



Subject card

|   |  |  |                                |                                     |   |  |     |  |  |
|---|--|--|--------------------------------|-------------------------------------|---|--|-----|--|--|
| Subject name and code                       | , PG_00065826  |  |                                |                                     |   |  |     |  |  |
| Field of study                              | Materials Engineering  |  |                                |                                     |   |  |     |  |  |
| Date of commencement of studies             | October 2025   | Academic year of realisation of subject                  |                                | 2025/2026                           |   |  |     |  |  |
| Education level                             | second-cycle studies   |  | Subject group                  |                                     | Specialty 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   |                                | 4.0                                 |   |  |     |  |  |
| Learning profile                            | general academic profile   |  | Assessment form                |                                     | assessment  |  |     |  |  |
| Conducting unit                             | Department of Polymer Technology -> Faculty of Chemistry -> Faculties of Gdańsk University of Technology   |  |                                |                                     |   |  |     |  |  |
| Name and surname of lecturer (lecturers)    | Subject supervisor   |  | dr hab. inż. Michał Strąkowski |                                     |   |  |     |  |  |
|   | Teachers   |  | dr hab. inż. Michał Strąkowski |                                     |   |  |     |  |  |
| Lesson types                                | Lesson type  | Lecture  | Tutorial                       | Laboratory                          | Project   | Seminar  | SUM |  |  |
|   | Number of study hours  | 15.0   | 0.0                            | 30.0                                | 0.0   | 0.0  | 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   |                                | 5.0                                 |   | 50.0   | 100 |  |  |
| Subject objectives                          | Understanding the method of processing and testing of polymeric materials. Analysis of problems with plastic processing.   |  |                                |                                     |   |  |     |  |  |
| Learning outcomes                           | Course outcome   |  | Subject outcome                |                                     |   | Method of verification                             |     |  |  |
|   | [K7_U04] Can undertake a detailed analysis of the obtained results and develop a technical report or presentation, also in English.  |  | -                              |                                     |   | [SU2] Assessment of ability to analyse information |     |  |  |
|   | [K7_W01] Has extended knowledge of the fields of science and scientific disciplines relevant to materials engineering, and their historical development and importance for the progress of exact and natural sciences, knowledge of the world and evolution of humanity. |  | -                              |                                     |   | [SW1] Assessment of factual knowledge              |     |  |  |
|   | [K7_W06] Knows the theoretical basics the functioning of scientific equipment in the fields of science and scientific disciplines relevant to materials engineering.   |  | -                              |                                     |   | [SW1] Assessment of factual knowledge              |     |  |  |

| Subject contents   | <p>Course content – lecture</p> <ul style="list-style-type: none"> <li>- Physical basics of polymer processing.</li> <li>- Rules for selecting the type of processing according to the characteristics of the product and the type of material.</li> <li>- Special methods of plastic injection molding.</li> <li>- Influence of the injection molding technique on the properties of these materials.</li> <li>- Plastic additives.</li> </ul>  |                               |                   |                               |            |                      |       |            |        |       |
|--|--|-------------------------------|-------------------|-------------------------------|------------|----------------------|-------|------------|--------|-------|
| Prerequisites and co-requisites                          |  |                               |                   |                               |            |                      |       |            |        |       |
| Assessment methods and criteria                          | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Subject passing criteria</th><th style="text-align: center;">Passing threshold</th><th style="text-align: center;">Percentage of the final grade</th></tr> </thead> <tbody> <tr> <td style="text-align: center;">Final test</td><td style="text-align: center;">50.0%</td><td style="text-align: center;">50.0%</td></tr> <tr> <td style="text-align: center;">Laboratory</td><td style="text-align: center;">100.0%</td><td style="text-align: center;">50.0%</td></tr> </tbody> </table> | Subject passing criteria      | Passing threshold | Percentage of the final grade | Final test | 50.0%                | 50.0% | Laboratory | 100.0% | 50.0% |
| Subject passing criteria                                 | Passing threshold  | Percentage of the final grade |                   |                               |            |                      |       |            |        |       |
| Final test   | 50.0%  | 50.0%                         |                   |                               |            |                      |       |            |        |       |
| Laboratory   | 100.0%   | 50.0%                         |                   |                               |            |                      |       |            |        |       |
| Recommended reading                                      | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Basic literature</td><td style="width: 50%;">-</td></tr> <tr> <td>Supplementary literature</td><td>-</td></tr> <tr> <td>eResources addresses</td><td></td></tr> </table>   | Basic literature              | -                 | Supplementary literature      | -          | eResources addresses |       |            |        |       |
| Basic literature   | -  |                               |                   |                               |            |                      |       |            |        |       |
| Supplementary literature                                 | -  |                               |                   |                               |            |                      |       |            |        |       |
| eResources addresses                                     |  |                               |                   |                               |            |                      |       |            |        |       |
| Example issues/ example questions/ tasks being completed | <p>Characterize advanced techniques of plastics processing.</p> <p>Describe the RHCM (Rapid Heat Cycle Molding)method.</p> <p>The most important types of plastic additives.</p>   |                               |                   |                               |            |                      |       |            |        |       |
| Practical activites within the subject                   | Not applicable   |                               |                   |                               |            |                      |       |            |        |       |

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