SPECIALIZATION
Drive Systems in Industry and Electromobility

Electrical Engineering
Faculty of Control, Robotics & Electrical Engineering

DRIVE SYSTEMS IN INDUSTRY AND ELECTROMOBILITY

Supervisor:

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More informations:

www.iee.put.poznan.pl (Institute of Electrical Engineering and Electronics)

zmime.put.poznan.pl (Department of Mechatronics and Electrical Machines)

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General information:

Classes within the Module are carried out by researchers of the Division of Mechatronics and Electrical Machines of the Institute of Electrical Engineering and Electronics at Poznan University of Technology.

As part of this specialization, students will familiarize themselves with:

- control and operation of electrical drive systems as well as electromagnetic devices in automation and robotics systems,
- the use of computers in modelling, designing and testing drive systems with the use of professional software, i.e.: Ansys, Comsol, Motor Solve, CAD, Inventor and others,
- computer methods of simulating operating states and designing, testing and diagnosing electrical machines and automation actuators,
- computer and microprocessor techniques in an area of electromobility.

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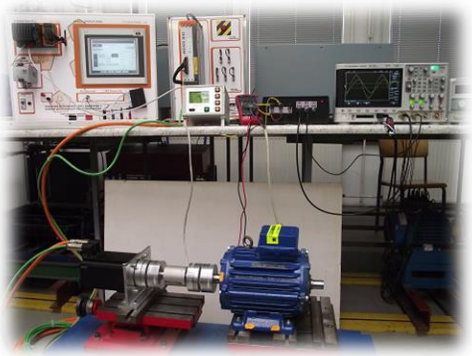
Subjects offered within the specialization:

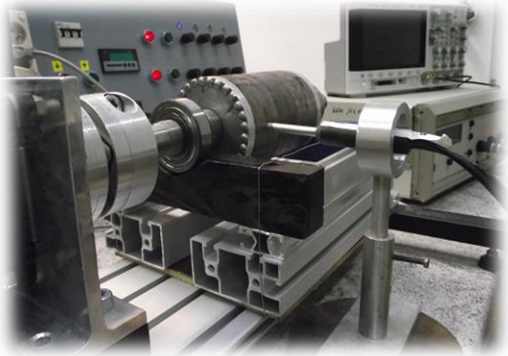
Semester 1:

- Testing of electric drive systems

Semester 2:

- Optimization methods in electromagnetic devices design
- Design of converters and electric drives
- Diploma seminar





Semester 3:

- Data analysis and visualization
- Automation of electric propulsion systems
- Exploitation and diagnostics of drive systems
- Diploma seminar
- Diploma project
- Preparation of master's thesis

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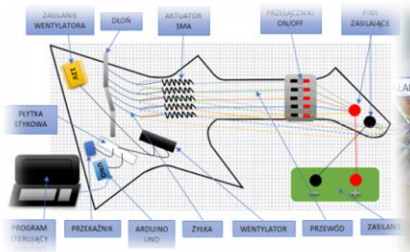
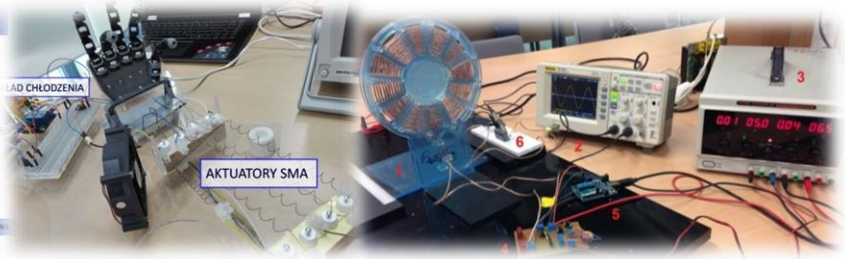
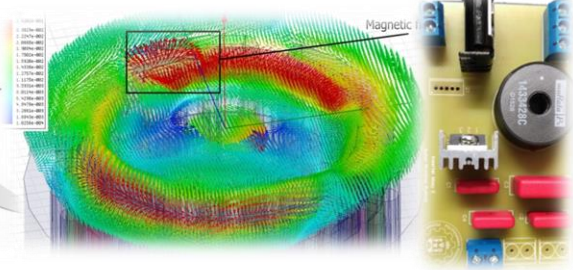
Topics for diploma theses:

- Analysis and testing of operating states of electrical machines and transformers,
- Signal analysis and decision support in the diagnosis of drive systems using machine learning methods,
- Design, construction and programming of mobile robots,
- Design and analysis of the properties of automation actuator systems using intelligent materials,
- Design and analysis of power supply systems for wired and wireless power transfer systems,
- Design and analysis of magnetostrictive transducers,
- Programming of microaircraft control systems,
- Other topics resulting from the student's interests or projects proposed by the future employer


See more at: www.creef.put.poznan.pl

Employment opportunities after graduation:

- advisor in scientific and technical centers and design offices,
- designer and programmer in companies providing services in the field of specialized software,
- engineer of the control and maintenance department in production plants of automation, electronics and electrical engineering,
- specialist in offices of companies producing and using electromagnetic and power electronic converters and control systems,
- professional and distributed power engineering equipment service engineer.

Additional information:

- For students of the specialization, we offer training and workshops in the field of designing and operating modern converter systems and electromechanical systems from such companies as B&R Industrial Automation, Lenze Polska or ABB.
- For students interested in studying abroad under the "Erasmus+" program, we offer internships at such universities as: RWTH Aachen, Technical University of Dortmund, Universite de Lille, Universite de Liege and others.
- Students of this specialization can broaden their knowledge and skills, as well as conduct their own scientific and research work as part of the activities of the Student Association "Magnesia".

Attention!

The choice of specialization takes place at the recruitment stage on the day of the qualifying exam.

The candidate indicates a maximum of three specialtizations, with the first one being the highest preference and the third one being the lowest.

Choosing your preferences does not mean being assigned to a selected specialization.

The final allocation will be made not only on the basis of the preferences indicated by the candidate, but also taking into account the ranking list determined according to the result of the qualifying exam, the specializations opened and the numerosity of the created groups.

Not every specialization has to be opened, it depends on the number of students admitted to the studies. The condition for starting a specialization is that at least 15 students are assigned to it.

Lists of assignments to specializations will be available on the faculty website 3 days before the start of the first semester of studies.