



Subject card

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|---|--|--|--|-------------------------------------|---|------------|-----|
| Subject name and code | Specialization seminar, PG_00049172 | | | | | | |
| Field of study | Mathematics | | | | | | |
| Date of commencement of studies | October 2024 | | Academic year of realisation of subject | | 2026/2027 | | |
| Education level | first-cycle studies | | Subject group | | Optional subject group 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 | | 3.0 | | |
| Learning profile | general academic profile | | Assessment form | | assessment | | |
| Conducting unit | Institute Of Applied Mathematics -> Faculty Of Applied Physics And Mathematics -> Wydziały Politechniki Gdańskiej | | | | | | |
| Name and surname of lecturer (lecturers) | Subject supervisor | | dr inż. Robert Krawczyk | | | | |
| | Teachers | | | | | | |
| Lesson types and methods of instruction | Lesson type | Lecture | Tutorial | Laboratory | Project | Seminar | SUM |
| | Number of study hours | 0.0 | 0.0 | 0.0 | 0.0 | 30.0 | 30 |
| | E-learning hours included: 0.0 | | | | | | |
| | Adresy na platformie eNauczanie: | | | | | | |
| 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 | 30 | | 5.0 | | 40.0 | 75 |
| Subject objectives | The aim of the course is to prepare the student for the diploma examination, including the presentation of the specialization project underway, as well as familiarization with the questions for the diploma examination and learning more about these questions. | | | | | | |
| Learning outcomes | Course outcome | | Subject outcome | | Method of verification | | |
| | K6_U12 | | Learned the basics of statistical reasoning and knows how to apply them to the studied issues. | | [SU5] Assessment of ability to present the results of task [SU4] Assessment of ability to use methods and tools | | |
| | K6_K04 | | The student is able to answer the questions on the list prepared for the diploma examination | | [SK4] Assessment of communication skills, including language correctness | | |
| | K6_K01 | | the student is able to prepare a short presentation covering his bachelor's thesis and answer any questions about the work | | [SK2] Assessment of progress of work [SK5] Assessment of ability to solve problems that arise in practice | | |
| | K6_W04 | | He can use the basic mathematical concepts in the field of the work. | | [SW3] Assessment of knowledge contained in written work and projects [SW2] Assessment of knowledge contained in presentation | | |
| | K6_W05 | | He can use the basic mathematical concepts in the field of the work. | | [SW3] Assessment of knowledge contained in written work and projects [SW2] Assessment of knowledge contained in presentation | | |

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| Subject contents | mathematical analysis (number sequences, differential and integral calculus). Ordinary differential equations (basic methods of solving equations), linear algebra (matrix, determinant, linear transformation, eigenvectors and eigenvalues), analytic geometry (line equation, vectors and vector product, conic sections), algebra (groups, rings, bodies) . Basic concepts in financial mathematics (financial leverage, NPV, random component, Chow test,type I and II error) | | |
| Prerequisites and co-requisites | Knowledge of the knowledge needed to complete the diploma project in your subject. Knowledge of the basic concepts of first-cycle studies, allowing you to understand the presentation of other speakers. | | |
| Assessment methods and criteria | Subject passing criteria | Passing threshold | Percentage of the final grade |
| | prelection | 50.0% | 100.0% |
| Recommended reading | Basic literature | any | |
| | Supplementary literature | any | |
| | eResources addresses | | |
| Example issues/ example questions/ tasks being completed | 1. Continuity and differentiability of functions 2. Green and Stokes theorem 3. Conical curves 4. Transforms and orthogonal matrices 5. Derivative of a complex function. Cauchy-Riemann equations | | |
| Work placement | Not applicable | | |

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