



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Pre-diploma Seminar [S2FT2>SPD]

### Course

Field of study

Technical Physics

Year/Semester

1/2

Area of study (specialization)

–

Profile of study

general academic

Level of study

second-cycle

Course offered in

Polish

Form of study

full-time

Requirements

elective

### Number of hours

Lecture

0

Laboratory classes

0

Other

0

Tutorials

0

Projects/seminars

15

### Number of credit points

2,00

### Coordinators

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### Lecturers

### Prerequisites

Good knowledge of experimental physics and basic knowledge in the field of nanotechnology and functional materials, as well as principles of engineering graphics. Ability to solve physical problems based on the knowledge acquired, ability to gather information from indicated sources, and to present and analyze obtained research results. Understanding the necessity of expanding one's competencies and readiness for teamwork.

### Course objective

To develop students' skills in analyzing results, preparing research reports, and public presentation of findings based on conducted research and its discussion in a forum. To encourage students to work as a team.

### Course-related learning outcomes

Knowledge:

As a result of the course, the student:

Has organized knowledge about basic physical phenomena in the field of nanotechnology and functional materials, as well as phenomena in classical experimental physics

Knows the current state of knowledge in the area of expertise: nanotechnologies and functional materials, and is aware of the latest trends in this topic

Skills:

As a result of the course, the student should demonstrate the ability to:

Independently perform preliminary analysis of laboratory measurement results based on literature and draw conclusions

Independently and efficiently prepare and present an oral presentation in Polish with well-documented and interpreted measurement results

Social competences:

As a result of the course, the student will acquire the competencies to:

Show responsibility for the accuracy of obtained results

Understand the need and identify opportunities for continuous self-education, as well as understand the importance of non-technical aspects and consequences of engineering activities

### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Evaluation of individual oral presentations using multimedia software and assessment of responses to questions related to the presentation.

Assessment of students' activity in discussion during the seminar and engagement in preparing the presentation.

### Programme content

Detailed issues related to the individual research topic.

### Course topics

1. Discussion of the structure of the master's thesis.
2. Guidelines for the development of research results.
3. Discussion of the methodology for presenting theoretical issues and obtained results.

### Teaching methods

Seminar presentation of selected experimental methods and techniques used in research within the preparation of the thesis. The course is conducted in the second half of the semester.

### Bibliography

Basic:

Individually selected, according to the topic of the thesis and performed research tasks.

Additional:

Individually selected, according to the topic of the thesis and performed research tasks.

### Breakdown of average student's workload

	Hours	ECTS
Total workload	50	2,00
Classes requiring direct contact with the teacher	15	0,50
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	35	1,50