><u>Other courses:</u> Lab course: Physical Chemistry Lab course: General Physics</p> <p><i>Rotation in Community Pharmacy Practice</i></p>

SECOND PROFESSIONAL YEAR

Third Semester	Fourth Semester
<p><u>Courses in Pharmaceutical Biology:</u> Lecture in Fundamentals of Biology – Cytology Lecture in Fundamentals of Biology – Biochemistry Lecture in Cytological and Histochemical Basics in Biology Exercise course: Cytological and Histochemical Basics in Biology Lab course: Pharmaceutical Biology II</p> <p><u>Courses in Pharmaceutical Chemistry:</u> Seminar on Stereochemistry and Chemical Nomenclature Lectures in Organic Chemistry II Lab course: Pharmaceutical Chemistry I – Organic Chemistry</p> <p><u>Courses in Pharmacology:</u> Lecture in Human Anatomy and Physiology</p> <p><u>Other courses:</u> Lab course: General Microbiology</p>	<p><u>Courses in Pharmaceutical Chemistry:</u> Lecture in Introductory Instrumental Analysis Lab course: Instrumental Analysis</p> <p><u>Courses in Pharmacology:</u> Exercise course: Physiology</p> <p><u>Other courses:</u> Lecture in Fundamentals of Nutrition</p>

FIRST STATE EXAM

THIRD PROFESSIONAL YEAR

Fifth Semester	Sixth Semester
<p><u>Courses in Pharmaceutical Biology:</u> Lecture in Immunology, Vaccines and Sera</p> <p><u>Courses in Pharmaceutical Chemistry:</u> Lecture in Pharmaceutical/Medicinal Chemistry - Chemical Drug Analysis Lab course: Chemical Drug Analysis with particular consideration of the Pharmacopoeia (Quality Control and Quality Assurance of Drugs) Lecture in basics in Clinical Biochemistry and Pathobiochemistry Lecture in Pharmaceutical Chemistry – Structure-Activity Relationship Lecture in Biochemistry and Molecular Biology Lab course: Methods in Biochemistry including Clinical Biochemistry</p> <p><u>Courses in Pharmaceutics:</u> Lecture in Pharmaceutics – Liquid Dosage Forms</p> <p><u>Courses in Pharmacology:</u> Lecture in Pharmacology Lecture in Pathophysiology</p>	<p><u>Courses in Pharmaceutical Biology:</u> Lecture in Pharmaceutical Biology – Drugs of Herbal or Microbial Origin Lecture in Pharmaceutical Biology – Recombinant Drugs Lecture in Methods of Pharmaceutical Biotechnology</p> <p><u>Courses in Pharmaceutical Chemistry:</u> Lecture in Pharmaceutical Chemistry – Structure-Activity Relationship</p> <p><u>Courses in Pharmaceutics:</u> Lecture and Seminar in Biopharmaceutics and Pharmacokinetics Seminar on Quality Assurance in Production and Control of Drugs Lecture in Pharmaceutics – Semi Solid Dosage Forms Lab course: Pharmaceutics</p> <p><u>Courses in Pharmacology:</u> Lecture in Pharmacology Lecture in Pathophysiology</p> <p><u>Courses in Clinical Pharmacy:</u> Lecture in Pathology Lecture in Pharmacotherapy</p>

FOURTH PROFESSIONAL YEAR

Seventh Semester	Eighth Semester
<p><u>Courses in Pharmaceutical Biology:</u> Lecture in Pharmaceutical Biology – Drugs of Herbal or Microbial Origin Lecture in Pharmaceutical Biology – Recombinant Drugs Lecture in Methods of Pharmaceutical Biotechnology Lab course: Pharmaceutical Biology III</p> <p><u>Courses in Pharmaceutical Chemistry:</u> Lecture in Pharmaceutical Chemistry – Structure-Activity Relationship</p> <p><u>Courses in Pharmaceutics:</u> Lecture in Pharmaceutics – Solid Dosage Forms</p> <p><u>Courses in Pharmacology:</u> Lecture in Pharmacology Exercise course: Pharmacology and Toxicology</p> <p><u>Courses in Clinical Pharmacy:</u> Lecture in Pathology Lecture in Pharmacotherapy Seminar on Clinical Pharmacy – Clinical Pharmacokinetics and Dose Optimization Seminar on Clinical Pharmacy – Pharmaceutical Care Lecture in Pharmacoeconomics and -epidemiology</p> <p><u>Other courses:</u> Lecture in Pharmacy Laws</p>	<p><u>Courses in Pharmaceutical Biology:</u> Lecture in Pharmaceutical Biology – Drugs of Herbal or Microbial Origin Lecture in Pharmaceutical Biology – Recombinant Drugs Seminar on Biopharmaceuticals</p> <p><u>Courses in Pharmaceutical Chemistry:</u> Lecture in Pharmaceutical Chemistry – Structure-Activity Relationship Lab course: Pharmaceutical Chemistry – Drug Analysis: Drug Monitoring, Toxicological and Environmental Analysis</p> <p><u>Other courses:</u> Seminar on Evidence-based Drug Evaluation</p> <p><u>Elective advanced lab courses (either one):</u> Pharmaceutical Chemistry Pharmaceutical Biology Pharmaceutical Technology Pharmacology Clinical Pharmacy</p>

SECOND STATE EXAM