



Programme description

The Green Energy study course was created for students who want to receive an engineering education corresponding to the needs of sustainable development and the growing role of problems related to ecological production, transmission, distribution, and use of energy. The energy systems of many countries will change significantly in the coming years, and their sustainability will prove to be extremely important in environmental, economic, and social terms. Green Energy graduates are specialists who will be prepared to lead green transformation around the world.

The education of a graduate of Green Energy is based on technical knowledge in the field of electrical power engineering, thermal technology, economics, and environmental engineering.

Master studies in Green Energy last three semesters starting in February each year. The first semester is partly devoted to improving the basic knowledge in green energy for candidates studying abroad and those students who (at bachelor level) studied majors different from energy, electric power engineering, thermal engineering, and environmental engineering to reach standards defined by the Ministry of Education and Science. Regular courses focus on issues related to green and renewable energy, environmental protection, and electric power engineering. Classes on modeling and simulation are also included. The students have also the possibility to select elective courses during their studies, e.g., European Union Strategies in Energy Supply, Energy and Buildings, or others.

Green Energy graduates are prepared to work in companies operating in the field of energy systems and institutions related to the production, processing, transmission, and distribution of energy, as well as energy management in industry and construction. They have knowledge and skills in the field of advanced technologies and methods of researching processes and the operation of devices used in the broadly understood energy sector in the field of renewable energy, but also conventional energy sources, as well as the use of energy in construction to ensure thermal comfort.

Green Energy graduates are prepared to carry out design tasks and control processes and devices used in the energy and related industries. They also have the knowledge and skills necessary to conduct research on the modernization and implementation of processes and new technologies in the broadly understood energy sector, as well as to set up and manage small businesses.

Course summary:

Semester 1

- Numerical Methods
- Thermodynamics
- Fluid Mechanics
- Power Plants and Heat Power Plants
- Nuclear Power Engineering
- Environmental Engineering
- Renewable Energy Sources
- Humanistic-Social Subject I
- Biotechnology for Biorefineries
- Design of Lightning and Surge Protection Systems

Semester 2

- Foreign Languages
- Heat Exchange
- Turbomachinery
- Numerical Thermomechanics
- Advanced Power Generation Technology
- Humanistic-Social Subject II
- Humanistic-Social Subject III
- Modern Technologies in the Transmission and Distribution of Electricity
- Elective Course 1 – 1. European Union Strategies in Energy Supply, 2. Energy security
- Elective Course 2 – 1. Data analysis and Visualisation, 2. Databases
- Renewable Energy Project Management
- Diploma Seminar

Semester 3

- Devices Diagnostics
- Exergy Analysis
- Building Information Modeling
- Elective Course 3 – 1. Building Performance Modeling and Simulation, 2. Energy and Buildings
- Management and Control Systems for Energy-Efficient Buildings
- Diploma Seminar
- Preparation of the Thesis Work



Green Energy

University	Poznan University of Technology Poznan, POLAND
Degree to be obtained	Master of Science
Programme website	https://www.put.poznan.pl/en
Contact	International Relations Office Piotrowo 5 61-138 Poznan, Poland
Phone	+48 61 665 3544
Fax	+48 61 665 3956
E-mail	study@put.poznan.pl
Language of instruction	English
ECTS points	90
Duration	1.5 years (3 semesters)
Programme begins	end of February
Programme ends	end of June
Deadline for application	3 months before the course starts – end of November
Education requirements	English language – level B2 (Common European Framework), Bachelor of Science degree (or equivalent). Full list of the required documents is available at: https://www.put.poznan.pl/en
Mode of instruction	Lectures, classes, laboratory classes, projects

