

<b>STUDY COURSE DESCRIPTION FORM</b>		
Name of the course <b>Doctoral seminar</b>		Code
Name of the doctoral school <b>Poznan University of Technology Doctoral School</b>		Year /Semester <b>IV/8</b>
Specialty -		Type (obligatory, elective): <b>obligatory</b>
No. of hours Lectures: -      Classes: -      Laboratories: -      Seminars: <b>10</b>		No. of credits <b>2</b>
<b>Cycle of study:</b> Third-cycle studies (Polish Qualifications Framework level eight)	<b>Form of study:</b> Full-time	<b>Assessment:</b> (written exam, presentation, etc.) presentation
<b>Responsible for the course/lecturers:</b>		
<ul style="list-style-type: none"> <li>• dr hab. inż. arch. Anna Januchta-Szostak, prof. PP - architecture and urban planning,</li> <li>• prof. dr hab. inż. Piotr Skrzypczyński - automation, electronic and electrical engineering,</li> <li>• dr hab. inż. Mikołaj Morzy, prof. PP - information and communication technology,</li> <li>• prof. dr hab. inż. Krzysztof Wisłocki - civil engineering and transport,</li> <li>• dr hab. Mirosław Szybowicz, prof. PP - materials engineering,</li> <li>• dr hab. inż. Szymon Wojciechowski, prof. PP - mechanical engineering,</li> <li>• dr hab. inż. Mieczysław Porowski, prof. PP - environmental engineering, mining and energy,</li> <li>• prof. dr hab. inż. Krystyna Prochaska - chemical sciences,</li> <li>• dr hab. inż. Łukasz Hadaś, prof. PP - management and quality studies.</li> </ul>		
<b>Prerequisites in terms of knowledge, skills and social competencies:</b>		
1	<b>Knowledge:</b> A PhD student has the knowledge resulting from the scope of completed university studies, necessary to implement the doctorate in the chosen discipline.	
2	<b>Skills:</b> A PhD student is able to organize his own workshop using modern research methods; is able to formulate and verify research hypotheses, plan and conduct research and scientific experiments as well as analyze, interpret, critically evaluate, develop and present research results.	
3	<b>Social competencies:</b> A PhD student is prepared to take social responsibility for studying at the 3rd degree of education; understands the need to deepen, update and popularize knowledge especially regarding the achievements of science and technology. Has the ability to work in a team, is open to cooperation with other people.	
<b>Objectives of the course:</b>		
Getting to know the general principles of preparing doctoral documentation in accordance with the PhD School requirements. Overview of the basic requirements for the preparation of doctoral dissertation, broadening the knowledge of PhD students concerning the ways to properly prepare and give oral presentations.		
Preparing PhD students to critically analyze and assess scientific research results and evaluate their own contribution to the development of a scientific discipline as well as to take part in scientific discourse.		
<b>Educational results (Study outcomes)</b>		
<b>Knowledge:</b> a person who graduated from doctoral school knows and understands:		

<b>P8S_WG</b>	to the extent that enables revision of existing paradigms - global achievements, covering theoretical basis as well as general and selected specific issues, that are specific to scientific disciplines studied at the doctoral school,	<b>SzD_W01</b>
<b>P8S_WG</b>	key developmental trends of science disciplines in which education takes place at the doctoral school	<b>SzD_W02</b>
<b>P8S_WG</b>	principles of promoting scientific activity results, also in an open access mode,	<b>SzD_W04</b>
<b>P8S_WK</b>	basic conditions of knowledge transfer to the economic and social sphere as well as commercialization of the results of scientific activities and know-how related to these results	<b>SzD_W07</b>

**Skills:** a person who graduated from doctoral school can:

<b>P8S_UW</b>	use the knowledge from different branches of science to creatively identify, formulate and to innovatively solve complex problems or to execute research tasks in particular: <ul style="list-style-type: none"> <li>- define the aim and subject of scientific research, form a research hypothesis,</li> <li>- develop research methods, techniques and tools and use them creatively,</li> <li>- draw conclusions on the basis of research results.</li> </ul>	<b>SzD_U01</b>
<b>P8S_UW</b>	critically analyze and assess scientific research results, work of experts and other creative activities together with their contribution into knowledge development	<b>SzD_U02</b>
<b>P8S_UK</b>	take part in scientific discourse	<b>SzD_U07</b>

**Social competencies:** a person who graduated from the doctoral school is ready to:

<b>P8S_KK</b>	critically assess the achievements within a given scientific discipline	<b>SzD_K01</b>
<b>P8S_KK</b>	critically evaluate their own contribution to the development of a given scientific discipline	<b>SzD_K02</b>
<b>P8S_KR</b>	maintain and develop the ethos of research and creative communities, including: <ul style="list-style-type: none"> <li>- conducting independent scientific activity,</li> <li>- respecting the principle of public ownership of the results of scientific activities, including the principles of intellectual property protection.</li> </ul>	<b>SzD_K07</b>

**Compulsory literature:**

1. Chris A. Mack, *How to Write a Good Scientific Paper*, SPIE PRESS Bellingham, Washington USA, 2018.
2. Marino J, Stefan MI, Blackford S (2014) Ten Simple Rules for Finishing Your PhD. *PLoS Comput Biol* 10(12): e1003954. <https://doi.org/10.1371/journal.pcbi.1003954>

**Additional literature:**

1. Turabian KL. *A Manual for Writers of Research Papers, Theses, and Dissertation*, 8th edition, Chicago (Illinois): The University of Chicago Press, 2013.

### COURSE DESCRIPTION

	<b>General issues</b>	<b>Specific issues</b>	<b>No. of hours</b>
1.	Scientific discussion	<ul style="list-style-type: none"> <li>• principles applicable during exchange of scientific views,</li> <li>• clarity of formulation of observations, doubts, questions,</li> <li>• giving opinions on the content presented.</li> </ul>	2

2.	Presentation of progress in the implementation of the doctoral dissertation	<ul style="list-style-type: none"> <li>• structure of presentations,</li> <li>• analysis of the issues presented in doctoral dissertations.</li> </ul>	4
3.	Preparation of PhD students for the defense of the doctoral dissertation	<ul style="list-style-type: none"> <li>• giving opinions on the content presented.</li> </ul>	4
<b>Assessment methods of educational results</b>			
The lecturer responsible the seminar assesses the presentation prepared by the doctoral students and their activity in the discussion.			
<b>STUDENT'S WORKLOAD</b>			
<b>Activity</b>		<b>Hours</b>	
Participation in lectures, classes, seminars and laboratories		10	
Contact hours with lecturers		5	
Self-study		25	
Exam		-	
TOTAL		<b>40</b>	
TOTAL NUMBER OF ECTS POINTS FOR THE COURSE		2	