Cracow University of Technology
80th Anniversary

Faculty of Electrical and Computer Engineering
50th Anniversary

SUMMER SCHOOL

Design and Analysis of AC electrical machines and Entrepreneurship in Sustainable Transportation

The summer school is aimed at undergraduates and graduates of second-cycle and unified master's degree programs, doctoral schools and people working on the problems of design and modeling of AC electrical machines.

Planned training date: July 7 to 11, 2025

Place: Faculty of Electrical and Computer Engineering, Tadeusz Kosciuszko Cracow University of Technology, Warszawska 24, 31-155 Cracow

Duration: 5 days, a total of 30h of teaching conducted in English in the form of lectures and computer labs.

Lecturers:

- Prof. Claudia-Steluța Martis (Technical University of Cluj-Napoca)
- Assoc. Prof. Anca Constantinescu–Dobra (Technical University of Cluj-Napoca)

Cost of participation: 960 PLN ~ 225 EUR

DATES

Deadline for receipt of applications:
July 1, 2025

Signing of an agreement on the terms and conditions for charging fees for summer school:
July 4, 2025

Payment of fee:
July 4, 2025

DETAILS

VISIT WEBSITE FOR MORE INFOMATION

Course director:
Jaroslaw Tulicki, PhD
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Registration:
Grażyna Skuza
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Financial support
Anna Lukasik, M.Sc.,
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COURSE OUTLINE

	Day I	Day II	Day III	Day IV	Day V
	7 VII 2025	8 VII 2025	9 VII 2025	10 VII 2025	11 VII 2025
8:30-9:00	Welcome Session • Opening remarks by the organizers • Overview of the Summer School programme • Practical information for participants w				
9:00-11:15	General Aspects of AC Electrical Machines - Electromagnetic fields - Windings - Magnetic circuits	Comparative Analysis: Induction vs. Synchronous Machines - Topologies and operation - Applications and characteristics	Machine Modeling - Comparative analysis: induction vs. synchronous machines (continued)	Special Electrical Machines - Power and torque in synchronous machines - Topologies and operation	Advanced Design Approaches - Multiphysics and multilevel approach in machine design and analysis
11:15-12:15	Break	Break	Break	Break	Break
12:15-15:15	Introduction to Entrepreneurship for Sustainable Transportation (group work) - Entrepreneurial mindset – leadership, management, coaching - The Propeller Method - From market problems to solutions – idea generation	Effective Entrepreneurial Teams - Setting SMART objectives - Steps to build effective teams - Group work on achieving a business goal	Market and Customer Analysis - Value proposition - Competition analysis - Strategic market positioning - Target segments & market segmentation - Client analysis & persona model - Group work: defining and describing target markets	Marketing and Funding Strategies - Promotional strategy - Integrated communication: advertising, promotion, PR, direct sales - Group work: development of a promotional campaign - How to finance a business idea?	Final Presentations - Team project presentations - Business idea pitch with investment offer
15:15-16:00					Closing Ceremony -Summary of the programme -Completion of the evaluation survey by participants regarding the instructor's performance and organization of the sessions - Presentation of certificates of completion - Final remarks and group photo