

Module title		Abbreviation
Principles of drug design		o8-MCM3-102-m01
Module coordinator		Module offered by
lecturers Pharmazeutische Chemie (Pharmaceutical Chemistry)		Institute of Pharmacy and Food Chemistry
ECTS	Method of grading	Only after succ. compl. of module(s)
5	numerical grade	--
Duration	Module level	Other prerequisites
1 semester	graduate	--
Contents		
<p>Fundamentals: drug targets (types and classification), target validation, effect mechanisms, protein-ligand interactions, lead finding; lead optimisation. Experimental methods: bioassays, HTS, combinatorial chemistry, naturally occurring substances. Theoretical methods: molecular modelling, structure-based drug design, pharmacophore models, docking, virtual screening, simulation methods, de novo design. Ligand-based drug design. QSAR. Predictions of pharmacokinetic and toxicological components (ADME). Case examples, prodrug strategies, bioisosterism, SAR.</p>		
Intended learning outcomes		
Students master the theoretical and experimental methods and aspects of drug design.		
Courses (type, number of weekly contact hours, language – if other than German)		
S + Ü (no information on SWS (weekly contact hours) and course language available)		
Method of assessment (type, scope, language – if other than German, examination offered – if not every semester, information on whether module is creditable for bonus)		
presentation with discussion (approx. 30 minutes) Language of assessment: German or English		
Allocation of places		
Chemistry Master's and Mathematics Master's: no restrictions. Biochemistry Master's: 10 places. Places will be allocated by lot.		
Additional information		
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Workload		
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Teaching cycle		
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Referred to in LPO I (examination regulations for teaching-degree programmes)		
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Module appears in		
Master's degree (1 major) Biochemistry (2012) Master's degree (1 major) Chemistry (2010) Master's degree (1 major) Mathematics (2010) Master's degree (1 major) FOKUS Pharmacy (2012)		