STUDY MODULE DESCRIPTION FORM

Name of the module/subject **Preparation for research**		Code **1010135241010108606**
Field of study **Enviromental Engineering Extramural Second-**	Profile of study (general academic, practical) **(brak)**	Year /Semester **2 / 4**
Elective path/specialty **Heating, Air Conditioning and And**	Subject offered in: **Polish**	Course (compulsory, elective) **obligatory**
Cycle of study: **Second-cycle studies**	Form of study (full-time,part-time) **part-time**	
No. of hours Lecture: **-** Classes: **10** Laboratory: **-** Project/seminars: **-**		No. of credits **16**
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 %) **16 100%** **16 100%**

Responsible for subject / lecturer:

dr hab. inż. Małgorzata Basińska
email: malgorzata.basinska@put.poznan.pl
tel. (61) 647 5824
Faculty of Civil and Environmental Engineering
ul. Piotrowo 5 60-965 Poznań

Prerequisites in terms of knowledge, skills and social competencies:

1	**Knowledge**	Basic knowledge (engineering level) - obtained within the scope of the subjects taught and the part-time degree in Environmental Engineering.
2	**Skills**	The skills acquired in the course of time studies degree - design, construction and operation of installations in buildings and external networks in the field of environmental engineering.
3	**Social competencies**	Ability to work independently.

Assumptions and objectives of the course:

Preparing students to carry out the master thesis.

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

Knowledge:

1. The student has the knowledge gained in the current process of education that is necessary for the preparation of master work to the extent specified in the subject of the thesis (individual work) - [K_W03, K_W04, K_W07]

2. The student has knowledge of the methods of solving technical problems problems (obtained on individual consultations with the promoter and individual work) - [K_W07]

Skills:

1. The student is able to formulate the thesis work, select and apply the appropriate method of solution of the problem and to draw conclusions on the basis of the collected material problems (obtained on individual consultations with the promoter and individual work) - [K_U12, K_U14]

2. Student use of information technology, Internet resources and other sources to find the information necessary for the preparation of a thesis problems (obtained on individual consultations with the promoter and individual work) - [K_U01, K_U07]

Social competencies:

1. The student is aware the need to raise professional competence problems (obtained on individual consultations with the promoter and individual work) - [K_K01]

2. Student is able to draw conclusions and describe the results of their own problems (obtained on individual consultations with the promoter and individual work) - [K_K04]

3. Student complements and extends knowledge of modern techniques, processes and technologies in environmental engineering problems (obtained on individual consultations with the promoter and individual work) - [K_K01, K_K07]

Assessment methods of study outcomes
Consultations - checking progress, factual correctness, the degree of progress of the thesis. The evaluation of the thesis supervisor issues. Positive mark - fulfilling the requirements of diploma thesis. (study outcomes: W3,W4,W7,U1,U7,U12,14,K1,K4,K7)
Course description
Course description: Program content compatible with the tasks detailed in the tab thesis topic. Method of education: classic, case study.
Basic bibliography: 1. Technical Books in line with the theme of work 2. Polish and European technical standards and construction
Additional bibliography:

Result of average student's workload

Activity	**Time (working hours)**
1. Direct consultation with the promoter (direct hours)	10
2. Preparation of thesis and scientific research (indywidual works)	300
3. Preparation of the diploma thesis (practical hours)	170

Student's workload

Source of workload	**hours**	**ECTS**
Total workload	480	16
Contact hours	10	1
Practical activities	170	15