GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

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|---|---|---|---|
| Subject name and code | , PG_00052088 | | |
| Field of study | Nanotechnology | | |
| Date of commencement of studies | October 2023 | Academic year of realisation of subject | 2025/2026 |
| Education level | first-cycle studies | Subject group | Optional subject group<br>Subject group related to scientific research in the field of study |
| Mode of study | Full-time studies | Mode of delivery | at the university |
| Year of study | 3 | Language of instruction | Polish |
| Semester of study | 6 | ECTS credits | 4.0 |
| Learning profile | general academic profile | Assessment form | assessment |
| Conducting unit | Institute of Nanotechnology and Materials Engineering -> Faculty of Applied Physics and Mathematics -> Faculties of Gdańsk University of Technology | | |
| Name and surname of lecturer (lecturers) | Subject supervisor | dr hab. inż. Agnieszka Witkowska | |
| | Teachers | dr hab. inż. Agnieszka Witkowska<br>dr inż. Marek Augustyniak<br>dr hab. inż. Natalia Wójcik | |

**Lesson types**

| Lesson type | Lecture | Tutorial | Laboratory | Project | Seminar | SUM |
|---|---|---|---|---|---|---|
| Number of study hours | 0.0 | 0.0 | 0.0 | 45.0 | 0.0 | 45 |

E-learning hours included: 0.0

eNauczanie source addresses:

Moodle ID: 3156 Projekt dyplomowy inżynierski I
https://enauczanie.pg.edu.pl/2025/course/view.php?id=3156

**Learning activity and number of study hours**

| Learning activity | Participation in didactic classes included in study plan | Participation in consultation hours | Self-study | SUM |
|---|---|---|---|---|
| Number of study hours | 45 | 5.0 | 50.0 | 100 |

**Subject objectives**

The aim of the course is:

1. to prepare students for the development and initiation of an engineering diploma project and the preparation of the diploma thesis, including: developing the ability to appropriately and critically select literature and other materials and prepare a literature review and planning and performing selected experimental or numerical-simulation tasks within the engineering project.

2. to familiarize students with the diploma process and the diploma examination procedure, and to prepare them for the oral presentation of their diploma thesis results.

## Learning outcomes

| Course outcome | Subject outcome | Method of verification |
|---|---|---|
| K6_U04 | After getting acquainted with the research problem, the student has the ability to plan an experiment and select the appropriate experimental tools, analyse research results and conduct a critical discussion. | [SU2] Assessment of ability to analyse information<br>[SU1] Assessment of task fulfilment |
| K6_U11 | The student has the ability to prepare the proper structure of a scientific work and write its introductory part, and is able to prepare a professional presentation template for an oral presentation (in Polish), presenting issues from the diploma project. | [SU1] Assessment of task fulfilment<br>[SU5] Assessment of ability to present the results of task |
| K6_U07 | After analyzing a simple research/ technical problem (including the engineering project selected for implementation), the student is able to perform a preliminary economic analysis of planned experiments and activities aimed at solving the problem. | [SU3] Assessment of ability to use knowledge gained from the subject |
| K6_K05 | The student has the ability to prepare and orally present the results of their work and participate in discussions, in Polish, on the issues analyzed in the discussed diploma projects. He is able to constructively evaluate his own results and the results of others. | [SK4] Assessment of communication skills, including language correctness<br>[SK2] Assessment of progress of work |

## Subject contents

Course content – project

Part 1.

- Engineering project topic selection, work schedule development;
- Diploma procedure;
- Introduction to issues related to writing a diploma thesis general guidelines and principles for preparing scientific papers.

Part 2.

- Literature databases and other sources: tools for searching databases and creating a literature list, preliminary preparation of a literature review;
- Effective and critical searching of Internet resources;
- Selected tools supporting the preparation of a diploma thesis;
- Artificial intelligence in text editing and information searching;
- Development of examination issues.

Part 3.

- Diploma presentation: elements of the presentation, the way of presenting the content and scientific results;
- Preparation of a presentation template;
- Oral presentation training: presentation and discussion of the preliminary results of the diploma project.

## Prerequisites and co-requisites

## Assessment methods and criteria

| Subject passing criteria | Passing threshold | Percentage of the final grade |
|---|---|---|
| P1. Consultation with supervisors, project schedule preparation; P2. Literature review; implementation of assigned mini-tasks; P3. Seminar preparation and presentation | 50.0% | 100.0% |

## Recommended reading

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| Basic literature | Hugh G. Gauch Jr., Scientific Methods in Brief, Cambridge University Press, 2012 |
| Supplementary literature | PN-ISO 690, 2012 "Information and documentation - Guidelines of bibliographic footnotes and references to information resources"<br><br>Current scientific literature and specialist reports related to the diploma project. |

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|---|---|---|
| | eResources addresses | Supplementary<br>https://ftimspg.edu.pl/studenci/studia-i-i-ii-stopnia/proces-dyplomowania/akty-prawne-i-regulaminy - University and faculty legal acts, regulations and guidelines related to the diploma process<br>https://pg.edu.pl/jakosc-ksztalcenia/procedury-uczelniane - Gdańsk Tech procedures, including Procedure 3 – anti-plagiarism verification |
| Example issues/ example questions/ tasks being completed | Preparation of detailed schedule for implementation of engineering project.<br><br>Present your project/idea in the most attractive form for the "investor".<br><br>Find the original source of requested information and determine if and what is fake news | |
| Practical activites within the subject | Not applicable | |

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