

STUDY MODULE DESCRIPTION FORM		
Name of the module/subject Technological Project		Code 1010702231010700706
Field of study Chemical Technology	Profile of study (general academic, practical) (brak)	Year /Semester 2 / 3
Elective path/specialty Composites and Nanomaterials	Subject offered in: Polish	Course (compulsory, elective) obligatory
Cycle of study: Second-cycle studies	Form of study (full-time, part-time) full-time	
No. of hours Lecture: - Classes: - Laboratory: - Project/seminars: 45		No. of credits 5
Status of the course in the study program (Basic, major, other) (brak)		(university-wide, from another field) (brak)
Education areas and fields of science and art technical sciences Technical sciences		ECTS distribution (number and %) 5 100% 5 100%
Responsible for subject / lecturer: prof. dr hab. Elżbieta Frackowiak email: elzbieta.frackowiak@put.poznan.pl tel. 616653632 Faculty of Chemical Technology ul. Berdychowo 4 60-965 Poznań		
Prerequisites in terms of knowledge, skills and social competencies:		
1	Knowledge	Student should be familiar with CAD programs. Student should be familiar with mathematic operations in chemical engineering. Student should be familiar with patent-survey evaluation.
2	Skills	Student should be able to communicate in English. Student should understand the need of self-education.
3	Social competencies	Student should feel the importance of group-working.
Assumptions and objectives of the course: During the classes students will become more familiar with typical pathway for technological concepts of chemical engineering, supported by literature review and computer simulation.		
Study outcomes and reference to the educational results for a field of study		
Knowledge:		
1. Student is able to project the technology at lab-scale level - [K_W03, K_W05] 2. Student is able to project the technology in accordance with engineering rules. - [K_W13] 3. Student is familiar with CAD programs. - [K_W11]		
Skills:		
1. Student understands the technological aspects of the project. - [K_U01, K_U08, K_U09] 2. Student knows the general processes in modern chemical technology. - [K_U10]		
Social competencies:		
1. Student is able to self-education - [K_K01] 2. Student is be able to work in a team. - [K_K04]		
Assessment methods of study outcomes		
Presentation of the project after finishing classes.		
Course description		

The major goal of the course is to make the students more familiar with the rules and pathways for technological project preparation. Particularly, the chemical concept will be discussed. Firstly, the general approach to proposed idea (subject of the project) will be considered as a keyword for literature review. Secondly, patent survey and assessment will be done and discussed, especially in terms of copyright protection. The last part will be devoted for the economic analysis of proposed idea. The calculations will be supported by ChemCAD and HySYS software for process modelling. Mathcad and Matlab will serve as a calculation support during classes.

Basic bibliography:

1. Not specified - all books related with the subject are permitted after discussion with lecturer

Additional bibliography:

1. Proceedings of the Central-European Conference RECYCLING AND RECOVERY OF THE POLYMER MATERIALS, SCIENCE ? INDUSTRY, Wrocław/Szczecin, 2000-2013

Result of average student's workload

Activity	Time (working hours)	
1. Project realization (seminar)	45	
2. Project preparation	34	
3. Consultations to project	45	
4. Project presentation	1	
Student's workload		
Source of workload	hours	ECTS
Total workload	125	5
Contact hours	91	0
Practical activities	34	0