

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