



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

DOCTORAL SEMINAR

### Course

Proposed by Discipline

-

Year/Semester

III/6

Type of studies

Course offered in

Doctoral School

English

Form of study

Requirements

full-time

compulsory

### Number of hours

Lecture

Tutorials

Projects/seminars

10

### Number of credit points

2

### Lecturers

Responsible for the course/lecturer:

Responsible for the course/lecturer:

Coordinator within the discipline or a delegated lecturer from the respective Faculty

### Prerequisites

Knowledge: PhD student has the knowledge resulting from the scope of completed university studies, necessary to implement the doctorate in the chosen discipline.

Skills: 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.

Social competences: 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.

### Course objective

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 for promoting scientific activity results, using the knowledge from different branches of science to execute research tasks in particular research methods, techniques and tools and drawing conclusions on the basis of research results.

### Course-related learning outcomes

#### Knowledge

A PhD student who graduated from doctoral school knows and understands:

1. 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, [P8S\_WG/SzD\_W01]
2. key developmental trends of science disciplines in which education takes place at the doctoral school, [P8S\_WG/SzD\_W02]
3. principles of promoting scientific activity results, also in an open access mode, [P8S\_WG/SzD\_W04]
4. 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. [P8S\_WK/SzD\_W07]

#### Skills

A PhD student who graduated from doctoral school can:

1. 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:
  - define the aim and subject of scientific research, form a research hypothesis,
  - develop research methods, techniques and tools and use them creatively,
  - draw conclusions on the basis of research results, [P8S\_UW/SzD\_U01]
2. critically analyze and assess scientific research results, work of experts and other creative activities together with their contribution into knowledge development, [P8S\_UW/SzD\_U02]
3. take part in scientific discourse. [P8S\_UK/SzD\_U07]

#### Social competences

A PhD student who graduated from the doctoral school is ready to:

1. critically assess the achievements within a given scientific discipline, [P8S\_KK/SzD\_K01]
2. critically evaluate their own contribution to the development of a given scientific discipline, [P8S\_KK/SzD\_K02]
3. maintain and develop the ethos of research and creative communities, including:
  - conducting independent scientific activity,
  - respecting the principle of public ownership of the results of scientific activities, including the principles of intellectual property protection. [P8S\_KR/SzD\_K07]



### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

PQF code	Methods for verification of learning outcomes	Assessment criteria
W01, W02, W04, W07	Assessment of oral presentation and assessment of student's answers to questions related to both the presentation and their knowledge of relevant discipline	3.0 (50.1 - 70.0%) 4.0 (70.1 - 90.0%) 5.0 (from 90.1%)
U01, U02, U07	Lecturer responsible for the seminar assesses the presentation prepared by doctoral students with the use of computer software and their activity in subsequent discussion	3.0 (50.1 - 70.0%) 4.0 (70.1 - 90.0%) 5.0 (from 90.1%)
K01, K02, K07	Assessment of doctoral student's activity in the discussion during seminar classes and their involvement in the presentation	3.0 (50.1 - 70.0%) 4.0 (70.1 - 90.0%) 5.0 (from 90.1%)

### Programme content

Discussing the key principles of organizing doctoral documentation according to the requirements of the PhD School; providing essential guidelines for preparing a doctoral dissertation, and expanding PhD students' knowledge on effectively preparing and delivering oral presentations.

### Course topics

1. Analysis of the issues presented in doctoral dissertations (specifying the main objectives of the dissertation and its scope, and its major tasks, making theses/hypotheses, selection of research methods, rules for the choice and analysis of literature).
2. Presentation of progress in the implementation of the doctoral dissertation (monitoring progress in the implementation of individual tasks, proving hypotheses, drawing conclusions).
3. Discussion on the need to develop transversal competences important in the work of a scientist, such as taking initiative, problem solving skills, risk assessment, decision making skills.

### Teaching methods

Seminar, consultations on implemented projects, workshops - discussions on the presented diploma projects.

### Bibliography

Basic

1. Chris A. Mack, The lecturer responsible for the seminar assesses the presentation prepared by the doctoral students and their activity in the discussion. 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

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

#### Breakdown of average student's workload

	Hours	ECTS
Total workload	50	2,0
Classes requiring direct contact with the teacher	10	0,5
Doctoral student's own work (literature studies, preparation for tutorials, project preparation, consultations with the teacher) <sup>1</sup>	40	1,5

<sup>1</sup> delete or add other activities as appropriate