MODULE INFORMATION SHEET

Name of Module Unit	**Building Heating Systems II**
Name in Polish language	Instalacje cieplne w budynku II
Module type	elective
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 Air Conditionnig and Heating
Responsible person	dr inż. Michał Strzeszewski

Semester	Lectures (E)	Tutorials	Laboratory	Computer Exercises	Projects	ECTS
7	15				30	3

Objectives (summary)

The main purpose of the course is extending the knowledge and skills of students in the area of heating systems design and their modernization.

Prerequisites

Physics, Thermodynamics, Heat Transfer, Fluid Mechanics, Civil Engineering and Constructions, Building Heating Systems I.

Rules of integrated grade setting

Arithmetic average of the grades from lectures and guided project.

Recommended reading

Siegenthaler J.: *Modern Hydronic Heating*. Delmar Publishers. 1995.

Petitjean R.: *Total Hydronic Balancing. A Handbook for Design and Troubleshooting of Hydronic HVAC Systems*, Tour & Andersson Hydronics AB, Valve Division, Ljung, Sweden, 1994.

Contents of lectures (syllabus)

	Topics	Time (hrs.)	Scope (S / Ex)
1	Design of complex heating systems	3	
2	Design of surface heating systems	6	
3	Adjustment of existing heating systems	2	
4	Designs for modernisation of heating systems	2	
5	Theoretical test	2	
	Total	**15**	**hours**

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

Lecturers

dr inż. Michał Strzeszewski

Assessment method

Theoretical test.

Contents of guided projects

	Topics	Time (hrs.)	Scope (S / Ex)
1	Design of complex heating systems	6	
2	Design of surface heating systems	14	
3	Adjustment of existing heating systems	4	
4	Designs for modernisation of heating systems	4	
5	Computational test	2	
	Total	**30**	**hours**

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

Persons responsible for guided projects

dr inż. Michał Strzeszewski

Assessment method for guided projects

Computational test and design assessment.