STUDY MODULE DESCRIPTION FORM

Name of the module/subject **Computer-Aided Design of Electromechanical Devices**		Code **1010324391010324797**

Field of study **Electrical Engineering**	Profile of study (general academic, practical) **(brak)**	Year /Semester **5 / 9**

Elective path/specialty **Electrical Systems in Mechatronics**	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				No. of credits **2**
Lecture: **-**	Classes: **-**	Laboratory: **9**	Project/seminars: **9**	

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:

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Prerequisites in terms of knowledge, skills and social competencies:

1	**Knowledge**	Basic knowledge of electrical engineering, electrical machines and system Windows.
2	**Skills**	Basics of engineering structures at a general level. Ability to effectively self-education in a field related to the chosen field of study.
3	**Social competencies**	The need to broaden their competence, willingness to work together as a team.

Assumptions and objectives of the course:

The ability to correctly formulate the task of synthesis and analysis of the technical object, the implementation of selected stages of the design process. Acquisition of computer skills of technical design representation in two-and three-dimensional systems.

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

Knowledge:

1. Basic knowledge of the graphic representation of the structure, knows the rules of the projection, creating sections, dimensioning engineering applications - [K_W17 ++]

Skills:

1. He can formulate an algorithm uses a programming language and related software tools used in electrical engineering - [K_U04 +]

2. The use of properly chosen development environments, simulators and software tools to support the design serving to simulate, design and analysis of simple electrical circuits. - [K_U13 ++]

Social competencies:

1. Ability to act in an entrepreneurial manner in the area of ??electrical engineering - [K_K04 ++]

Assessment methods of study outcomes

Project:

- checking and favoring the knowledge necessary to carry out the set of problems

- evaluation based on the current progress of the projects in the form of computer projects

- continuous evaluation for each course - rewarding gain skills students met the principles and methods.

Get extra points for the activity in the classroom, and in particular for:

- propose to discuss further aspects of the subject;

- the effectiveness of the application of the knowledge gained during solving the given problem;

- comments related to the improvement of teaching materials.

Course description

Labs with multimedia presentations, projects - analysis of various methods to solve the problem. The implementation of the project tasks using AutoCAD system. The use of computer systems in the design of electromagnetic actuators. Issues two-dimensional and three-dimensional structures in computer recording technology.

Basic bibliography:

1. Jaskulski A. Autocad 2016 / LT2016 / 360 +. Kurs projektowania parametrycznego i nieparametrycznego 2D i 3D, Wydawnictwo Naukowe PWN SA, Warszawa 2015

2. Folęga P.,Wojnar G., Czech P.; Zasady zapisu konstrukcji Maszyn, Wydawnictwo Politechniki Śląskiej, Gliwice 2014.

3. Chlebus E. ? Techniki komputerowe CAx w inżynierii produkcji, WNT, Warszawa 2000.

4. Dąbrowski M. Projektowanie maszyn elektrycznych prądu przemiennego, WNT, Warszawa 1994.

5. AUTOCAD system documentation.

Additional bibliography:

1. Documentation CAD programs available on the web pages.

Result of average student's workload

Activity	Time (working hours)
1. participation in laboratory classes	9
2. participation in project activities	9
3. participation in the consultation	10
4. project preparation activities	22
5. participation in the passing tests	4

Student's workload

Source of workload	hours	ECTS
Total workload	54	2
Contact hours	32	1
Practical activities	50	2