



Politechnika Łódzka

Published on *Politechnika Łódzka - Rekrutacja* (<https://rekrutacja.p.lodz.pl>)

Organizational unit running the field of study:

Faculty of Chemistry

Cycle of study:

First-cycle

Mode of study:

Full-time (degree programme)

Language of instruction:

Polish

Degree awarded:

Bachelor of Science

Duration of study:

3,5 years

Description of the field of study:

Application of nanomaterials have long gone beyond advanced space, military or aircraft technologies. More and more, polymer nanomaterials are used in medicine, automotive industry, pharmaceutical, cosmetic, electronic and many other industries. One would not err by claiming that nanoengineering and molecular engineering will become the foundation of technology in the 21st century. The objective of education in this field of study is to train engineers who will easily operate in various industry sectors as well as will make great employees of research and science organizations of the future. The programme of study embraces courses which provide knowledge in the area of engineering and polymer nanomaterials, synthesis, processing and modification of polymers and polymer nanocomposites used as construction materials. It also covers course dealing with development, synthesis and manufacture of organic and inorganic functional nanomaterials for medical and electronic applications. In the course of the degree, students acquire knowledge and learn skills in the scope of physics, chemistry and information technology and materials science (materials engineering) with special consideration given to polymer nanomaterials. They learn to select the best nanomaterials to suit particular applications and acquire broad knowledge in methods of modification and testing their structure at the nanoscopic scale. Students are introduced to manufacturing and processing technologies of nanomaterials and materials both engineering as well as functional, and technologies of manufacturing and recycling of finished goods.

Specializations:

- functional nanomaterials

- polymeric engineering materials

Graduate profile:

Graduates with a degree in nanotechnology are prepared to use specialized software and computer databases. They have basic knowledge of management and human resources management in industry. Persons who successfully complete the first-cycle degree programme in nanotechnology will be equipped with professional competences which are essential for working at laboratories engaged in nanomaterials synthesis, for operating laboratory apparatus and devices, for investigation basic properties of this type of materials, determining nanomaterials' fitness for purpose. They will be able to monitor and control technological processes in chemical industry connected with the field of nanotechnology. Graduates may also undertake developing methods of synthesis of new nanoscale materials, read data and prepare new documents using engineering graphics software or perform computations that are part of everyday practice for an engineering professional. Graduates with a degree in nanotechnology may be employed in a position of engineer, designer or technologist in industry involving nanotechnologies and/or in chemical and plastics industry or as a research laboratory staff member in academic and industrial research centers in Poland and abroad.

Date of enrolment:

We are not currently recruiting for this field of study

Admission requirements:

- [Admissions calendar](#) [1]
- [Required documents](#) [2]
- [Fees](#) [3]

Source URL: <https://rekrutacja.p.lodz.pl/en/nanotechnologia-first-cycle-faculty-chemistry>

Links

[1] <https://rekrutacja.p.lodz.pl/en/deadlines> [2] <https://rekrutacja.p.lodz.pl/en/documents> [3] <https://rekrutacja.p.lodz.pl/en/tuition-fees>