

Nanotechnology Student Guidebook



**FACULTY OF PHYSICS
AND APPLIED
INFORMATICS**

University of Lodz

Why study Nanotechnology at Faculty of Physics and Applied Informatics, University of Lodz?

Nanotechnology studies are an interdisciplinary program which covers various aspects of physics, chemistry, material science and biology, which are especially important for modern technology as well as the technology of the future. During the studies students have an unique opportunity to gain the understanding at the nanoscale of the phenomena which are crucial for the development of new electronic devices along with enhancing their knowledge of new functional materials dedicated for nanoelectronics, electrotechnics, and medicine.

University of Lodz is one of the highest-ranked institutions in Poland, linking research and teaching activities in the field of physics and astronomy.

Our academic staff responsible for the nanotechnology studies are not only experienced tutors, but they are also active researchers. They understand the latest world wide trends and they are able to prepare you for work in the high technology industry in the future.

The Faculty focuses on the collaboration with industrial partners to familiarize the students with the work style in non-academic institutions and provide the knowledge related to the commercialisation of research.



Study overview

What will you learn?

Nanotechnology studies give an in-depth understanding of the principles of physics, chemistry, biology and material science as well as information technology and programming.

Nanotechnology is 3 year program with two terms per study year with English as the main study language.

During the first year the students take courses which allow them to understand and describe the nanometer world. Those include courses on the basics of physics and chemistry. The program introduces the concepts and terminology used in nanoscience and nanotechnology. Additionally the students gain knowledge in the field of mathematics and statistics.

During the second year the students improve their understanding of the rules governing the nanoworld. The courses cover quantum physics, physical chemistry of surfaces and crystallography. Additionally the students develop their experimental skills of growth and characterisation of nanostructures.

In the last year of the studies the program focuses on the main aspects of application of nanomaterials in the real industrial environment. The

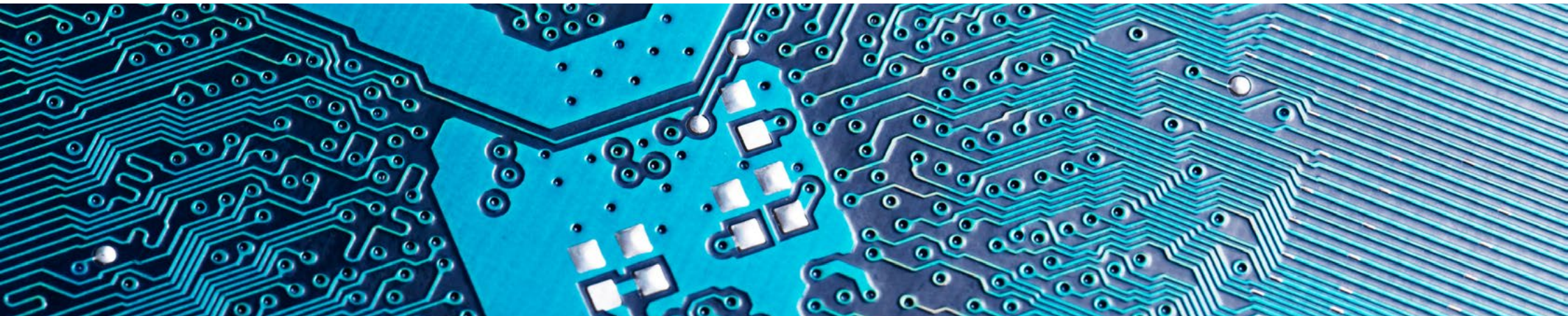
courses expand the knowledge of nanostructures devices particularly based on graphene, nanotubes, nanoparticles, hybrid structures and wide range of molecules.

How will you learn?

You will study through lectures, tutorials, laboratories and projects. All the courses are accompanied by practical classes in a laboratory equipped with state of the art scientific instruments.

Assessment

Students are assessed through examinations, laboratory reports, projects as well as oral presentations. In the final year students prepare their diploma thesis and present it during the final bachelor exam.





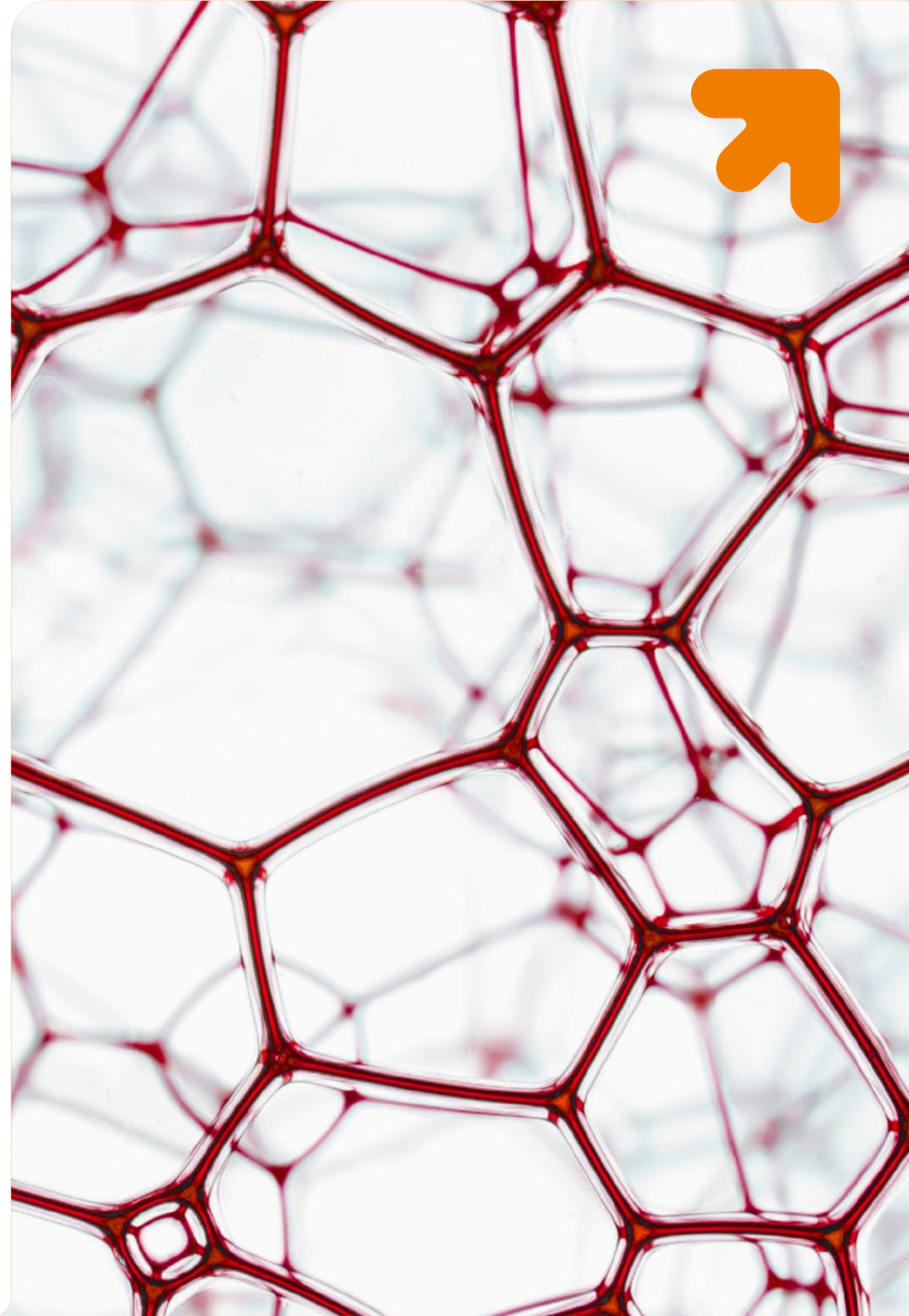
Entry requirements

- a high school diploma
- high school transcript of records showing passed subjects and obtained grades
- a certificate proving adequate English fluency for foreigners unless the secondary education was taught in English are required

For detailed information about the required documents and the admission procedure please visit:

www.iso.uni.lodz.pl/study-in-english/required-documents/

www.iso.uni.lodz.pl



Program information

The students follow four main modules during the study as shown below:

Mathematics-Information Technology Module

Information Technology and Statistics I, Information Technology and Statistics II, Mathematics I, Mathematics II, Mathematics III, Programming 2C ++, Programming 2 java

Physics Module

Physics Foundation of Nanotechnology I, Physics Foundation of Nanotechnology II, Physics Foundation of Nanotechnology III, Introduction to Semiconductor Physics, Physics of Atoms and Molecules, Statistical Physics and Thermodynamics

Chemistry Module

Basic Chemistry for Nanotechnology 1, Basic Chemistry for Nanotechnology 2, Chemistry and Technology of Polymers, Energy Storage, Modern Methods of Total Synthesis, Organic Chemistry with Elements of Biochemistry, Physical Chemistry

Nanotechnology module

Computational Methods in Nanotechnology, Experimental Method in Nanotechnology, Laboratory of Nanotechnology, Nanoelectronics, Nanostructures, Physiochemistry of Surface

Additionally all students are required to attend the diploma seminars, participate in laboratory research projects and finally prepare a bachelor thesis.

Career opportunities

Due to the excellent theoretical background and practical experience, our graduates are considered by employers as high-class experts in the field of Nanotechnology and notably continue their professional careers in chemical and pharmaceutical industries as well as electronic engineering and IT companies.

Additionally the diploma obtained at University of Lodz, one of the most prominent in Poland, gives opportunity for further education in top-ranked scientific institution around the world.

Application deadline: 15 July 2017

Essential information

Studies: Nanotechnology

Entry Requirements: A high school diploma, a transcript of records showing the subjects/grades and a certificate proving adequate English fluency for foreigners (unless the secondary education was taught in English) are required.

www.iso.uni.lodz.pl

Award: Degree of Bachelor of Nanotechnology

Duration: 3 years full time (30 weeks per academic year)

Website: www.wfis.uni.lodz.pl

Location: Faculty of Physics and Applied Informatics, University of Lodz

Tuition: 2500 EUR/year for students from outside the EU/EFTA, exclusive of an additional 120 EUR charge that covers registration fee (for students of Polish origin the tuition is reduced by 50%).

For more details check University of Lodz website

iso.uni.lodz.pl/study-in-English/tuition

Contact

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<http://www.wfis.uni.lodz.pl/wfis-main/?lang=en>

In matters related to the admission
procedure please contact:

International Students Office
University of Lodz

Address: Matejki 21/23 str.

90-237 Lodz

Phone: +48 42 635 42 37

Email: iso@uni.lodz.pl

<http://iso.uni.lodz.pl>



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