GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

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|---|---|---|---|
| Subject name and code | Informatics, PG_00059006 | | |
| Field of study | Materials Engineering, Materials Engineering, Materials Engineering | | |
| Date of commencement of studies | October 2022 | Academic year of realisation of subject | 2022/2023 |
| Education level | first-cycle studies | Subject group | Obligatory subject group in the field of study |
| Mode of study | Full-time studies | Mode of delivery | at the university |
| Year of study | 1 | Language of instruction | Polish |
| Semester of study | 2 | ECTS credits | 6.0 |
| Learning profile | general academic profile | Assessment form | assessment |
| Conducting unit | Department of Corrosion and Electrochemistry -> Faculty of Chemistry | | |
| Name and surname of lecturer (lecturers) | Subject supervisor | dr inż. Łukasz Gaweł | |
| | Teachers | | |

**Lesson types and methods of instruction**

| Lesson type | Lecture | Tutorial | Laboratory | Project | Seminar | SUM |
|---|---|---|---|---|---|---|
| Number of study hours | 30.0 | 0.0 | 30.0 | 15.0 | 0.0 | 75 |

E-learning hours included: 0.0

**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 | 75 | 5.0 | 70.0 | 150 |

**Subject objectives**

Advanced mastery of Excel spreadsheets, by learning to handle data experimental data, their statistical analysis, and the creation of basic programs for their processing. In addition, the student will acquire knowledge of basic programming in the Python language, in order to enable visualisation of experimental data using Matplotlib libraries.

**Learning outcomes**

| Course outcome | Subject outcome | Method of verification |
|---|---|---|
| K6_W05 | The student has knowledge of how to use a computer, of extension files for various purposes and how to process them. | [SW1] Assessment of factual knowledge |
| K6_K01 | Student is able to use libraries, and research aids to improve his/her competence in the use of data analysis programs | [SK4] Assessment of communication skills, including language correctness<br>[SK2] Assessment of progress of work |
| K6_W01 | Student has knowledge of statistical analysis, regression equations and how to apply them to experimental data correctly | [SW1] Assessment of factual knowledge |
| K6_U04 | The student is able to use a variety of software to analyse and process experimental data. | [SU2] Assessment of ability to analyse information<br>[SU1] Assessment of task fulfilment |

**Subject contents**

Lectures: 1-8 Use of spreadsheets in practice, discussion of MS Office and related packages

9-15 Use of the Python language in handling experimental data

**Prerequisites and co-requisites**

Basic knowledge of computer use and peripheral equipment
Knowledge of the Windows environment

**Assessment methods and criteria**

| Subject passing criteria | Passing threshold | Percentage of the final grade |
|---|---|---|
| laboratory | 60.0% | 60.0% |
| lecture | 60.0% | 40.0% |

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|---|---|---|
| Recommended reading | Basic literature | Excel 2016 PL. Programowanie w VBA- A. Michael, R. Kuslejka<br><br>Matplotlib for Python Developers- A. Yim, C. Chung, A. Yu |
| | Supplementary literature | Excel 2016 PL. Programowanie w VBA- A. Michael, R. Kuslejka<br><br>Matplotlib for Python Developers- A. Yim, C. Chung, A. Yu |
| | eResources addresses | Adresy na platformie eNauczanie: |
| Example issues/ example questions/ tasks being completed | Use of if functions.<br>Statistical analysis of experimental data using the t-student test. | |
| Work placement | Not applicable | |

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