



## Subject card

|   |  |   |                                     |            |   |         |     |
|---|--|---|-------------------------------------|------------|---|---------|-----|
| Subject name and code                       | Antibacterial Drugs, PG_00058246   |   |                                     |            |   |         |     |
| Field of study                              | Biotechnology  |   |                                     |            |   |         |     |
| Date of commencement of studies             | February 2024  | Academic year of realisation of subject   |                                     |            | 2024/2025   |         |     |
| Education level                             | second-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                               | 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   |   |                                     |            |   |         |     |
| Name and surname of lecturer (lecturers)    | Subject supervisor   | dr inż. Andrzej Skwarecki   |                                     |            |   |         |     |
|   | Teachers   |   |                                     |            |   |         |     |
| Lesson types and methods of instruction     | Lesson type  | Lecture   | Tutorial                            | Laboratory | Project   | Seminar | SUM |
|   | Number of study hours  | 30.0  | 0.0                                 | 0.0        | 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  | 5.0                                 |            | 40.0  | 75      |     |
| Subject objectives                          | The aim of the subject is to familiarize the student with the basic issues of antimicrobial drugs chemistry  |   |                                     |            |   |         |     |
| Learning outcomes                           | Course outcome   | Subject outcome   |                                     |            | Method of verification  |         |     |
|   | [K7_K02] is aware of the limitations and the necessity of continuous development of knowledge and technology; understands the need for education and constant training   | The student solves problems in group work. The student proposes structural modifications of antibiotics leading to their improvement in the field of stability and activity.  |                                     |            | [SK1] Assessment of group work skills<br>[SK5] Assessment of ability to solve problems that arise in practice   |         |     |
|   | [K7_W02] has advanced knowledge of structure and activity of enzymes and biologically active compounds also in pharmacological context, knows basic instrumental methods of qualitative and quantitative analysis and activity studies of biomolecules | The student is able to divide antimicrobial drugs into specific groups. The student is able to recognize chemical structures of antimicrobial drugs. The student is able to present antimicrobial drugs' mechanisms of action |                                     |            | [SW2] Assessment of knowledge contained in presentation<br>[SW1] Assessment of factual knowledge  |         |     |
|   | [K7_U04] is able to predict potential properties of biomolecules and biologically active compounds on the basis of knowledge of their chemical structure and apply methods of molecular modelling of biomolecules                                      | The student knows the basic biochemical processes occurring in the human body and has basic knowledge of organic chemistry<br>The student knows the main groups of antimicrobial drugs  |                                     |            | [SU3] Assessment of ability to use knowledge gained from the subject<br>[SU2] Assessment of ability to analyse information<br>[SU1] Assessment of task fulfilment |         |     |
| Subject contents                            | Antibacterial drugs. Antifungal drugs. Antiprotozoal drugs. Antiparasitic drugs. Antiviral drugs. Anticancer antibiotics   |   |                                     |            |   |         |     |
| Prerequisites and co-requisites             | General knowledge of organic chemistry and biochemistry  |   |                                     |            |   |         |     |
| Assessment methods and criteria             | Subject passing criteria   | Passing threshold   |                                     |            | Percentage of the final grade   |         |     |
|   | Final exam   | 60.0%   |                                     |            | 100.0%  |         |     |

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| Recommended reading  | Basic literature         | "Chemia Medyczna. Podstawowe zagadnienia" G.L. Patrick. Wydawnictwa Naukowo-Techniczne. Warszawa 2005<br><br>"An introduction to medicinal chemistry" G.L. Patrick. Oxford University Press. Nowy Jork 2017 |
|  | Supplementary literature | "Wybrane zagadnienia z metod poszukiwania i otrzymywania środków leczniczych" Pod redakcją Katarzyny Kieć-Kononowicz. Wydawnictwo Uniwersytetu Jagiellońskiego. Kraków 2006                                 |
|  | eResources addresses     | Adresy na platformie eNauczanie:  |
| Example issues/<br>example questions/<br>tasks being completed |                          |   |
| Work placement   | Not applicable           |   |