



Subject card

| | | | | | | | |
|---|---|--|---|-------------------------------------|---------|---|-----|
| Subject name and code | Cancer cell biology, PG_00053381 | | | | | | |
| Field of study | Biomedical Engineering, Biomedical Engineering, Biomedical Engineering | | | | | | |
| Date of commencement of studies | February 2027 | | Academic year of realisation of subject | | | 2027/2028 | |
| Education level | second-cycle studies | | Subject group | | | Optional subject group Specialty 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 | 1 | | Language of instruction | | | Polish | |
| Semester of study | 2 | | ECTS credits | | | 3.0 | |
| Learning profile | general academic profile | | Assessment form | | | exam | |
| Conducting unit | Department of Pharmaceutical Technology and Biochemistry -> Faculty of Chemistry -> Faculties of Gdańsk University of Technology | | | | | | |
| Name and surname of lecturer (lecturers) | Subject supervisor | | dr hab. Ewa Augustin | | | | |
| | Teachers | | | | | | |
| Lesson types | Lesson type | Lecture | Tutorial | Laboratory | Project | Seminar | SUM |
| | Number of study hours | 15.0 | 0.0 | 15.0 | 0.0 | 15.0 | 45 |
| | 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 | 45 | | 3.0 | | 27.0 | 75 |
| Subject objectives | The aim of the course is to provide students with knowledge about the biology of cancer, in particular the causes of cancer diseases and the molecular mechanisms of the process of cancerogenesis. | | | | | | |

| | | | |
|--|---|---|--|
| Learning outcomes | Course outcome | Subject outcome | Method of verification |
| | [K7_W53] knows and understands, to an increased extent, selected aspects of biomedical diagnostics | The student has knowledge of selected aspects of biomedical diagnostics, in particular regarding cancer. | [SW3] Assessment of knowledge contained in written work and projects [SW1] Assessment of factual knowledge |
| | [K7_U12] is able, to an increased extent, to analyze the operation of components and systems related to the field of study, as well as to measure their parameters and study their technical characteristics, and to plan and carry out experiments related to the field of study, including computer simulations, interpret the obtained results and draw conclusions | The student has skills in planning and conducting experiments related to the field of study, and is also able to properly interpret the obtained results and draw conclusions from them. | [SU5] Assessment of ability to present the results of task [SU3] Assessment of ability to use knowledge gained from the subject [SU2] Assessment of ability to analyse information |
| | [K7_K01] is ready to create and develop models of proper behaviour in the work and life environment; undertake initiatives; critically evaluate actions of their own, teams and organisations they are part of; lead a group and take responsibility for its actions; responsibly perform professional roles taking into account changing social needs, including: - developing the achievements of the profession, - observing and developing rules of professional ethics and acting to comply to these rules | The student is able to take appropriate initiatives in the work and life environment, work in a team, take responsibility for their professional roles and comply with the principles of professional ethics. | [SK5] Assessment of ability to solve problems that arise in practice [SK3] Assessment of ability to organize work [SK1] Assessment of group work skills |
| Subject contents | Course content – lecture Phases of cancer development.Epidemiology of cancer diseases.Causes of cancer diseases.Oncogenes and tumor suppressor genes.Metastasis formation and angiogenesis.Tumor markers, targeted therapies. | | |
| Prerequisites and co-requisites | Knowledge in the field of biochemistry and genetic engineering. | | |
| Assessment methods and criteria | Subject passing criteria | Passing threshold | Percentage of the final grade |
| | sprawozdania | 60.0% | 25.0% |
| | kolokwium | 60.0% | 50.0% |
| | prezentacja | 60.0% | 25.0% |
| Recommended reading | Basic literature | R.A. Wienber. The biology of cancer. Gerland Science. Taylor & Francis Group, 2007, 2014. L. Pecorino. Biologia molekularna nowotworów w praktyce klinicznej. Edra. 2018, 2023. | |
| | Supplementary literature | J. Bal. Biologia molekularna w zarysie. Elementy genetyki klinicznej. PWN, 2006. | |
| | eResources addresses | | |
| Example issues/ example questions/ tasks being completed | The role of oncogenes and tumor suppressor genes in cancer transformation.Mechanism and types of angiogenesis.Phases of metastasis.Causes of cancer diseases. | | |
| Practical activities within the subject | Not applicable | | |