

Advanced Pharmaceutical Technology

Physical Pharmacy, Pharmaceutical Technology and Biopharmacy

(Arzneiformenlehre II)

Lecture: 3 hours per week (winter and summer semester)

ECTS credits: 8

Topics :

The lecture is split into three parts: physical pharmacy, pharmaceutical technology and biopharmacy. The lecture on physical pharmacy covers physicochemical aspects that are relevant to the design, manufacture and stability of dosage forms. This also includes physicochemical methods for the characterization of pharmaceutical preparations. The part 'pharmaceutical technology' covers the manufacture of dosage forms and the basic principles of drug delivery. Implemented into this lecture are also experimental drug delivery systems and current trends in the manufacture of drug delivery systems. The part 'biopharmacy' explains the basic principles of pharmacokinetics and relates the design principles of drug delivery systems to their efficacy during in vivo applications.

Literature :

Bauer, Frömming, Führer, Pharmazeutische Technologie, Gustav Fischer Verlag.

Atkins, Physical Chemistry, Freeman, New York.

Sucker, Fuchs, Speiser, Pharmazeutische Technologie, Georg Thieme Verlag, Stuttgart.

Stricker, Physikalische Pharmazie, WVG, Stuttgart.

Müller, Hildebrand, Pharmazeutische Technologie: Moderne Arzneiformen, WVG, Stuttgart.

no assessment

Standards of the Pharmacopoeia Concerning Preparation of Dosage Forms

(Anforderungen des Arzneibuchs an die Herstellung von Arzneiformen)

Seminar: 1 hour per week (winter and summer semester)

ECTS credits: 1

Topics :

Statistics, tablet processing, film coating, sterile preparation techniques, lyophilisation, parenteral emulsions, nanoparticles, liposomes, GMP, registering, blood preparations, sera and vaccines, stability.

Literature :

R.H. Müller, G.E. Hildebrand, Pharmazeutische Technologie: Moderne Arzneiformen, wissenschaftliche Verlagsgesellschaft, Stuttgart, 1998.

Pharmacopoeia Europaea

A. Martin, P. Bustamonte (eds), Physical pharmacy, Lea & Febinger, Philadelphia, 1993.

no assessment

Pharmaceutical-Technological and Biopharm. Analytical Methods

(Pharmazeutisch-technologische und biopharm. Analysenmethoden)

Seminar: 1 hour per week (winter and summer semester)

ECTS credits: 1

Topics :

Statistics, particle size determination (with sieves, Coulter Counter, PCS and laserdiffraction), thermal analysis (DSC, TG), rheological determinations, x-ray diffraction, bioavailability testing, drug targeting.

Literature :

R.H. Müller, W. Mehnert (eds), Particle and surface characterisation methods, medpharm scientific publishers, Stuttgart, 1997.

D.A. Skoog, F.J. Holler (eds), Principles of instrumental analysis, Saunders college, Philadelphia, 1997.

no assessment

Pharmaceutical Technology II

(Arzneiformenlehre II)

Practical Course: 22 hours per week (winter and summer semester)

ECTS credits 19

Topics :

Preparation, testing and properties of classic and recently developed pharmaceutical dosage forms

(solutions, colloidal solutions, eye drops and ophthalmic ointments, infusions, injections, powders, granules, capsules, tablets, controlled release tablets, ointments, cremes, emulsions, suspensions, gels, suppositories, microparticles, microcapsules, liposomes, parenteral emulsions)

physical-chemical principles concerning their preparation and properties, sterile preparation techniques and their testing, preparation techniques for chemotherapeutics, adsorption to solid surfaces, stability testing, incompatibilities, drug release, biopharmaceutics, packaging (plastics and glass)

Literature :

K.H. Bauer, K.-H. Frömming, C. Führer (eds), Pharmazeutische Technologie, Govi-Verlag, Stuttgart, 1997.

R.H. Müller, G.E. Hildebrand, Pharmazeutische Technologie: Moderne Arzneiformen, wissenschaftliche Verlagsgesellschaft, Stuttgart, 1998.

A. Martin, P. Bustamonte (eds), Physical pharmacy, Lea & Febinger, Philadelphia, 1993.

Method of assessment : written examination

Physical Pharmacy and Formulation Section. Biopharmaceutics Section. Department of Pharmaceutics and Food Technology, School of Pharmacy, University Complutense, Avenida Complutense, 28040 Madrid, Spain Interests: conventional pharmaceutical dosage forms (tablets, capsules, semisolid and liquid formulations); new controlled release systems (pellets, nanoparticles, microcapsules, microspheres and liposomes) including production and quality control. Department of Pharmaceutical Technology and Biopharmacy, University of Groningen, Antonius Deusinglaan 1, 9713 AV Groningen, The Netherlands Interests: biopharmaceuticals; influenza vaccines; stabilization; spray drying; freeze drying; spray freeze drying; drug delivery; solid dispersions. Prof. Advanced cognitive technologies could be developed to analyze a significantly large set of parameters and create personalized insights into a consumer's health. The availability of data and personalized AI can enable precision well-being and real-time microinterventions that allow us to get ahead of sickness and far ahead of catastrophic disease. How might exponential advancements in science and technology impact biopharma companies? What are some examples of disruption already happening in the market, and how quickly is change likely to occur? To find out, researchers from the Deloitte Center for Health Solutions conducted interviews with 14 forward-thinking industry experts (for more details see the sidebar, "Methodology"). Pharmaceutical Sciences & Technology. I Institute of Chemical Technology I 5. PROFESSOR K. G. AKAMANCHI B.Sc., B. Sc. (Tech.), Ph.D. (Tech.) Professor of Pharmaceutical Technology. Some of these Excipient are co processed to enhance their physical properties and their role in drug delivery is enhanced. Work is focused on new application for approved excipients. Fixed dose combination of drugs are the need for the day, for treating TB, malaria, diabetes, and hypertension. Lectures: Pharmaceutics, Pharmaceutical Technology, Dispensing Pharmacy, Hospital Pharmacy, Advanced Pharmaceutics Practical: Biochemistry, Pharmaceutics-II, Dispensing Pharmacy. RESEARCH STUDENTS: Ph.D (Tech.)-08, M. Tech. Welcome to the homepage of the department of Pharmaceutical Technology and Biopharmacy. Use the links on the left to find relevant information. Pharmaceutical Technology and Biopharmacy - May 2019. Last modified: 23 September 2020 5.50 p.m.