



## Subject card

|  |   |  |  |                                     |                               |            |     |
|--|---|--|--|-------------------------------------|-------------------------------|------------|-----|
| Subject name and code  | Selected aspects of pharmaceutical techniques, PG_00024946  |  |  |                                     |                               |            |     |
| Field of study   | Mechanical and Medical Engineering  |  |  |                                     |                               |            |     |
| Date of commencement of studies                                | October 2022  | Academic year of realisation of subject                  |  |                                     | 2024/2025                     |            |     |
| Education level  | first-cycle studies   | Subject group  |  |                                     |                               |            |     |
| 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   |  |                                     | 1.0                           |            |     |
| Learning profile   | general academic profile  | Assessment form  |  |                                     | assessment                    |            |     |
| Conducting unit  | Faculty of Mechanical Engineering and Ship Technology   |  |  |                                     |                               |            |     |
| Name and surname of lecturer (lecturers)                       | Subject supervisor  |  | prof. Wiesław Sawicki  |                                     |                               |            |     |
|  | 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                           | 15.0       | 15  |
|  | 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   | 15   |  | 3.0                                 |                               | 7.0        | 25  |
| Subject objectives   | Skills and competences: characterization and description of essential oral dosage forms. Skills and competences: quality assessment of drug formulation, selection of storage conditions for medicinal products.  |  |  |                                     |                               |            |     |
| Learning outcomes  | Course outcome  |  | Subject outcome  |                                     | Method of verification        |            |     |
| Subject contents   | Technology of oral solid formulations and related biopharmaceutical aspects: <ul style="list-style-type: none"><li>• basic operations (granulation, tableting, coating, drying); types of tableting machines, construction and operation of laboratory tableting machine XP1 from Korsch company, drum coating - apparatus and the process, fluidbed granulation, drying and coating, coating excipients;</li><li>• granules characteristics, methods of production, excipients, tests;</li><li>• pellets characteristics, methods of production;</li><li>• tablets (oral, for oral cavity, for solutions and suspensions, coated and uncoated, excipients);</li><li>• gelatin capsules soft and hard, of modified release, multiparticulate delivery formulations;</li><li>• modified drug release oral formulations: enteric coated and prolonged release methods of production, role of the excipients;</li><li>• methods of quality control for tablets and capsules.</li></ul> |  |  |                                     |                               |            |     |
| Prerequisites and co-requisites                                |   |  |  |                                     |                               |            |     |
| Assessment methods and criteria                                | Subject passing criteria  |  | Passing threshold  |                                     | Percentage of the final grade |            |     |
|  | term with credit  |  | 60.0%  |                                     | 100.0%                        |            |     |
| Recommended reading  | Basic literature  |  | Janicki St., Fiebig A., Applied Pharmacy. Manual for Students of pharmacy, PZWL, Warszawa 2002.  |                                     |                               |            |     |
|  | Supplementary literature  |  | Łunio R., <b>Sawicki W.</b> : Tablets - methods and mechanism of manufacturing. Part I. Pol. Pharm., 2008; 64, nr 6, 265-275.<br><br><b>Sawicki W.</b> , Krasowska M.: Methods and mechanism of tablets production. Part II. Pol. Pharm., 2009; 65, nr 1, 59-68. |                                     |                               |            |     |
|  | eResources addresses  |  | Adresy na platformie eNauczenie:   |                                     |                               |            |     |
| Example issues/<br>example questions/<br>tasks being completed |   |  |  |                                     |                               |            |     |
| Work placement   | Not applicable  |  |  |                                     |                               |            |     |