



## Subject card

|   |   |  |  |                                     |  |            |     |
|---|---|--|--|-------------------------------------|--|------------|-----|
| Subject name and code                       | Computer Aided Design (CAD), PG_00042637  |  |  |                                     |  |            |     |
| Field of study                              | Environmental Engineering   |  |  |                                     |  |            |     |
| Date of commencement of studies             | October 2021  |  | Academic year of realisation of subject  |                                     | 2022/2023                                      |            |     |
| 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                               | 2   |  | Language of instruction  |                                     | Polish   |            |     |
| Semester of study                           | 4   |  | ECTS credits   |                                     | 4.0  |            |     |
| Learning profile                            | general academic profile  |  | Assessment form  |                                     | assessment                                     |            |     |
| Conducting unit                             | Department of Geotechnics, Geology and Marine Civil Engineering -> Faculty of Civil and Environmental Engineering   |  |  |                                     |  |            |     |
| Name and surname of lecturer (lecturers)    | Subject supervisor  |  | dr inż. Krzysztof Szarf  |                                     |  |            |     |
|   | Teachers  |  | dr inż. Krzysztof Szarf<br><br>dr inż. Witold Tisler   |                                     |  |            |     |
| Lesson types and methods of instruction     | Lesson type   | Lecture  | Tutorial   | Laboratory                          | Project  | Seminar    | SUM |
|   | Number of study hours   | 10.0   | 0.0  | 20.0                                | 0.0  | 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                                 |  | 70.0       | 105 |
| Subject objectives                          | To learn skills required to draft technical drawings using CAD software (AutoCAD)   |  |  |                                     |  |            |     |
| Learning outcomes                           | Course outcome  |  | Subject outcome  |                                     | Method of verification                         |            |     |
|   | [K6_W16] knows the rules of descriptive geometry and technical drawing regarding the recording and reading of architectural drawings, construction and surveying drawings, as well as their preparation with the use of CAD |  | Knows the rules of drafting technical drawings<br>Knows the rules of descriptive geometry<br>Has the knowledge to draft technical drawings according to the aforementioned rules<br>Knows how to draw in AutoCAD |                                     |  |            |     |
|   | [K6_U07] can read architectural, construction and geodesy drawings, and can use the known computer programs to prepare a drawing part of technical documentation for the sanitary industry                                  |  | Student can read a civil engineering or a sanitary engineering technical drawing<br>Student is able to use AutoCAD software to create a technical drawing  |                                     |  |            |     |
|   | [K6_U11] can use selected computer programs to support design, including CAD graphics programs  |  | Can prepare technical drawings using AutoCAD   |                                     |  |            |     |
| Subject contents                            | Learning how to use Autodesk AutoCAD<br>Drawing of basic elements<br>Modification of the elements already drawn<br>Precision<br>Layers<br>Properties<br>Printing<br>Introduction to 3D drawing                              |  |  |                                     |  |            |     |
| Prerequisites and co-requisites             | Classes taught in the previous semesters: descriptive geometry, technical drawing<br>Knowledge of technical drawing rules<br>How to use Windows OS<br>Polish proficiency  |  |  |                                     |  |            |     |

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| Assessment methods and criteria                                | Subject passing criteria   | Passing threshold   | Percentage of the final grade |
|  | test   | 30.0%   | 80.0%                         |
|  | Udział w zajęciach   | 100.0%  | 20.0%                         |
| Recommended reading  | Basic literature   | 1. AutoCAD help files<br>2. <a href="http://knowledge.autodesk.com/support/autocad/learn-explore/">http://knowledge.autodesk.com/support/autocad/learn-explore/</a><br>3. Andrzej Pikoń: AutoCAD. Pierwsze kroki. Helion.<br>4. Andrzej Jaskólski: AutoCad. Kurs projektowania parametrycznego i nieparametrycznego w 2D i 3D. PWN. |                               |
|  | Supplementary literature   | any AutoCAD manual  |                               |
|  | eResources addresses   | Adresy na platformie eNauczanie:  |                               |
| Example issues/<br>example questions/<br>tasks being completed | Final test consists of redrawing a given figure and performing a number of specific tasks such as adding dimensions or printing the figure |   |                               |
| Work placement   | Not applicable   |   |                               |