

**COURSE OFFERED IN THE DOCTORAL SCHOOL**

Code of the course	4606-ES-00EGKP-0295	Name of the course	Polish	Ocena wyników badawczych, polityka publikacyjna, redagowanie artykułów naukowych i projektów badawczych		
			English	Research data evaluation, publishing policy, scientific papers writing and scientific proposals preparation		
Type of the course	specialty					
Course coordinator	Prof. dr hab. Adam Proń					
Implementing unit		Scientific discipline / disciplines*	Chemistry, chemical engineering, materials engineering, biotechnology			
Level of education	PhD/MSc (exceptionally for outstanding MSc candidates performing research work)	Semester	spring semester			
Language of the course	English					
Type of assessment:	Preparation of a paper and a grant proposal	Number of hours in a semester	30	ECTS credits		4
Minimum number of participants	10	Maximum number of participants	25	Available for students (BSc, MSc)		For PhD and outstanding MSc students
Type of classes		Lecture	Auditory classes	Project classes	Laboratory	Seminar
Number of hours	in a week	3		3		
	in a semester	6		24		

\* does not apply to the Researcher's Workshop

**1. Prerequisites**

MSc in chemistry, chemical engineering or materials science. In the case of highly motivated students BSc in chemistry, chemical engineering or materials science

**2. Course objectives**

PhD or exceptional research-oriented MSc students should get acquainted with the main principles of scientific papers and research proposals writing in the domains of chemistry, chemical engineering and materials science.

**3. Course content (separate for each type of classes)**

**Lecture**

In the first part of the course the lecturer will discuss in detail strong and weak points of the principal publishing companies (ACS, RSC, Elsevier, Wiley, Springer, APS, IEEE, MDPI). This will be followed by a presentation of a set of specific (yet unpublished) scientific data which will then be used by PhD students for writing a scientific paper. In the second part of the course the students, working in groups of four, will write particular parts of this paper under the lecturer's supervision: Abstract, Introduction, Experimental, Results and Discussion and Conclusions. Then the lecturer will comparatively discuss the completed papers, indicating their strong and weak points. In the second part of the course, the lecturer will present a different set of experimental data which will be then used by the PhD, working in the same groups, for writing an European grant proposal.

**Laboratory**

**4. Learning outcomes**

	Learning outcomes description	Reference to the learning outcomes of the WUT DS	Learning outcomes verification methods*
Knowledge			
K01	Students will get acquainted with principal rules governing the preparation of a scientific paper.	SD_W3	Evaluation of the prepared paper and the grant proposal
K02	Students will get basic knowledge of composing research proposals.	SD_W2; SD_W3	Evaluation of the prepared paper and the grant proposal
K03	Students will get familiar with principle companies editing scientific journals and books with special emphasis on their strong and weak points.	SD_W5	Evaluation of the prepared paper and the grant proposal
Skills			
S01	More efficient writing of scientific paper	SD_U1; SD_U4; SD_U6	Evaluation of the prepared paper and the grant proposal
S02	Better skills in research proposals preparation	SD_U1; SD_U3; SD_U6	Evaluation of the prepared paper and the grant proposal
S03	Better knowledge of current publishing policies	SD_U2;SD_U4; SD_U6	Evaluation of the prepared paper and the grant proposal
Social competences			
SC01	Common work in groups of four on complicated texts of scientific papers and research proposals should strongly improve students' capability of future participating in collaborative projects both in industry and in academics.	SD_K1; SD_K2; SD_K3; SD_K4; SD_K5	Evaluation of the prepared paper and the grant proposal

\*Allowed learning outcomes verification methods: exam; oral exam; written test; oral test; project evaluation; report evaluation; presentation evaluation; active participation during classes; homework; tests

#### 5. Assessment criteria

No examination. The grades will be attributed on the basis of the paper and the research proposal prepared and presented by each group.

#### 6. Literature

1. Barbara Gastel, Robert Day "How to write and publish a scientific paper"
2. Marek Kosmulski "Dobrze wypełnione sloty, czyli jak być naukowcem w Polsce w latach 20. XX wieku."

#### 7. PhD student's workload necessary to achieve the learning outcomes\*\*

No.	Description	Number of hours
1	Hours of scheduled instruction given by the academic teacher in the classroom	30
2	Hours of consultations with the academic teacher, exams, tests, etc.	20
3	Amount of time devoted to the preparation for classes, preparation of presentations, reports, projects, homework	40
4	Amount of time devoted to the preparation for exams, test, assessments	20

<b>Total number of hours</b>	<b>110</b>
<b>ECTS credits</b>	<b>4</b>

\*\* 1 ECTS = 25-30 hours of the PhD students work (2 ECTS = 60 hours; 4 ECTS = 110 hours, etc.)