



Subject card

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| Subject name and code | Descriptive Geometry , PG_00044358 | | | | | | |
| Field of study | Civil Engineering | | | | | | |
| Date of commencement of studies | October 2020 | | Academic year of realisation of subject | | 2020/2021 | | |
| Education level | first-cycle studies | | Subject group | | Obligatory subject group in the field of study | | |
| Mode of study | Part-time studies | | Mode of delivery | | at the university | | |
| Year of study | 1 | | Language of instruction | | Polish | | |
| Semester of study | 1 | | ECTS credits | | 4.0 | | |
| Learning profile | general academic profile | | Assessment form | | assessment | | |
| Conducting unit | Department of Geodesy -> Faculty of Civil and Environmental Engineering | | | | | | |
| Name and surname of lecturer (lecturers) | Subject supervisor | | dr inż. Bożena Kotarska-Lewandowska | | | | |
| | Teachers | | dr inż. Anna Sobieraj-Żłobińska | | | | |
| | | | dr inż. Bożena Kotarska-Lewandowska | | | | |
| Lesson types and methods of instruction | Lesson type | Lecture | Tutorial | Laboratory | Project | Seminar | SUM |
| | Number of study hours | 12.0 | 10.0 | 0.0 | 5.0 | 0.0 | 27 |
| | E-learning hours included: 0.0 | | | | | | |
| | Address on the e-learning platform: https://enauczanie.pg.edu.pl/moodle/course/view.php?id=8732 Adresy na platformie eNauczanie: | | | | | | |
| 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 | 27 | | 5.0 | | 68.0 | 100 |
| Subject objectives | Introduction of main geometrical constructions and projectors of three-dimensional objects into two dimensional drawings (orthogonal projections, axonometric projection and topographical projection). Getting knowledge how to use geometry to solve basic engineering problems. The development of spatial imaginary and abstract thinking skills. | | | | | | |
| Learning outcomes | Course outcome | | Subject outcome | | Method of verification | | |
| | [K6_U09] can read architectural, geodetical and construction drawings, is able do prepare engineering drawing using selected CAD software | | Can present the construction elements using geometry | | [SU1] Assessment of task fulfilment | | |
| | [K6_W02] knows the rules of descriptive geometry and technical drawing, which is needed to read and understand architecture, construction and geodesy plans and making them using CAD tools. | | Knows the basis of Orthogonal projections, aksonometry and marking projection | | [SW1] Assessment of factual knowledge | | |

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| Subject contents | Orthogonal projections. Location of a point, line and plane in space. Relative position of lines and planes. Common elements (edges, the penetration). Penetration of polygons and their visibility. Puncture a simple polygon, intersection plane. The transformation of the position and its applications. Projection of polyhedrons. Polyhedron's simple puncture, cut plane. Axonometric projection. Basic elements and constructions. Marking projection, basic elements and constructions. Design of slopes, embankments and excavations for the squares and roads. | | |
| Prerequisites and co-requisites | | | |
| Assessment methods and criteria | Subject passing criteria | Passing threshold | Percentage of the final grade |
| | project | 60.0% | 10.0% |
| | test | 60.0% | 50.0% |
| | exercises | 60.0% | 40.0% |
| Recommended reading | Basic literature | <ul style="list-style-type: none">• Bieliński A.: Geometria wykreślna, Oficyna Wydawnicza Politechniki Warszawskiej, 2005 (Descriptive geometry)• Grochowski B.: Elementy geometrii wykreślnej, PWN Warszawa, 2002 (Elements of descriptive geometry)• Jankowski W.: Geometria Wykreślna, Wydawnictwo Politechniki Poznańskiej, 1999 (Descriptive geometry)• Mierzejewski W.: Geometria Wykreślna, Oficyna Wydawnicza Politechniki Warszawskiej, 2006 (Descriptive geometry) | |
| | Supplementary literature | web pages with some exercises and examples (also animations) <ul style="list-style-type: none">• http://matwbn.icm.edu.pl/kstresc.php?tom=16&wyd=10• http://fluid.itcmp.pwr.wroc.pl/~eichler/program.html• http://wms.mat.agh.edu.pl/~samujlo/6.htm• http://members.chello.pl/j.paszkowski/strony/studia/elektryczny/• http://www.studianet.pl/kreska | |
| | eResources addresses | Uzupełniające | |
| Example issues/ example questions/ tasks being completed | | | |
| Work placement | Not applicable | | |