MODULE INFORMATION SHEET

Name of Module Unit	**Technical Drawing**
Name in polish language	Rysunek techniczny
Module type	compulsory
Form of studying	full-time day courses
Level of study	undergraduate course (B.Sc. level)
Type of study (for extra-mural courses)	-
Programme	Environmental Engineering
Speciality	Environmental Engineering
Responsible department	Department of Hydro-Engineering and Hydraulics
Responsible person	Agnieszka Machowska, PhD Eng., Paweł Falaciński, PhD Eng.

Semester	Lectures(E)	Tutorials	Laboratory	Computer Exercises	Projects	ECTS
1					15	2

Objectives (summary)

The objectives of Technical Drawing course are:

- to enable students to understand the role of technical drawing in the design process and to make and interpret structural drawing,
- to introduce basic rules of structural drawing (paper formats, scale, types of lines, sectioning, lettering thechniques, dimensioning),
- to introduce projection theory and its use to make required views of objects (revolution, multiview projections),
- to enable students to solve simple geometric problems with means of graphical techniques.

Prerequisites

Basic knowledge of *plane geometry*: triangles; regular polygons; parallelism and perpendicularity; constructions by using a ruler and compasses involving straight lines and circles (particularly tangents to circles).
Elementary knowledge of 3*D-space geometry*: straight lines, planes and relationships; dihedral angles; distances; parallelism and perpendicularity in the space; prisms; pyramids; regular polyhedrons.

Rules of integrated grade setting

Weighted mean of results obtained in the final test (weight: 0,2), project (weight: 0,5) and homeworks (weight: 0,3)

Recommended readings

[1] Giesecke F.E., and others: *Technical Drawing* Pearson Education International, USR, NJ, 2003
[2] Bielefeld B., Skiba I.: *Basics of Technical Drawing* Publishers for Architecture, Berlin 2007

Contents of guided projects

	Topics	Time (hrs.)	Scope (S / Ex)
1	Basic information concerning subject's completion, required materials, references, regulations.	2	S
2	Paper formats, scales, types of lines, sectioning, lettering techniques. Work in class. Homework.	2	S
3	Dimensioning principles. Work in class. Homework.	2	S
4	Revolution and multiview projection. Work in class. Homework.	2	S
5	Principles of making an architectural and structural drawing. Elements of construction law. Reading technical documentation, details of: sewerage, central heating, air conditioning and water-supply system.	2	S/Ex
6	Review of vertical and horizontal projections of a selected building.	2	S/Ex
7	Review of an obligatory structural drawing.	2	S/Ex
8	Final test and submission of obligatory structural drawing.	1	S
	Total	**15**	**hours**

S – topics listed in the legal study programme standards from 12.07.2007
Ex – extended topics

Persons responsible for guided projects

Agnieszka Machowska, PhD Eng., Paweł Falaciński, PhD Eng.

Assessment method for guided projects

It is based on:
· results of written test of engineering geometry
· grading of all obligatory drawings concerning studied projects
· participation in classes