



## Subject card

|   |   |  |   |                                     |   |            |     |
|---|---|--|---|-------------------------------------|---|------------|-----|
| Subject name and code                       | TECHNOLOGY TRANSFER, PG_00071287  |  |   |                                     |   |            |     |
| Field of study                              | Engineering Management  |  |   |                                     |   |            |     |
| Date of commencement of studies             | October 2022  | Academic year of realisation of subject                  |   |                                     | 2025/2026   |            |     |
| Education level                             | first-cycle studies   | Subject group  |   |                                     | Optional subject group<br>Subject group related to scientific research in the field of study                                    |            |     |
| Mode of study                               | Part-time studies (on-line)   | Mode of delivery   |   |                                     | at the university   |            |     |
| Year of study                               | 4   | Language of instruction                                  |   |                                     | Polish  |            |     |
| Semester of study                           | 8   | ECTS credits   |   |                                     | 3.0   |            |     |
| Learning profile                            | general academic profile  | Assessment form  |   |                                     | assessment  |            |     |
| Conducting unit                             |   |  |   |                                     |   |            |     |
| Name and surname of lecturer (lecturers)    | Subject supervisor  |  | Damian Ciachorowski   |                                     |   |            |     |
|   | Teachers  |  | Damian Ciachorowski   |                                     |   |            |     |
| Lesson types                                | Lesson type   | Lecture  | Tutorial  | Laboratory                          | Project   | Seminar    | SUM |
|   | Number of study hours   | 0.0  | 0.0   | 8.0                                 | 0.0   | 0.0        | 8   |
|   | E-learning hours included: 0.0  |  |   |                                     |   |            |     |
|   | eNauczenie source address: <a href="https://enauczenie.pg.edu.pl/moodle/course/view.php?id=47560">https://enauczenie.pg.edu.pl/moodle/course/view.php?id=47560</a>  |  |   |                                     |   |            |     |
| 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   | 8  |   | 5.0                                 |   | 62.0       | 75  |
| Subject objectives                          | The aim of the course is to prepare students for: practical design and evaluation of research results commercialization paths (including license, spin-off, direct implementation), based on knowledge of technology transfer process design (IPR, science-business cooperation models, financing, profitability and risk analysis), and shaping attitudes related to responsible engineering and managerial decision-making, taking into account quality, environment and safety in the context of implementing innovations in industry and the economy. |  |   |                                     |   |            |     |
| Learning outcomes                           | Course outcome  |  | Subject outcome   |                                     | Method of verification  |            |     |
|   | [K6_W13] has a basic knowledge of the design, modelling and optimisation of technical processes and systems   |  | The student knows and understands the basics of designing research results commercialization processes (stages from ideation and incubation, through prototyping and concept visualization, to introduction and maintenance on the market; TTO roles, cooperation models, IPR) in the context of their modeling and optimization for implementation purposes. |                                     | [SW2] Assessment of knowledge contained in presentation<br>[SW3] Assessment of knowledge contained in written work and projects |            |     |
|   | [K6_U08] analyses engineering and managerial solutions in decision-making processes, taking into account pro-quality and pro-environmental aspects, as well as safety of work processes   |  | The student is able to analyze engineering and managerial solutions and make decisions regarding commercialization (choice of path: license vs. spin-off, profitability/risk analysis, quality, environmental and health and safety conditions), applying technology transfer methods and tools to specific cases.  |                                     | [SU4] Assessment of ability to use methods and tools  |            |     |

| Subject contents  | Course content – laboratory <ul style="list-style-type: none"> <li>• Sources of R&amp;D Concepts</li> <li>• Types of Entities Carrying Out Research and Development</li> <li>• Barriers to University-Business Collaboration</li> <li>• Need Awareness, Idea, and Concept</li> <li>• Idea Incubation</li> <li>• Concept Prototyping and Visualization</li> <li>• Market Introduction, Promotion, and Sustainability</li> <li>• Technology Transfer Platforms</li> </ul>           |   |                               |                          |                   |                               |                |       |       |   |       |       |
|---|---|---|-------------------------------|--------------------------|-------------------|-------------------------------|----------------|-------|-------|---|-------|-------|
| Prerequisites and co-requisites   |   |   |                               |                          |                   |                               |                |       |       |   |       |       |
| Assessment methods and criteria   | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;">Subject passing criteria</th> <th style="width: 30%;">Passing threshold</th> <th style="width: 30%;">Percentage of the final grade</th> </tr> </thead> <tbody> <tr> <td>Project report</td> <td>60.0%</td> <td>50.0%</td> </tr> <tr> <td>Comprehension test in the form of open-ended, problem-based questions</td> <td>60.0%</td> <td>50.0%</td> </tr> </tbody> </table> |   |                               | Subject passing criteria | Passing threshold | Percentage of the final grade | Project report | 60.0% | 50.0% | Comprehension test in the form of open-ended, problem-based questions | 60.0% | 50.0% |
|   | Subject passing criteria  | Passing threshold   | Percentage of the final grade |                          |                   |                               |                |       |       |   |       |       |
|   | Project report  | 60.0%   | 50.0%                         |                          |                   |                               |                |       |       |   |       |       |
| Comprehension test in the form of open-ended, problem-based questions   | 60.0%   | 50.0%   |                               |                          |                   |                               |                |       |       |   |       |       |
|   | Basic literature  | Brak  |                               |                          |                   |                               |                |       |       |   |       |       |
| Recommended reading   | Supplementary literature  | Brak  |                               |                          |                   |                               |                |       |       |   |       |       |
|   | eResources addresses  |   |                               |                          |                   |                               |                |       |       |   |       |       |
|   | Example issues/<br>example questions/<br>tasks being completed  | The "Technology Transfer" course is an intensive course devoted to the process of transferring modern technological solutions from the scientific and research sector to industry and the economy. Students will learn the basic mechanisms that enable the development of innovative products and services, as well as tools supporting the commercialization of inventions. |                               |                          |                   |                               |                |       |       |   |       |       |
| The course consists of eight hours of lectures, during which we will discuss key aspects of technology transfer, such as intellectual property protection, models of cooperation between science and business, financing innovation, and analyzing the profitability of implementing new solutions. The final session will be devoted to the presentation of final projects developed by students and a test. |   |   |                               |                          |                   |                               |                |       |       |   |       |       |
| Practical activities within the subject   | Not applicable  |   |                               |                          |                   |                               |                |       |       |   |       |       |

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