

Course title Projektowanie biznesu chemicznego / Chemical business design		ECTS code 13.3.0740	
Name of unit administrating study Faculty of Chemistry			
Studies			
Field of study	Type	Form	
Chemical Business	Bachelor / Engineer	Full-time studies	
Teaching staff Prof. dr hab. inż. Adriana Zaleska-Medynska			
Forms of classes, the realization and number of hours		ECTS credits 3	
A. Forms of classes, in accordance with the UG Rector's regulations lecture, auditorium classes		classes - 45 h tutorial classes – 5 h student's own work – 25 h	
B. The realization of activities in-class learning		Total: 75 h - 3 ECTS	
C. Number of hours 45 h (15 h lecture, 30 h auditorium classes)			
The academic cycle Third year, winter semester			
Type of course obligatory		Language of instruction Polish	
Teaching methods Conversational lecture Auditorium seminar: case studies analysis, business project method, discussion		Form and method of assessment and basic criteria for evaluation or examination requirements	
		A. Final evaluation, in accordance with the UG study regulations lecture – exam auditorium classes – course completion (with a grade)	
		B. Assessment methods Oral exam Preparation of semestral work – experiments performance and presentation of results	
		C. The basic criteria for evaluation or exam requirements Final grade will be issued based on the students' activity during classes and based on the group projects prepared by students. The grades from the activity in the classroom and project presentation will be in accordance with the guidelines defined by the "UG Study Regulations".	
Required courses and introductory requirements Principles of general chemistry, start-up design. Basic knowledge of English language.			
Aims of education - Acquainting with the principles of designing of small production installations; - Acquainting with the principles of economical analysis / determining the profitability of a new production installation			
Course contents Lecture program: <ol style="list-style-type: none"> 1. Business planning process (economical and technological aspects) 2. The structure of the technological process 3. Business plan structure 4. The essence of the strategic and marketing analysis 5. Financial analysis of the planned project Seminar program:			

1. Development of a preliminary process design for a selected company operating in the field of cosmetics, medicines, plant protection products, paints, varnishes, biotechnology, waste processing, etc.,:
Development of chemical concept for selected technological process
Development of technological concept of the process (process diagram flow, mass and energy balance, technological diagram)
2. Development of preliminary business plan for selected small company
Choice and justification of business concept model for a start up
Development of market and financial for a start up

Bibliography of literature

A. Literature required to pass the course

E.Pawłowski, K. Pawłowski, J. Trzcielińska, S. Trzcieliński, Projektowanie biznesu i ocena przedsięwzięć inwestycyjnych, Wydawnictwo Politechniki Poznańskiej, Poznań 2010, publikacja elektroniczna
https://www.researchgate.net/publication/269332977_projektowanie_biznesu

B. Extracurricular readings

Knowledge

- Distinguishes the patentability of products/ technologies
- Prepares the business plan for the small company
- Identifies and recognizes market needs
- Designs small production installations and determines their profitability

Skills

- Group co-working
- Prepares business plan
- The ability to briefly and simply presents idea
- Evaluates the technology readiness level
- The ability to choose a chemical and technological concept

Social competence

- Understands the benefits of teamworking
- Understands the needs of systematic literature study
- Shows responsibility for time oriented tasks realization
- Is aware of the needs of critical own work analysis
- Is aware of the needs for honest and reliable work.