STUDY MODULE DESCRIPTION FORM

Name of the module/subject **Diploma Seminar**		Code **1010634181010630467**
Field of study **Mechanical Engineering**	Profile of study (general academic, practical) **(brak)**	Year /Semester **4 / 8**
Elective path/specialty **Thermal Engineering**	Subject offered in: **Polish**	Course (compulsory, elective) **obligatory**
Cycle of study: **First-cycle studies**	Form of study (full-time,part-time) **part-time**	
No. of hours Lecture: **-** Classes: **-** Laboratory: **-** Project/seminars: **18**		No. of credits **15**
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**		ECTS distribution (number and %) **15 100%**

Responsible for subject / lecturer:

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Prerequisites in terms of knowledge, skills and social competencies:

1	**Knowledge**	Basic knowledge of the basics of writing papers and reports in the field of mechanics
2	**Skills**	Ability to present description and calculation of thermodynamic processes and simple conversion circuits thermal and mechanical energy.
3	**Social competencies**	He is aware of the need to broaden their competence, willingness to cooperate within the team and documenting their dissertations.

Assumptions and objectives of the course:

Introduction to basic principles of writing and presenting papers on dissertations. Mastering the skills of drafting studies and reports documenting theses.

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

Knowledge:

1. Has a knowledge of physics, including the basics of classical mechanics, optics, electricity and magnetism, solid state physics, quantum and nuclear physics, necessary to understand the specialized lectures on the theory of structural materials and materials science, the theory of machines and mechanisms, theory of electrical drives and mechatronic systems. - [K1A_W02]

Skills:

1. Is able to prepare technical documentation (descriptive and graphic) of an engineering task. - [K1A_U04 K1A_U05 K1A_U03]

2. Is able to perform rudimentary technical calculations in fluid mechanics and thermodynamics, such as heat and mass balance, pressure loss in pipes, selected parameters of blowers and fans in ventilation and transportation systems, calculate the thermodynamic flows in thermal machines. - [K1A_U17]

Social competencies:

1. Is able to freely use an international language in contacts with professionals from the same field of study. - [K1A_K01 K1A_K02 K1A_K04]

Assessment methods of study outcomes

seminar
? Continuous assessment for each course, rewarding activity and quality perception.
? Rewarding increase skills have met the principles and methods
? assessment of the progress of the thesis,
? assessment of knowledge and skills related to the implementation of the thesis,
? favoring the knowledge necessary to implement the problems arising in the implementation of labor

Get extra points for the activity in the classroom, especially for:
? proposing discussion of additional aspects of the subject;
? the effectiveness of applying knowledge when solving a given problem;

Course description

Genesis engineering dissertations topics - the role of the promoter. Sources of scientific and technical information and ways to use them. Formulating hypotheses. Models and modeling. Elements of scientific language: regularities, laws, theories, principles. The structure of the thesis. The technique of writing scientific papers - the principle of editorial. Preparation for the final exam.

Basic bibliography:

1. Mechanika płynów, Zbiór zadań z rozwiązaniami pod redakcją Michała Ciałkowskiego
2. Hobler T.: Ruch ciepła i wymienniki, WNT 1979
3. Staniszewski B. Red.: Wymiana ciepła ? zadania i przykłady, PWN 1965
4. Wiśniewski St., Wiśniewski T.: Wymiana ciepła, WNT 1997
5. T. Chmielniak, Technologie energetyczne, WNT, 2008

Additional bibliography:

Result of average student's workload

Activity	Time (working hours)
1. Preparing to lecture	100
2. Participation in the lecture	15
3. Preparing project	230
4. Consultation	12
5. Preparing for exam	12
6. Participation in the exam	2

Student's workload

Source of workload	hours	ECTS
Total workload	371	15
Contact hours	29	1
Practical activities	371	15