

STUDIA II LEVEL, MAGISTERSKIE (3 sem)
DIRECTION: CHEMICAL AND PROCESS ENGINEERING
 Specialty: **APPLIED CHEMICAL ENGINEERING**
 (Prof. A. Trusek-Hołownia)

Electives II :
 Statistical thermodynamics in molecular modeling -
 2w (2 ECTS)
 Materials used in chemical unit operation
 2w (2 ECTS)

Microwaves and other advanced thermal technologies in
 chemical engineering - 2w (2 ECTS)
 New concepts and solutions in chemical engineering
 2w (2 ECTS)

Sem.	I	II	III
Godz.	23h / 30 ECTS / 3E	26h / 30 ECTS / 1E	23h / 30 ECTS / 1E
26		Principles of business 2w (3 ECTS)	
25			
24		Multiphase systems in chemical processes 2w (2 ECTS)	
23	Chemical nanoengineering 2w + 1s (3 + 1) ECTS		Electives II 2w (2 ECTS)
22		Biotechnology process engineering 1w + 2l (2 + 2) ECTS	Management of quality in chemical enterprise E 2w (3 ECTS)
21			
20	Modern methods of liquid separation 1w + 1s (2 + 2) ECTS	Project of chemical processes 2l (2 ECTS)	Economics of production processes 1w + 2l (1 + 2) ECTS
19			
18	Software for simulation and design of chemical systems 2l (2 ECTS)	Polymeric materials 2w + 2l (2 + 2 ECTS)	
17			Philosophy of science and technology 1w (2 ECTS)
16	Projects in CAD 2l (3 ECTS)		Graduate laboratory II 14l (10 ECTS)
15			
14	Process equipment 2w + 2l (3 + 2) ECTS	CFD - computer modeling of processes 1w + 2l (2 + 2) ECTS	
13			
12			
11			
10	Transport phenomena in chemical processes 2w (3 ECTS)	Computer simulations in designing materials for chemical processes 1w + 2l (2 + 2) ECTS	
9			
8	Renewable energy sources 1w + 1s (2 + 1) ECTS		
7		Industrial waste management 2w (2 ECTS)	
6	Mathematical and statistical methods in chemical engineering 1w + 2l (2 + 2) ECTS		
5		Foreign language I 1c (1 ECTS)	
4		Graduate laboratory I 4l (4 ECTS)	
3	Foreign language II 3c (2 ECTS)		
2			
1			Graduate seminar - and thesis preparation 1s (10 ECTS)
Sem.	I	II	III

Allowable deficit of ECTS credits after each semester **15** credits