

## Course syllabus

binding for the doctoral students of the CUT Doctoral School commencing their studies  
in the academic year 2022/2023

### Information on the course

|  |  |
|--|--|
| Name of the course in Polish                 | Seminarium w dyscyplinie   |
| Name of the course in English                | Seminar in a discipline  |
| Number of the ECTS points                    | 10   |
| Language of instruction                      | Polish   |
| Category of the course                       | Mandatory  |
| Field of education                           | Engineering and Technology   |
| Discipline of education                      | Automatic Control, Electronics and Electrical Engineering  |
| Person responsible for the course<br>Contact | Witold Mazgaj, <i>doctor habilitatus</i> in Engineering,<br>prof. of CUT<br><a href="mailto:witold.mazgaj@pk.edu.pl">witold.mazgaj@pk.edu.pl</a> |

### Type of course, number of hours in the study programme curriculum

| Semester      | Credit type<br>(G / NG)* | Lecture | Practical<br>class | Laboratory | Computer<br>laboratory | Project class | Seminar            |
|---------------|--------------------------|---------|--------------------|------------|------------------------|---------------|--------------------|
| 2, 3, 4, 5, 6 | NG                       | 0       | 0                  | 0          | 6                      | 0             | 15 per<br>semester |

\*G – graded credit, NG – non-graded credit

### Course objectives

| Code        | Objective description   |
|-------------|---|
| Objective 1 | Learning about the formal requirements for completing a dissertation at the Doctoral School and obtaining a doctoral degree, preparation of an individual research plan, preparation for the mid-term evaluation    |
| Objective 2 | Acquiring the ability to present one's scientific and research achievements, discuss and prepare presentations on various issues within the discipline of Automatic Control, Electronics and Electrical Engineering |
| Objective 3 | Expanding knowledge of current global achievements and development trends as well as research methods in the discipline of Automatic Control, Electronics and Electrical Engineering                                |

### Learning outcomes

| Code                                 | Description of the learning outcome<br>adjusted to the specific characteristics of the discipline  | Learning<br>outcome<br>symbol in<br>the CUT<br>DS | Methods of verification                                |
|--------------------------------------|--|---|--|
| <b>OUTCOMES RELATED TO KNOWLEDGE</b> |  |   |  |
| EUW1                                 | The doctoral student knows and understands current scientific achievements within their discipline | E_W01<br>E_W02                                    | Attendance in class,<br>participation in<br>discussion |
| EUW2                                 | The doctoral student knows and understands the main development trends within their discipline     | E_W01<br>E_W02                                    | Attendance in class,<br>participation in<br>discussion |

| OUTCOMES RELATED TO SKILLS             |   |                |   |
|--|---|----------------|---|
| EUU1                                   | The doctoral student is able to formulate the purpose of scientific research, define the research methods and the methods for analysing the results   | E_U01          | Attendance in class, a presentation, discussion |
| EUU2                                   | The doctoral student is able to critically evaluate scientific and research achievements within their discipline                                      | E_U02          | Attendance in class, discussion                 |
| EUU3                                   | The doctoral student is able to prepare a presentation on a selected topic from their discipline, not directly related to their doctoral dissertation | E_U01          | A presentation, discussion                      |
| OUTCOMES RELATED TO SOCIAL COMPETENCES |   |                |   |
| EUK1                                   | The doctoral student is able to critically evaluate their scientific achievements and take into account the ethical aspects of scientific activities  | E_K01<br>E_K03 | Discussion                                      |

### Course outline

| No.            | Contents  | Learning outcomes for the course | No. of hours |
|----------------|---|----------------------------------|--------------|
| <b>SEMINAR</b> |   |                                  |              |
| S1             | Semester 2<br>The formal requirements for completing a dissertation at the Doctoral School and obtaining a doctoral degree, preparation of an individual research plan, discussion about the doctoral students' individual research plans | EUW1, EUU1                       | 15           |
| S2             | Semester 3<br>Presentation and discussion of global scientific and research achievements within the discipline  | EUW1, EUW2, EUU2, EUU3           | 15           |
| S3             | Semester 4<br>Discussion about the implementation of the individual research plans, preparation for mid-term evaluation   | EUW1, EUU1, EUK1                 | 15           |
| S4             | Semester 5<br>Presentation and discussion of global scientific and research achievements within the discipline - continued  | EUW1, EUW2, EUU2, EUU3           | 15           |
| S5             | Semester 6<br>Discussion about the implementation of the individual research plans, preparation for the development of a doctoral dissertation, the procedure for obtaining a doctoral degree   | EUW1, EUW2, EUU1, EUU2, EUK1     | 15           |

### The ECTS points statement

| WORKING HOURS SETTLEMENT (per semester)                  |   |
|--|---|
| Type of activity   | Average number of hours (45 min.) dedicated to the completion of an activity type |
| <b>SCHEDULED CONTACT HOURS WITH THE ACADEMIC TEACHER</b> |   |
| Hours allotted in the syllabus                           | 15  |
| Consultations  | 2   |

|   |    |
|---|----|
| Course credit assignment                                | 0  |
| HOURS WITHOUT THE PARTICIPATION OF THE ACADEMIC TEACHER |    |
| Independent study of the course contents                | 20 |
| Preparation of a presentation                           | 15 |
| ECTS POINTS STATEMENT                                   |    |
| Total number of hours                                   | 52 |
| The ECTS points number                                  | 2  |

#### Preliminary requirements

| No. | Requirements |
|-----|--------------|
| 1   | None         |

#### Course credit assignment conditions / method of the final grade calculation

| No.                                   | Description   |
|---------------------------------------|---|
| COURSE CREDIT ASSIGNMENT CONDITIONS   |   |
| 1                                     | 80% attendance in class. Presentation of a paper on current scientific and research achievements in the discipline, active participation in discussions |
| METHOD OF THE FINAL GRADE CALCULATION |   |
| None                                  |   |

#### Additional information

|      |
|------|
| None |
|------|

#### The course reading list

|   |   |
|---|---|
| 1 | Apanowicz J. : <i>Metodologiczne uwarunkowania pracy naukowej : prace doktorskie, prace habilitacyjne</i> , Warszawa, Difin, 2005                     |
| 2 | Mendel T. : <i>Metodyka pisania prac doktorskich</i> , 6 <sup>th</sup> ed., Poznań, Wydaw. AE, 2004.  |
| 3 | Cewswell, J.: <i>Projektowanie badań naukowych. Metody jakościowe, ilościowe i mieszane</i> , Kraków: Wydawnictwo Uniwersytetu Jagiellońskiego, 2013. |
| 4 | Stępień B.: <i>Zasady pisania tekstów naukowych</i> , PWN, Warszawa, 2022.  |
| 5 | Selected publications within the discipline of Automation, Electronics and Electrical Engineering   |