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 **technical sciences** **Technical sciences**	ECTS distribution (number and %**)** **2 100%** **2 100%**

Responsible for subject / lecturer:	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. Additional assignments	15

Student's workload

Source of workload	hours	ECTS
Total workload	45	2
Contact hours	30	1
Practical activities	15	1