



The Master of Science (MSc) in Industrial Pharmacy at the University of Ljubljana has been designed to teach a range of advanced topics to graduates of pharmacy, biology, chemistry, or engineering.

LEARNING OUTCOMES AND CAREER OPTIONS

The Industrial Pharmacy program at the University of Ljubljana is created to prepare students for professional careers in the pharmaceutical industry and scientific research at an advanced level. Graduates of the program may find employment in areas such as drug discovery and development, production, quality control, quality assurance, regulatory affairs, and equipment management.

The program aims:

- ❖ to give students an overview of basic concepts in pharmaceutics and industrial pharmacy,
- ❖ to familiarize them with the complete drug development process,
- ❖ to provide advanced knowledge in pharmaceutical science such as Quality by Design,
- ❖ to develop essential and transferable skills such as analytical problem solving, teamwork, organization, and information communication,
- ❖ to equip students to pursue careers in the pharmaceutical industry or in the life science sector,
- ❖ to give students the advanced knowledge, skills and experience to compete for sought after roles in the pharmaceutical sector.

Students will have the opportunity to visit industrial partners, thus providing them with an insight into the pharmaceutical industry and the various careers available in the industry. Throughout the course, modules are supplemented by guest lectures and workshops provided by experts from pharmaceutical companies and regulatory bodies.

WHY STUDY INDUSTRIAL PHARMACY IN SLOVENIA?

- ❖ The Faculty of Pharmacy in Ljubljana is an internationally recognized academic and research institution, with a high-ranking degree course.
- ❖ Our students have access to a range of state-of-the-art equipment and facilities to help them develop necessary practical skills.
- ❖ The Faculty of Pharmacy provides an excellent environment for students to realize their professional and personal potential, equipping them with competitive knowledge and skills desired by employers.
- ❖ Qualifications obtained at the Faculty of Pharmacy are internationally recognized.
- ❖ Our close links with the pharmaceutical industry allow us to arrange careers days, work placements, and other opportunities for direct access to potential employers.



ENTRY AND ADMISSION REQUIREMENTS

Academic admission requirements

Applicants must have completed the first cycle study programme from the following fields: biochemistry, biology, biotechnology, chemistry, chemical engineering, chemical technology, cosmetology, laboratory biomedicine, microbiology, food science (180 ECTS). If academic qualifications are not within these fields, the applicant should meet additional study requirements of 10 to 60 ECTS credit points of worth, which is defined according to their particular discipline.

Language requirements

Students must present a language certificate of their English language skills. Good language skills refer to level B2 on the CEFR scale of the European Language Portfolio Levels.

How to apply?

Application must be submitted through the electronic online system **eVŠ Online Portal**. See our official website for further information:

[https://www.ffa.uni-lj.si/en/study/academic-programmes/industrial-pharmacy-\(2nd-stage\)](https://www.ffa.uni-lj.si/en/study/academic-programmes/industrial-pharmacy-(2nd-stage))

Candidates with foreign degree qualifications undergo a procedure for the recognition of foreign higher education qualifications upon applying for studies. The procedure starts with the candidate's application for study in the Republic of Slovenia. Please note that the documents in languages other than English or Slovene have to be translated and notarized.

Selection criteria

The admission to the master study course is limited to 40 students per year. Therefore, an additional selection process and ranking by the grades of the previous study course may be needed.

Application deadline

The first application deadline is September 1st 2023.

The extended application deadline is September 22nd 2023.

The enrolment will take place after September 25th 2023.



For more information, please contact Izidor Sosič at izidor.sosic@ffa.uni-lj.si

COURSE OUTLINE

The scope of studies is 120 ECTS and lasts typically two academic years with a duration from October 1st until September 30th next year. The academic year is split into **two semesters**, in which students are required to complete a combination of **compulsory** and **elective** courses. Students may select elective modules from other study programs offered by the University of Ljubljana. The modules can be selected on the basis of the scientific research project, which students undertake in the last semester.

FIRST YEAR

WINTER SEMESTER (30 ECTS)

Compulsory Courses

- ❖ Pharmaceutical Technology (10 ECTS)
- ❖ Pharmaceutical Chemistry (10 ECTS)
- ❖ Stability of Pharmaceutical Products (5 ECTS)

Elective Courses (students must choose one course, 5 ECTS)

- ❖ Pharmaceutical Technological Analytics
- ❖ Biological and Toxicological Properties of Pharmaceutical Materials
- ❖ Pharmaceutical Packaging
- ❖ Design of Particle Properties
- ❖ Spectroscopic and Separation Analytic Methods

SUMMER SEMESTER (30 ECTS)

Compulsory Courses

- ❖ Biopharmaceutics and Pharmacokinetics (10 ECTS)
- ❖ Pharmaceutical Biotechnology 1 (5 ECTS)
- ❖ Pharmaceutical Nanotechnology and Delivery Systems for Biotechnological Active Substances (5 ECTS)
- ❖ Analysis of Pharmaceutical Products (5 ECTS)

Elective Courses (students must choose one course, 5 ECTS)

- ❖ Pharmaceutical Ingredients and Metabolites in Biological Materials
- ❖ Pharmaceutical Biotechnology 2
- ❖ Phytopharmaceutics
- ❖ Cosmetology and Cosmetic Products
- ❖ Methods for Evaluation of Biological Molecules
- ❖ Preclinical Studies

SECOND YEAR

WINTER SEMESTER (30 ECTS)

Compulsory Courses

- ❖ Industrial Development of Medicines (5 ECTS)
- ❖ Pharmaceutical Engineering (5 ECTS)
- ❖ Quality Assurance in Pharmaceutical Production (5 ECTS)
- ❖ Intellectual Property, Legislation and Regulation (5 ECTS)

Elective Courses (students must choose two courses, 2 x 5 ECTS)

- ❖ Microbiological Quality of Pharmaceutical Products
- ❖ Modified-Release Dosage Forms
- ❖ Pharmaceutical Marketing
- ❖ Pharmaceutical Process Equipment
- ❖ Pharmaceutical Industry Administration and Management
- ❖ Pharmacokinetic and Clinical Studies
- ❖ Pharmaceutical Nanotechnology 2
- ❖ Biopharmaceutical Evaluation of Dosage Forms
- ❖ Development of New Active Substances
- ❖ Advanced Therapy Medicinal Products

SUMMER SEMESTER (30 ECTS)

- ❖ Research Project – Preparation of Master's Thesis (25 ECTS)
- ❖ Master's Thesis Defense (5 ECTS)

The practical work for Master's thesis may be performed at an academic institution or an industrial organisation in any part of the world provided that there is a formal agreement between two parties. The thesis has to be submitted to and defended at the Faculty of Pharmacy, University of Ljubljana.

