



Subject card

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|---|--|---|-------------------------------------|------------|-------------------------------------|--|-----|--|
| Subject name and code | Nuclear Physics Laboratory, PG_00053505 | | | | | | | |
| Field of study | Biomedical Engineering, Biomedical Engineering, Biomedical Engineering | | | | | | | |
| Date of commencement of studies | October 2022 | Academic year of realisation of subject | | | | 2024/2025 | | |
| 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 Physics and Applied Computer Science -> Faculty of Applied Physics and Mathematics | | | | | | | |
| Name and surname of lecturer (lecturers) | Subject supervisor | dr Brygida Mielewska | | | | | | |
| | Teachers | | | | | | | |
| Lesson types and methods of instruction | Lesson type | Lecture | Tutorial | Laboratory | Project | Seminar | SUM | |
| | Number of study hours | 0.0 | 0.0 | 30.0 | 0.0 | 0.0 | 30 | |
| | 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 | 30 | 4.0 | | 41.0 | | 75 | |
| Subject objectives | To show experimental aspects of atomic and nuclear physics | | | | | | | |
| Learning outcomes | Course outcome | Subject outcome | | | Method of verification | | | |
| | [K6_U05] can plan and conduct experiments related to the field of study, including computer simulations and measurements; interpret obtained results and draw conclusions | The student gains the ability to conduct experiments with the use of radioactive isotopes. Can correctly present measurement data and assess measurement uncertainties. Can correctly interpret the results and draw conclusions. | | | [SU1] Assessment of task fulfilment | | | |
| | [K6_U02] can perform tasks related to the field of study in an innovative way as well as solve complex and nontypical problems, applying knowledge of physics, in changing and not fully predictable conditions | Student obtains knowledge of the physics course, especially nuclear physics. The student acquires the ability to analyze the phenomena occurring with the participation of ionizing radiation. The student is able to use simple physical models in relation to more complex systems. | | | [SU1] Assessment of task fulfilment | | | |
| Subject contents | Investigation of stochastic processes with the use of spark-discharge detector. Measurement of the range of alpha particles in air with the use of ionizing chamber. Investigation of sample activation in neutron beam Measurement of half-time of radioactive decay in cascade processes. Measurement of absorption coefficient for gamma radiation in selected materia | | | | | | | |
| Prerequisites and co-requisites | Physics - elementary course Physics of atomic nucleus and particles (08837) | | | | | | | |
| Assessment methods and criteria | Subject passing criteria | Passing threshold | | | Percentage of the final grade | | | |
| | All exercises from schedule positively marked | 60.0% | | | 50.0% | | | |
| | Acceptance of all reports | 60.0% | | | 50.0% | | | |
| Recommended reading | Basic literature | 1. Instrukcje do przedmiotu opracowane w formie edukacji na odległość, dostęp: http://enauczanie.pg.gda.pl/moodle . II Pracownia Fizyczna, M. Zubek, A. Kuczkowski, skrypt -Wydawnictwo PG | | | | | | |
| | Supplementary literature | No requirements | | | | | | |
| | eResources addresses | Adresy na platformie eNauczanie: | | | | | | |

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| Example issues/ example questions/ tasks being completed | Radioactive decay. Law of absorption of ionizing radiation. |
| Work placement | Not applicable |

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