



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

DOCTORAL SEMINAR

### Course

Proposed by Discipline

-

Type of studies

Doctoral School

Form of study

full-time

Year/Semester

I/2

Course offered in

English

Requirements

compulsory

### Number of hours

Lecture

Tutorials

Projects/seminars

10

### Number of credit points

2

### Lecturers

Responsible for the course/lecturer:

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

Responsible for the course/lecturer:

### 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 competencies: 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.



Familiarizing PhD students with ways to revise existing paradigms, define the aim and subject of scientific research as well as form a research hypothesis and respect the principle of public ownership of the results of scientific activities, including the principles of intellectual property protection.

### Course-related learning outcomes

#### Knowledge

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

- 1) global achievements, covering theoretical foundations as well as general and selected specific issues that are relevant to scientific disciplines studied at the doctoral school, to the extent that enables revision of existing paradigms, [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 (50.1 - 70.0%) 4 (70.1 - 90.0%) 5 (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 (50.1 - 70.0%) 4 (70.1 - 90.0%) 5 (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 (50.1 - 70.0%) 4 (70.1 - 90.0%) 5 (from 90.1%)

### Programme content

1. Ways to fill out: an Individual Research Program, an Individual Education Program, an Annual Report.
2. Introduction of main categories of transfer of scientific knowledge and scientific writing (public speaking, doctoral dissertations, scientific discussion, ethical principles in science and publishing).
3. Models of oral presentations - general principles of public speaking (defining the purpose, formulating research hypotheses, assessing one's own capabilities).
4. Presentation and discussion of the documents prepared by the PhD students (an Individual Research Program, an Individual Education Program, an Annual Report).

### 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 M.I., 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 K.L. 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	35	2.0
Classes requiring direct contact with the teacher	10	1.0
Student's own work (literature studies, preparation for tutorials, project preparation) <sup>1</sup>	25	1.0

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