

**KAUNAS UNIVERSITY OF TECHNOLOGY
LITHUANIAN UNIVERSITY OF HEALTH SCIENCES**



LITHUANIAN UNIVERSITY
OF HEALTH SCIENCES

STUDY PROGRAMME

| | |
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| Public code | 6281CX001 |
| ISCED code | 7470531 |
| Level and/or type | University studies |
| Study cycle | Second cycle, graduate(Master's) |
| Study type | |
| Group of Study Fields | C Physical Sciences |
| Study field and code | C01 Chemistry |
| Programme title | Medicinal Chemistry |
| Specialization areas | |
| Programme workload in national credits | 120 |
| Programme workload in ECTS credits | 120 |
| Mode of studies | Full-time studies |
| Official length of studies | 2 |
| Minimum access requirements | Bachelor degree or its equivalent |
| Minimum access qualification degree | |
| Access conditions and requirements | |
| Qualification degree conferred | Master of Physical Sciences |
| Professional qualification conferred | |
| Date of programme establishment (No. of Senate Decree, date) | V3-S-6 2016-01-27 |
| Reason of programme registration in state register (No. of Decree, date) | Extract on the registration of the programme from the Register of Studies, Educational Programmes and Qualifications of the Ministry of Education and Science of the Republic of Lithuania, , 2016-04-21 |
| Accreditation date and its expiry date | 2019-07-17, 2023-12-31 |
| Accreditation status | V-835, Pratešta akreditacija iki artimiausio vertinimo |
| Accreditation institution | LRŠMSM |
| Programme closing date (No. of Senate decree, date) | |
| Date of programme signing out (No. of Decree of Minister of Education, date) | |

Aim

To provide knowledge and competences of drug design, development and determination of practical significance and to develop research skills required to work in high-tech research centers and industrial companies that develop, manufacture or supply pharmaceuticals.

Learning outcomes

Special features of programme implementation

Access to further study

S/he has access to the third cycle studies

Professional

status and career opportunities (including state regulated professions in case the qualification conferred gives such a right)

The graduate is able to carry out research, technological, expert, consulting and managing work in chemical, pharmaceutical and biotechnological industry as well as research laboratories.

Summary

A graduate has knowledge and skills of biologically active organic compound synthesis, purification and identification, identification of chemical and physical properties, biological activity of compounds, and quality of the pharmaceuticals. He/she is able to choose formulation technologies, perform biopharmaceutical evaluation, knows how to carry out preclinical trials, research raw pharmaceutical materials. The graduate has theoretical knowledge and practical skills of research, design, production, quality control and distribution of medications.

Programme structure

Full-time studies

| Code | F | Course | Cr. | Contact hrs | Semester | | | | Coordinating Lecturer |
|---|---|--|------------|-------------|-----------|-----------|-----------|-----------|---|
| | | | | | 1 | 2 | 3 | 4 | |
| Core and Compulsory Subjects | | | | | | | | | |
| P390M117 | 1 | Selected Chapters of Organic Chemistry | 6 | 64 | x | | | | Assoc. Prof. N. Kleizienė |
| P390M327 | 1 | Spectroscopy of Organic Compounds | 6 | 80 | x | | | | Prof. V. Getautis |
| P400M101 | 1 | Analytical and Preparative Chromatography | 6 | 64 | x | | | | Lect. L. Pečiulytė |
| MF/BCM/MC-M03 | 1 | Cell Biology | 6 | 80 | x | | | | J. Liobikas |
| FF/FKG/MC-M02 | 1 | Pharmacognosy and Pharmaceutical Chemistry | 6 | | x | | | | V. Janulis R. Benetis |
| P390M116 | 1 | Selected Chapters of Medicinal Chemistry | 6 | 64 | | x | | | Assoc. Prof. E. Arbačiauskienė |
| FF/KFK/MC-M06 | 1 | Development of Pharmaceuticals | 6 | | | x | | | V. Briedis K. Ramanauskienė |
| MF/FIK/MC-M01 | 1 | Pharmacology | 6 | | | x | | | R. Jankūnas |
| GTF/BIO/MC-M04 | 1 | Molecular Biology | 6 | | | x | | | P. Vaitkienė |
| T480M100 | 1 | Extraction of Bioactive Natural Materials | 6 | 56 | | | x | | Assoc. Prof. V. Kitrytė-Syrpa |
| | | Electives | 12 | | | | x | | |
| Total of Credits: | | | 72 | | 30 | 24 | 18 | | |
| Research Project and Optional Subjects | | | | | | | | | |
| P000M112 | 1 | Research Project 1 | 6 | 12 | | x | | | Assoc. Prof. E. Arbačiauskienė |
| P000M116 | 1 | Research Project 2 | 12 | 12 | | | x | | Assoc. Prof. E. Arbačiauskienė |
| Total of Credits: | | | 18 | | | 6 | 12 | | |
| Final Degree Project | | | | | | | | | |
| P000M114 | 1 | Master's Degree Final Project | 30 | | | | | x | Assoc. Prof. E. Arbačiauskienė, Prof. S. Petronienė |
| Total of Credits: | | | 30 | | | | | 30 | |
| Total of Credits | | | | | | | | | |
| Per Study Programme and per Semester | | | 120 | | 30 | 30 | 30 | 30 | |

Electives

| Code | F | Course | Cr. | Contact hrs | Semester Recommended | | Coordinating Lecturer |
|------------------|---|--|-----|-------------|----------------------|--------|-----------------------|
| | | | | | 3 sem. | 12 cr. | |
| Electives | | | | | | | |
| | | Biomedical Chemistry Study Line | 24 | | | x | |
| | | Synthetic Medicinal Chemistry Study Line | 24 | | | x | |

Modules

| Code | F | Course | Cr. | Contact hrs | Semester Recommended | | Coordinating Lecturer |
|--|---|---------------------------------|-----|-------------|----------------------|---|-----------------------------|
| | | | | | 3 sem. | | |
| Biomedical Chemistry Study Line | | | | | | | |
| MF/PAK/MC-M01 | 1 | General and molecular pathology | 6 | | | x | L. Poškienė D. Pangonytė |

| | | | | | | |
|---|---|---------------------------------------|---|----|---|--|
| VF/MVI/MC-M02 | 1 | Molecular Microbiology | 6 | | x | R. Plančiūnienė Ž. Štreimikytė- Mockeliūnė |
| IAK/IAK/MC-M01 | 1 | Molecular Immunology | 6 | | x | E. Gasiūnienė |
| FF/VTSE/MC-M02 | 1 | Drug Technology | 6 | | x | A.Savickas |
| | | Clinical Trials of Medicinal Products | 6 | | x | V. Briedis |
| Synthetic Medicinal Chemistry Study Line | | | | | | |
| P390M012 | 1 | Synthesis of Amino Acids and Peptides | 6 | 48 | x | Prof. V. Mickevičius |
| P390M102 | 1 | Chemistry of Heterocyclic Compounds | 6 | 80 | x | Prof. V. Mickevičius |
| P390M109 | 1 | Mechanisms of Organic Reactions | 6 | 64 | x | Prof. V. Martynaitis |
| P390M120 | 1 | Drug Synthesis | 6 | 48 | x | Assoc. Prof. E. Arbačiauskienė |

Study programme committee

| Title | Code |
|--|-----------|
| KTU-LSMU Joint Study Programme Committee for Medicinal Chemistry | JMED-KSPK |

Programme coordinator

| Position | Pedagogical title, research degree | Surname, name | Payroll No |
|--------------|---------------------------------------|---------------------|------------|
| Assoc. Prof. | | ARBAČIAUSKIENĖ Eglė | B390 |