## STUDY MODULE DESCRIPTION FORM

| Name of the module/subject **Engineering Drawing and CAD** | | Code **1010101221010134899** |
|---|---|---|
| Field of study **Environmental Engineering First-cycle Studies** | Profile of study (general academic, practical) **(brak)** | Year /Semester **1 / 2** |
| Elective path/specialty **-** | Subject offered in: **Polish** | Course (compulsory, elective) **obligatory** |

| Cycle of study: **First-cycle studies** | Form of study (full-time,part-time) **full-time** |
|---|---|

| No. of hours | | | | No. of credits |
|---|---|---|---|---|
| Lecture: **-** Classes: **-** Laboratory: **-** Project/seminars: **30** | | | | **2** |

| Status of the course in the study program (Basic, major, other) **(brak)** | (university-wide, from another field) **(brak)** |
|---|---|

| Education areas and fields of science and art | ECTS distribution (number and %**)** |
|---|---|
| **technical sciences** | **2 100%** |
| **Technical sciences** | **2 100%** |

### Responsible for subject / lecturer:

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### Prerequisites in terms of knowledge, skills and social competencies:

| 1 | **Knowledge** | Basic knowledge about Windows operating system. |
|---|---|---|
| 2 | **Skills** | Ability to use PC and Windows operating system. |
| 3 | **Social competencies** | Awareness of the need to constantly update and supplement knowledge and skills. |

### Assumptions and objectives of the course:

Learning the skills necessary to prepare 2D drawings using AutoCAD.

### Study outcomes and reference to the educational results for a field of study

**Knowledge:**

1. Basic and intermediate knowledge about AutoCAD interface - [K_W07]
2. Different methods of data input during object drawing - [K_W07]
3. Methods of modifying objects - [K_W07]
4. How to create and modify layers - [K_W07]
5. Methods of precise drawing - [K_W07]
6. Additional commands for navigating and creating drawings - [K_W07]
7. Knowledge about basic program preferences - [K_W07]
8. How to add and edit comments - [K_W07]
9. How to add and edit dimensions - [K_W07]
10. How to print - [K_W07]

**Skills:**

| |
|---|
| 1. Using program interface  - [K_U01] |
| 2. Drawing and modifying objects  - [K_U01] |
| 3. Working with layers  - [K_U01] |
| 4. Using different tools for precision drawing  - [K_U01] |
| 5. Using additional tools for working with drawings  - [K_U01] |
| 6. Editing program preferences  - [K_U01] |
| 7. Adding and editing comments  - [K_U01] |
| 8. Adding and editing dimensions  - [K_U01] |
| 9. Printing  - [K_U01] |

**Social competencies:**

| |
|---|
| |

### Assessment  methods of study outcomes

Test drawings during the course.

### Course description

Basics of using AutoCAD: program interface, working with 2D drawings, coordinates, layers, drawing and modifying objects, comments, dimensions, additional tools, printing, changing preferences.

### Basic bibliography:

1. Andrzej Pikoń AutoCAD 2006 i 2006 PL Helion Gliwice 2006

2. Andrzej Pikoń AutoCAD 2007 PL Helion Gliwice 2007

### Additional bibliography:

1. Janusz Graf AutoCAD 2005 i 2005 PL. Ćwiczenia praktyczne. Helion Gliwice 2005

2. Mirosław Babiuch AutoCAD 2007 i 2007 PL. Ćwiczenia praktyczne. Helion Gliwice 2007

### Result of average student's workload

| Activity | Time (working hours) |
|---|---|
| 1. Participation in classes | 30 |
| 2. Participation in consultations | 2 |
| 3. Additional assignments | 20 |

### Student's workload

| Source of workload | hours | ECTS |
|---|---|---|
| Total workload | 50 | 2 |
| Contact hours | 32 | 1 |
| Practical activities | 50 | 1 |