



## COURSE CARD

### 1. Basic information

|                                                                                                                                        |                                                    |                                     |
|----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|-------------------------------------|
| Course name in English:                                                                                                                | Science meets Social Science (S3) summer edition)  |                                     |
| Course name in Polish:                                                                                                                 | Seminarium S3, edycja letnia                       |                                     |
| Number of hours:                                                                                                                       | 15                                                 |                                     |
| Type of course:                                                                                                                        | Elective course                                    |                                     |
| Form of course:                                                                                                                        | seminar                                            |                                     |
| Code of course:                                                                                                                        | NZQ100391S/W08NZJ-SD0096S                          |                                     |
| Course leader:                                                                                                                         | Prof. Rafał Weron                                  |                                     |
| Faculty of the course leader:                                                                                                          | W8 Faculty of Management                           |                                     |
| Email address of the course leader:                                                                                                    | rafal.weron@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 checked="" type="checkbox"/> |
|                                                                                                                                        | Automation, electronic, and electrical engineering | <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 and transport                    | <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

C1 Acquiring skills and improving the presentation of research results and conducting discussions in an interdisciplinary environment.

### 3. Content

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

| No.  | Topic                                                | Number of hours | Form of classes |
|------|------------------------------------------------------|-----------------|-----------------|
| 1-15 | Presentations by the participants and invited guests | 15              | seminar         |

### 4. Prerequisites

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



## 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                     |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
|        | <i>KNOWLEDGE. Doctoral student knows and understands:</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                     |
| 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 checked="" 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 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:<br>- define the purpose and subject of scientific research, formulate a research hypothesis,<br>- develop research methods, techniques and tools, and use them creatively,<br>- draw conclusions on the basis of scientific research;<br>critically analyse and evaluate the results of scientific research, expertise and other creative work and their contribution to knowledge development;<br>transfer the results of scientific activities to the economic and social spheres; | <input checked="" 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 checked="" type="checkbox"/> |
| SzD_U5 | initiate debates and participate in a scientific discourse;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <input checked="" 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 checked="" 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:<br>- carrying out scientific activities in an independent manner,<br>- 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.*

Project presentation and discussion during seminars

## 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.*

Multimedia presentations, discussion

## 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.*

[1] M. Carter (2013) *Designing Science Presentations: A Visual Guide to Figures, Papers, Slides, Posters, and More*. Academic Press.

## 9. Other remarks

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

Language of the course: English