

| STUDY MODULE DESCRIPTION FORM | | |
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| Name of the module/subject Diploma seminar | | Code 1010325341010320081 |
| Field of study Electrical Engineering | Profile of study (general academic, practical) general academic | Year /Semester 2 / 4 |
| Elective path/specialty Electrical Systems in Mechatronics | 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: - Laboratory: - Project/seminars: 18 | | No. of credits 13 |
| Status of the course in the study program (Basic, major, other) other | | (university-wide, from another field) university-wide |
| Education areas and fields of science and art technical sciences Technical sciences | | ECTS distribution (number and %) 13 100% 13 100% |
| Responsible for subject / lecturer: dr hab. inż. Rafał Wojciechowski email: Rafał.wojciechowski@put.poznan.pl tel. +48 61 665 2396 Elektryczny ul. Piotrowo 3A, 60-965 Poznań | | |
| Prerequisites in terms of knowledge, skills and social competencies: | | |
| 1 | Knowledge | Elementary knowledge of the design and the analysis and synthesis of electromechanical converters and measurement methods used in mechatronics |
| 2 | Skills | Support programs for the numerical analysis of electromechanical converters at a basic level, skills in perform basic measurements of electrical and electromechanical, ability to effectively self-education in a field related to the chosen field of study |
| 3 | Social competencies | Ability to teamwork and verbal communication, the awareness of the need to broaden their skills and knowledge |
| Assumptions and objectives of the course: Harnessing modern testing methods, design and analysis of actuators for automatic control and mechatronics, and electromagnetic and electromechanical devices. | | |
| Study outcomes and reference to the educational results for a field of study | | |
| Knowledge: 1. Student will have knowledge about progress trends and major achievements related to the electrical engineering - [K_W04++] 2. Student will have structured and theoretically based knowledge related to design of devices and electrical systems - [K_W05+] | | |
| Skills: 1. Student knows how to prepare and present presentation/information related to progress of design or research task, is ready to perform discussion about presentation - [K_U04++] 2. Student knows how to acquire information from available literature, data bases and other sources, has skills to integrate obtained information and is ready to interpret knowledge, evaluate and draw proper conclusions. - [K_U01+] | | |
| Social competencies: 1. Student is prepared to think in creative and enterprising way - [K_K01+] | | |
| Assessment methods of study outcomes | | |

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| seminar: ? evaluation based on the presentation and the results of the work carried out, ? assess the knowledge and skills needed to carry out engineering work item, ? the effectiveness of the application of knowledge in problem solving, ? continuous evaluation for each course: student activities, increase their knowledge and skills. | | |
| Course description | | |
| Computer-aided design of electromagnetic and electromechanical converters. Unconventional electromechanical converters. Simulation of operating modes of selected machines. Analysis of the electromagnetic field in selected electromagnetic devices. Measurement stand to study phenomena in transformers and mechatronic systems. Discussion on the research activities in Division of Mechatronics and Electrical Machines of PUT. Reports on student research projects. | | |
| Basic bibliography: 1. Paper and books related to the subject of diploma work. | | |
| Additional bibliography: | | |
| Result of average student's workload | | |
| Activity | Time (working hours) | |
| 1. participation in seminar classes | 30 | |
| 2. participate in the consultations on the seminar | 100 | |
| 3. preparing presentations | 73 | |
| 4. implementation of thesis | 177 | |
| Student's workload | | |
| Source of workload | hours | ECTS |
| Total workload | 380 | 13 |
| Contact hours | 150 | 5 |
| Practical activities | 177 | 6 |