



Composites and Nanomaterials

Field of study: Chemical Technology



Programme description

Master studies in Chemical Technology – Composites and Nanomaterials last for three semesters starting in February each year. The first semester is partly devoted to amend the basic knowledge in chemical technology for candidates studying abroad and those persons who at their bachelor level, studied directions different from chemical technology to reach standards defined by the Ministry of Science and Higher Education. Regular courses contain physical and inorganic chemistry, engineering of materials and chemical reactors, technology of polymers, processing of nanomaterials and composites. Classes on modelling and simulation are included. Laboratory classes allow to perform synthesis and detailed characterization of composites together with their various practical application using the specific physical, mechanical and electrochemical properties. Ecology and recycling is also in the programme as well as advanced materials for generation and storage of energy. The students have also a possibility to select elective courses during studies, e.g. biotechnology, medical aspects and others.

A graduate receives the title – Master of Science in Chemical Technology. He/she is prepared to perform research and development in the discipline of his/her education, i.e. chemical technology, especially in Composites and Nanomaterials. A graduate can be employed in research and industry where the knowledge of advanced materials is required. His/her competence will be synthesis, characterization, processing and application of composites and nanomaterials taking into account environmental protection. He/she is prepared to undertake doctoral studies. His/her English knowledge allows easy exchange of experience, communication, direct interpersonal contacts and fluent formulation of documentations and/or specifications.

Course summary:

Semester 1

- Engineering of Chemical Reactors
- Modelling and Simulation
- Selected Aspects of Modern Chemistry
- Polymers
- Applied Rheology
- Processing of Polymeric Materials
- Nanocarbons and Carbon/Polymer Composites
- Engineering of Nanoporous Materials

Semester 2

- Surface Phenomena and Catalysis
- Introduction to Biotechnology
- Environmental Protection and Green Chemistry
- Recycling of Materials
- Polymers
- Advanced Materials for Generations/Storage of Energy
- Hybrid Materials and Fillers
- Characterization Techniques of Materials
- Biomaterials

Semester 3

- Eligible Subject
- Technological Project
- Diploma Laboratory
- Diploma Seminar



Composites and Nanomaterials

Field of study: Chemical Technology

University	Poznan University of Technology Poznan, POLAND
Degree to be obtained	Master of Science
Department	Faculty of Chemical Technology
Address	Piotrowo 3 60-965 Poznan Phone: +48 61 665 2352 Fax: +48 61 665 2852
Programme web site	http://www.put.edu.pl/
Contact	Lifelong Learning and International Education Office Pl. M. Skłodowskiej-Curie 5 60-965 Poznan
Phone	+48 61 665 35 44
Fax	+48 61 665 39 56
E-mail	study@put.poznan.pl
Language of instruction	English
Tuition fee	EU citizens: free of charge NON-EU citizens: 2000 EUR per year
Registration fee	EU citizens: 85 PLN NON-EU citizens: 200 EUR
ECTS points	90
Duration	1,5 years (3 semesters)
Programme begins	end of February
Programme ends	end of June
Deadline for application	2 months before the course starts – end of December
Education requirements	English language – level B2 (Common European Framework), Bachelor of Science degree (or equivalent). Full list of the required documents is available at http://www.put.edu.pl/
Mode of instruction	Lectures, classes, laboratory classes, projects, internships

