



## COURSE CARD

### 1. Basic information

Course name in English:	Money, money, money! How to write your first research grant proposal and obtain funding	
Course name in Polish:	Skuteczne pisanie projektów badawczych: jak uzyskać swój pierwszy grant na własne badania	
Number of hours:	15	
Type of course:	Elective course	
Form of course:	mixed forms (combination of lecture, seminar and laboratory)	
Code of course:		
Course leader:	dr hab. inż. Grzegorz Soboń, prof. uczelni	
Faculty of the course leader:	W12 Faculty of Electronics, Photonics and Microsystems	
Email address of the course leader:	grzegorz.sobon@pwr.edu.pl	
Scientific discipline(s) assigned to the course (doctoral students representing the marked disciplines can participate in the course):	Architecture and urban planning	<input type="checkbox"/>
	Automation, electronic, electrical engineering and space technologies	<input checked="" type="checkbox"/>
	Information and communication technology	<input checked="" type="checkbox"/>
	Biomedical engineering	<input checked="" type="checkbox"/>
	Chemical engineering	<input checked="" type="checkbox"/>
	Civil engineering, geodesy and transport	<input checked="" type="checkbox"/>
	Materials engineering	<input checked="" type="checkbox"/>
	Mechanical engineering	<input checked="" type="checkbox"/>
	Environmental engineering, mining, and energy	<input checked="" type="checkbox"/>
	Mathematics	<input checked="" type="checkbox"/>
	Chemical sciences	<input checked="" type="checkbox"/>
	Physical sciences	<input checked="" type="checkbox"/>
Management and quality studies	<input checked="" type="checkbox"/>	

### 2. Objectives

The main objective of the course is to familiarize the students with the fundamentals of writing research grant proposals. The course will review the available funding sources for young scientists in Poland, with most emphasis on the PRELUDIUM programme by the National Science Centre (NCN). The students will learn how to write a good grant proposal: what is the structure of a well-written research grant, how to calculate the budget, and how to convince the reviewers to our ideas

### 3. Content

*Detailed information about the course content, including topics and form of classes.*



No.	Topic	Number of hours	Form of classes
1	General introduction to the course; Overview of funding agencies in Poland; Available calls for young scientists and PhD students.	2	lecture
2	Description of the Preludium programme by the National Science Centre (NCN): objectives of the programme; overview of the proposal. Introduction to the OSF system.	2	lecture
3	How to write a good grant proposal? Best practices in writing grant proposals. Structure of a grant proposal (Part 1).	2	lecture
4	How to write a good grant proposal? Best practices in writing grant proposals. Structure of a grant proposal – Part 2, continued	2	lecture
5	Financial aspects of a research project: creating a reasonable budget; How to calculate the remuneration and other costs. Description of eligible and non-eligible costs.	2	lecture
6	Evaluation of grant proposals; How to satisfy the curiosity of reviewers; Examples of grant reviews and questions from interviews.	2	lecture
7	Short pitch-talk session: presentations of research grant ideas by the students	2	seminar
8	Final evaluation	1	lecture
9			Select form
10			Select form
11			Select form
12			Select form
13			Select form
14			Select form
15			Select form

#### 4. Prerequisites

*List of prerequisites relating to knowledge, skills and other competences for course participants.*

The participant should have a preliminary idea of his own research grant (e.g., a basic hypothesis or topic that she/he wants to investigate)

#### 5. Learning outcomes

*List of learning outcomes at level 8 of the Polish Qualifications Framework assigned to the course (mark the learning outcomes in the last column).*

Symbol	Learning outcome	
	KNOWLEDGE. Doctoral student knows and understands:	



SzD_W3	the main trends in the development of the scientific or artistic disciplines covered in the curricula;	<input checked="" type="checkbox"/>
SzD_W4	research methodology;	<input type="checkbox"/>
SzD_W5	the rules for the dissemination of scientific results, including in open access mode;	<input type="checkbox"/>
SzD_W6	the fundamental dilemmas of modern civilization;	<input type="checkbox"/>
SzD_W7	the legal and ethical conditions of scientific activity;	<input type="checkbox"/>
SzD_W8	the economic and other relevant conditions of scientific activity;	<input checked="" type="checkbox"/>
SzD_W9	basic principles of knowledge transfer to the economic and social spheres and commercialisation of results of scientific activity and know-how related to these results.	<input type="checkbox"/>
<i>SKILLS. Doctoral student is able to:</i>		
SzD_U2	use knowledge from different fields of science or art to creatively identify, formulate and innovatively solve complex problems or perform research tasks, in particular: - define the purpose and subject of scientific research, formulate a research hypothesis, - develop research methods, techniques and tools, and use them creatively, - draw conclusions on the basis of scientific research; critically analyse and evaluate the results of scientific research, expertise and other creative work and their contribution to knowledge development; transfer the results of scientific activities to the economic and social spheres;	<input type="checkbox"/>
SzD_U3	communicate on specialised topics to the extent that they enable an active participation in the international scientific community;	<input checked="" type="checkbox"/>
SzD_U4	disseminate research results, including in popular forms;	<input type="checkbox"/>
SzD_U5	initiate debates and participate in a scientific discourse;	<input type="checkbox"/>
SzD_U6	be able to speak a foreign language at B2 level of the Common European Framework of Reference for Languages to a level that enables them to participate in the international scientific and professional environment;	<input type="checkbox"/>
SzD_U7	plan and implement an individual or collective research or creative activity, including in an international environment;	<input checked="" type="checkbox"/>
SzD_U8	independently plan and act for one's own development and inspire and organize the development of others;	<input checked="" type="checkbox"/>
SzD_U9	plan classes or groups of classes and implement them using modern methods and tools.	<input type="checkbox"/>
<i>SOCIAL COMPETENCES. Doctoral student is ready to:</i>		
SzD_K3	fulfilling the social obligations of researchers and creators, initiate public interest activities, thinking and acting in an entrepreneurial way;	<input checked="" type="checkbox"/>
SzD_K4	maintaining and developing the ethos of research and creative environments, including: - carrying out scientific activities in an independent manner, - respecting the principle of public ownership of research results, taking into account the principles of intellectual property protection.	<input checked="" type="checkbox"/>

## 6. Evaluation



*Short description of the method(s) used to evaluate the learning outcomes assigned to the course, e.g., exam, test, report, presentation, etc.*

The evaluation process of the learning outcomes assumes two aspects: 1) Report about the general vision of own research project, containing: a summary of the proposal, the hypothesis, and impact of the research project on the field. 2) A short presentation (5 minute pitch-talk) presenting the main assumptions of the research grant.

## **7. Teaching methods**

*Short description of the teaching methods used during the course, e.g., multimedia presentation, discussion, literature studies, developing written documents, own work, etc.*

The teaching methods are based on: 1) multimedia presentations (Power Point), 2) demonstrations of real-life examples of grant proposals, 3) Own work (studying of the research grant documentation), 4) Discussions and presentations by the students

## **8. Literature**

*List of primary and secondary literature used to prepare the course and including additional knowledge for participants, e.g., books, textbooks, research papers, standards, web pages, etc.*

Peter J. Feibelman, "A PhD Is Not Enough! A Guide to Survival in Science", Basic Books, 2011  
Piotr Wasylczyk, Piotr Siuda, "Publikacje naukowe", PWN 2018

## **9. Other remarks**

*Additional remarks, comments, (e.g., language of the course)*

The course is conducted in English language. Requires skills at the level of B2