GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

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|---|---|---|---|
| Subject name and code | Engineering Graphics I, PG_00055216 | | |
| Field of study | Mechanical Engineering | | |
| Date of commencement of studies | October 2022 | Academic year of realisation of subject | 2022/2023 |
| Education level | first-cycle studies | Subject group | Obligatory subject group in the field of study<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 | English |
| Semester of study | 1 | ECTS credits | 5.0 |
| Learning profile | general academic profile | Assessment form | assessment |
| Conducting unit | Department of Machine Design and Vehicles -> Faculty of Mechanical Engineering and Ship Technology | | |
| Name and surname of lecturer (lecturers) | Subject supervisor | dr hab. inż. Jacek Łubiński | |
| | Teachers | dr hab. inż. Jacek Łubiński<br>mgr inż. Bartosz Bastian | |

**Lesson types and methods of instruction**

| Lesson type | Lecture | Tutorial | Laboratory | Project | Seminar | SUM |
|---|---|---|---|---|---|---|
| Number of study hours | 15.0 | 0.0 | 0.0 | 30.0 | 0.0 | 45 |

E-learning hours included: 0.0

Engineering Graphics I, PG_00055216 - Moodle ID: 26635
https://enauczanie.pg.edu.pl/moodle/course/view.php?id=26635

**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 | 9.0 | 71.0 | 125 |

**Subject objectives**

The aim of the classes is to develop the spacial imagination, recognition of the projection methods, preparation of the working drawings based on the current norms of the technical drawing

**Learning outcomes**

| Course outcome | Subject outcome | Method of verification |
|---|---|---|
| K6_W07 | The student can present elements on the bassis of the parallel projection. The student writes and read the shape of the mechanical construction. Can define the state of the surface, dimentions the machine elements and creates working drawing based on the norms of the technical drawing. | [SW1] Assessment of factual knowledge |
| [K6_U03] is able to identify, formulate and develop the documentation of a simple design or technological task, including the description of the results of this task in Polish or in a foreign language and to present the results using computer software or other aiding tools | The student can present elements on the bassis of the parallel projection. The student writes and read the shape of the mechanical construction. Can define the state of the surface, dimentions the machine elements and creates working drawing based on the norms of the technical drawing. | [SU1] Assessment of task fulfilment<br>[SU3] Assessment of ability to use knowledge gained from the subject |

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| Subject contents | The role of the enginnering drawing in the industry,<br><br>Introduction to preparation of the technical objects.<br><br>Axonometric and ortographic projection<br><br>Projections of: points, lines, planes, solids.<br><br>True size of geometrical elelments<br><br>Presentation of solids cut by multiple planes,<br><br>Views and sections of machine elements.<br><br>Dimentioning, dimention tollerance, fits.<br><br>Desctiption of surface state.<br><br>Types of machine drawings.<br><br>Position of the element on the drawing.<br><br>Normalisation in technical drawing. |
| Prerequisites and co-requisites | Basic knowledge of planar and spacial geometry, metrology, and machine design. |

**Assessment methods and criteria**

| Subject passing criteria | Passing threshold | Percentage of the final grade |
|---|---|---|
| Class projects | 60.0% | 40.0% |
| Final test | 60.0% | 60.0% |

**Recommended reading**

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| Basic literature | Dobrzański T.: Rysunek techniczny i maszynowy. WNT, Warszaw, 2017.<br><br>Rigall A., Sadaj J.: Zapis konstrukcji Geometria wykreślna, Wydawnictwo Politechniki Gdańskiej, 2003.<br><br>Hawk C, Schaum's outline of theory and problems of descriptive geometry,1962 |
| Supplementary literature | Kurmaz L.W.: Projektowanie węzłów i części maszyn, Wydawnictwo Politechniki Świętokrzyskiej, 2007. |
| eResources addresses | |

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|---|---|
| Example issues/ example questions/ tasks being completed | Create a working drawing of an element on the pictureDraw a solid cut by multiple planesFill the missing projections of the element |

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| Work placement | Not applicable |