

<b>Course title</b> Seminarium inżynierskie - Ekonomia / Engineering seminar in Economics		<b>ECTS code</b> 13.3.0736	
<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> dr Przemysław Kulawczuk, associate profesor			
<b>Forms of classes, the realization and number of hours</b>		<b>ECTS credits</b> 2	
<b>A. Forms of classes, in accordance with the UG Rector's regulations</b> seminar		classes - 30 h tutorial classes – 5 h student's own work – 15 h	
<b>B. The realization of activities</b> in-class learning		Total: 50 h - 2 ECTS	
<b>C. Number of hours</b> 30 h seminar			
<b>The academic cycle</b> 2022/23 winter semester			
<b>Type of course</b> obligatory		<b>Language of instruction</b> Polish	
<b>Teaching methods</b> 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> course completion (with a grade)	
		<b>B. Assessment methods</b> Engineering examination, defense of engineering thesis (business and technology project)	
		<b>C. The basic criteria for evaluation</b> or exam requirements Quality of the engineering thesis in the business part (feasible, purposeful, cost-effective, with elements of innovation, consistent with the technological part) The scale of grades according to the UG Study Regulations	
<b>Required courses and introductory requirements</b> completed courses on: startups design, startups financing, startups marketing and chemical business design			
<b>Aims of education</b> Developing a coherent and realistic part of the economic business and technology plan (diploma / engineering thesis)			
<b>Course contents</b> 1. Formulation of the business model - verification of potential and reality 2. Construction of organizational and qualification concept - analysis of matching to the business objectives of the enterprise 3. Market, marketing objectives, market activities and market recognition - verification of the concept's coherence with the business model and verification of the rationality of market objectives 4. Financing the undertaking - verification of the correctness, rationality and consistency of the proposed financial solutions with the proposed business model 5. Anticipation of implementation difficulties and design of remedies for potential problems in the first period of start up 6. Checking the cohesion of the economic part with the chemical and technological business and technology plan			

## **Bibliography of literature**

### **A. Literature required to pass the course**

1. Jak zostać i pozostać przedsiębiorcą, PARP, 2014
2. T. Gołębiowski (red), Modele biznesu polskich przedsiębiorstw, SGH 2008
3. Modele biznesowe budowy i rozwoju firm spin off na podbudowie szkoły wyższej, praca zbiorowa, IBnDiPP, Warszawa 2010
4. Modele biznesowe przedsiębiorstw tworzonych na bazie szkół wyższych, IBnDiPP, Warszawa 2011

### **B. Extracurricular readings**

1. Przedsiębiorczość technologiczna i intelektualna XXI wieku, praca zbiorowa pod red. Mieczysława Baka i Przemysława Kulawczuka, KIG, Warszawa 2009

## **Knowledge**

The student knows how to verify the potential and achievability of the business model  
The student knows the organizational solutions used in start-ups  
The student knows the methods of verification of the rationality of market goals  
The student knows the correct methods of creating financial plans and knows the methods of their verification  
The student knows the principles and construction of the preparation of business and technology plan

## **Skills**

The student can verify the potential and reality of the business model  
The student can apply organizational solutions used in start-ups  
The student can verify the rationality of market goals  
The student can draw up financial plans and knows how to verify them  
The student can prepare a coherent business and technology plan

## **Social competence**

Accuracy  
Regularity  
creativity  
Group work  
The ability to share knowledge and skills with others