

<b>Module title</b>		<b>Abbreviation</b>
Drug design		o8-MCM3-152-mo1
<b>Module coordinator</b>		<b>Module offered by</b>
lecturers Pharmazeutische Chemie (Pharmaceutical Chemistry)		Institute of Pharmacy and Food Chemistry
<b>ECTS</b>	<b>Method of grading</b>	<b>Only after succ. compl. of module(s)</b>
5	numerical grade	--
<b>Duration</b>	<b>Module level</b>	<b>Other prerequisites</b>
1 semester	graduate	--
<b>Contents</b>		
<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>		
<b>Intended learning outcomes</b>		
Students master the theoretical and experimental methods and aspects of drug design.		
<b>Courses</b> (type, number of weekly contact hours, language – if other than German)		
S (2) + Ü (1) Module taught in: German or English		
<b>Method of assessment</b> (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 and/or English		
<b>Allocation of places</b>		
20 places. 4 places for students of the Master's degree programme Chemie (Chemistry): Places will be allocated according to the same number of subject semesters; students who have chosen Medizinische Chemie (Medicinal Chemistry) as their focus will be given preferential consideration; among applicants with the same number of subject semesters, places will be allocated by lot.; 6 places for students of the Master's degree programme Biochemie (Biochemistry): Places will be allocated according to the number of subject semesters; among applicants with the same number of subject semesters, places will be allocated by lot; a waiting list will be maintained and places re-allocated by lot as they become available.		
<b>Additional information</b>		
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<b>Workload</b>		
150 h		
<b>Teaching cycle</b>		
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<b>Referred to in LPO I</b> (examination regulations for teaching-degree programmes)		
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<b>Module appears in</b>		
Master's degree (1 major) Biochemistry (2015) Master's degree (1 major) Chemistry (2016) Master's degree (1 major) Biochemistry (2017)		