

Course title:	Basics of drug design
Institute/Division:	FACULTY OF CHEMICAL ENGINEERING AND TECHNOLOGY
Number of contact hours:	15 hours (15 h seminar)
Course duration:	1 semester (6 th semester of regular I cycle studies - spring)
ETCS credits:	1
Course description:	The seminar concerns topics related to rational drug design. The main issues discussed at classed are: 1) molecular targets such as enzymes / receptors and chemical interactions between target and bioactive compound; 2) Physicochemical properties of bioactive compounds; 3) in vitro assays in medicinal chemistry; 4) molecular modelling basis; 5) <i>hit</i> generation; 6) <i>hit</i> to <i>lead</i> strategy; 7) ADME-Tox
Education effects :	
- knowledge:	the student has multidisciplinary basics of rational drug design
- skills:	the student is able to present and explain the drug discovery process in the first phase of preclinical research
- social:	the student can search for topic-related, specialised literature independently and in a group; students can also prepare and present developed topics
Literature:	
[1]	P. Graham, <i>An Introduction to Medicinal Chemistry</i> , Oxford, 2017.
[2]	B. Blass, <i>Basic Principles of Drug Discovery and Development</i> , Elsevier Science Publishing Co Inc, 2015
[3]	J Pugsley M.K., Curtis M.J. <i>Principles of Safety Pharmacology</i> . Springer-Verlag Berlin Heidelberg, 2015
[4]	A.A. Siddiqui, <i>Computer-Aided Drug Design</i> , CBS PUBLISHERS AND DISTRIBUTORS PVT LTD; First Edition, 2018)
Assessment method:	Final test
Prerequisites:	Basic knowledge in organic chemistry, physical chemistry and molecular biology.
Primary target group:	Students from all specialties
Lecturer:	Damian Kułaga, MSc
Contact person:	Damian Kułaga, MSc damian.kulaga@pk.edu.pl
Deadline for application:	15 th of January
Remarks:	The course is selectable