GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

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|---|---|---|---|
| Subject name and code | Descriptive geometry, PG_00061783 | | |
| Field of study | Geodesy and Cartography | | |
| Date of commencement of studies | October 2026 | Academic year of realisation of subject | 2026/2027 |
| Education level | first-cycle studies | Subject group | Obligatory subject group 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 | 1 | ECTS credits | 2.0 |
| Learning profile | general academic profile | Assessment form | assessment |
| Conducting unit | Department of Mechanics of Materials and Structures -> Faculty of Civil and Environmental Engineering -> Faculties of Gdańsk University of Technology | | |
| Name and surname of lecturer (lecturers) | Subject supervisor | dr inż. Dawid Bruski | |
| | Teachers | | |

**Lesson types**

| Lesson type | Lecture | Tutorial | Laboratory | Project | Seminar | SUM |
|---|---|---|---|---|---|---|
| Number of study hours | 15.0 | 10.0 | 0.0 | 5.0 | 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 | 25.0 | 60 |

**Subject objectives**

The aim of the course is to equip the student in:
- knowledge of orthogonal, topographic and perspective projections;
- skills of solving spatial problems in engineering practice.

**Learning outcomes**

| Course outcome | Subject outcome | Method of verification |
|---|---|---|
| [K6_U02] can make basic geodetic drawings and read an architectural technical drawing | The student can make basic geodetic drawings and read technical architectural drawings. | [SU1] Assessment of task fulfilment |
| [K6_W04] has knowledge and understands the concepts of projection with elevations, Monge's and middle (perspective), has basic knowledge and understands the concepts of engineering graphics needed to work with CAD (Computer Aided Design) software in accordance with the standards and principles of geodesy, construction and IT including computer network technologies, databases and programming as well as surveying software | Student potrafi zapisać obiekty trójwymiarowe w poznanych typach rzutowania oraz potrafi rozwiązać problemy przestrzenne w praktyce inżynierskiej. | [SW3] Assessment of knowledge contained in written work and projects |

**Subject contents**

Course content – lecture
Orthographic projection, planes of reference. Invariants of parallel projections. Representation of geometric elements in the Monge projection, transformation, auxiliary views. Belonging and parallelism of points, lines and planes. Determination of common elements: piercing points, edges between planes. Operating on polyhedrons: piercing points, intersection lines. Topographic projection. Representation of points, lines and planes. Basic constructions: belonging and parallelism of geometric elements, intersection of elements. Edge and normal view of a plane. Topographic surfaces. Determination of embankment and cut planes along roads and squares. Basic rules of perspective projection, one-point perspective.

**Prerequisites and co-requisites**

No requirements.

**Assessment methods and criteria**

| Subject passing criteria | Passing threshold | Percentage of the final grade |
|---|---|---|
| drawing exercises | 60.0% | 50.0% |
| test | 60.0% | 50.0% |

| | | |
|---|---|---|
| Recommended reading | Basic literature | Bieliński A.: *Geometria wykreślna*, Oficyna Wydawnicza Politechniki Warszawskiej, 2005<br><br>Grochowski B.: *Elementy geometrii wykreślnej*, PWN Warszawa, 2002<br><br>Jankowski W.*: Geometria Wykreślna,* Wydawnictwo Politechniki Poznańskiej, 1999<br><br>Otto F., Otto E.: *Podręcznik geometrii wykreślnej*, PWN Warszawa, 1998 (i inne wydania) |
| | Supplementary literature | Bieliński A.: *Ćwiczenia z geometrii wykreślnej*, Oficyna Wydawnicza Politechniki Warszawskiej, 2002<br><br>Błach A., *Inżynierska geometria wykreślna. Podstawy i zastosowania.* Wydawnictwo Politechniki Śląskiej, Gliwice 2006 |
| | eResources addresses | |
| Example issues/ example questions/ tasks being completed | Determination of embankment and cut planes along roads. | |
| Practical activites within the subject | Not applicable | |

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