

**StudY programME „MedicAL AND VETERINARY GENETICS“ DESPRICTION**

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| The Department responsible for the study programme | The Institute of Biology Systems and Genetic Research |
| State code | 6121DX002 |
| Study Field Group | Life Sciences Study Field Group |
| Field of Study | Genetics (D02) |
| Study duration | 3.5 years |
| Credit volume | 210 |
| Qualification degree and (or) professional qualification | Bachelor’s degree of Life Sciences;  Qualification of Biomedical Technologist |
| Cycle of studies | First |
| The aim of study programme | Medical and Veterinary Genetics (MVG) study programme aimsto prepare educated, innovative, creative, and critically thinking with broad erudition, qualified geneticists with the fundamental knowledge and skills required to work in the MVG related fields. The programme aims to prepare the specialists, who can perform independent genetic research using modern analytical methods, complying with the principles of good laboratory practice and bioethics, and who are able to analyze the research results obtained. It also aims to prepare the geneticists who have a continuous interest in genetics science and improve and maintain their professional competencies through lifelong learning. |
| The results of the study programme | MVG programme results are available [here](https://lsmu.lt/wp-content/uploads/2022/12/Study-results-of-the-MVG-programme-1.docx). |
| Features of the study program (annotation) | The genetics is a rapidly evolving field, with a constant increase in applying it to clinical practice, scientific research, and everyday activities. Genetic testing allows: the establishment of genetic disease diagnosis in humans and animals; the evaluation of multifactorial disease risks; the identification of specific pathogens, viruses, and bacteria; the analysis of genetically modified organisms; the determination of animal and plant breeds. Genetic testing is also used to sequence the SARS-CoV-2 virus, and the sequencing results are essential for developing and improving the COVID-19 vaccines. That indicates that the need for the specialists in genetics prepared by this programme is relevant and currently present. The uniqueness of the MVG study programme is that it is the only study programme providing knowledge in applied genetics by studying the biological and pathological processes in humans and animals. After graduating, the MVG students are able to use the acquired knowledge in planning and performing human or animal genetic testing, evaluating the genetic testing results based on clinical aspects and sample characteristics. Moreover, it is the only and unique LSMU MF study programme in Lithuania that provides quality professional knowledge in the field of animal genetics. |
| Admission requirements | The main criterion for admission is a competitive score. The competitive score is accumulated by assessing the state maturity examination grades of biology (40%), Lithuanian language (20%), and the annual average or state maturity examination grades of chemistry or mathematics (20%), including one chosen optional subject (20%). The entrants holding a maturity certificate without the maturity examination assessments and/or annual grades in a competitive module are considered to have a grade zero (0) in that subject and are admitted to the competition. Additional points are added to the competitive score only in compliance with the orders issued by LR ESSM for the current year. The individuals participating in the competition in their application can indicate up to nine preferred study programmes. All procedures are performed electronically in the LAMA BPO Information System (BPIS). |
| Professional career opportunities | The MVG study programme professional activities are performed at scientific/research and diagnostic laboratories involved in genetic testing. Upon completing this programme, the graduates can work in laboratories of the public and private health care sector, veterinary laboratories and health care resorts, food processing facilities, genetically modified organism laboratories, biotechnology, microbiology, pharmaceutical companies, food and veterinary services, dairy and meat and their product processing system institutions, etc. The MVG study programme’s graduates can also work in various scientific/research institutions, being constantly involved in genetic, epigenetic, genomic, transcriptomic, biochemical testing/research and experimenting on the use of cell cultures and animal models, etc. In addition, they can also work in the institutions providing the study process and studying-related activities. Also, they can start their own business or be a part of it as shareholders. |
| Student exchange opportunities | All LSMU students have equal opportunities to participate in the international mobility programmes and projects (Erasmus+, etc.) and leave for 3-12 months during the study period to the HEIs, which have signed the inter-institutional agreements with LSMU, in Europe or worldwide, and/or for 2-12 months - for the practical training to the chosen foreign institution. |
| Career opportunities | The graduates of the MVG study programme can choose the master’s studies in life sciences or related fields at LSMU (Laboratory Medical Biology, Medical Chemistry) and other universities in LT (Genetics (VU), Medical Genetics (VU), Molecular Biology and Biotechnology (VDU), etc.). Also, the MVG graduates can continue to study in the master’s programmes at the different international HEIs. After completing the second cycle of studies, the graduates can enter the third-cycle studies, doctorate, and gain a Ph.D. degree at LSMU or other Lithuanian or foreign universities. |
| Assessment of study results | In the MVG study programme a summative assessment is applied to assess MVG student achievements in the modules. The achievements of student learning outcomes are assessed by grades obtained by passing an exam, after accumulating the intended portion of the cumulative grade and/or defending an individual student's work (project). The intermediate assessment of learning outcomes is a pass/fail evaluation form. The assessment of student practical training results is also present. The student achievements of the whole study programme are assessed after the final thesis is defended. The following assessment methods of the MVG students are used: final examination, completion of assignments, preparing and giving presentations, control work, quizzes, defense of the laboratory work, colloquiums, exams, tests, individual projects, etc. In the MVG study programme, the student's self-study takes not less than 30% of the study subject volume (in hours). |
| MVG study programme committee | Head: Rasa Ugenskienė, Prof. Ph.D. tel. +37061594003, email: rasa.ugenskiene@lsmuni.lt  Deputy: Paulina Vaitkienė, lect. Ph.D.  Secretary: Gita Lašienė  Members: Algimantas Kriščiukaitis, Prof. Ph.D.  Rasa Bernotienė, lect. Ph.D.  Ramutė Mišeikienė, lect. Ph.D.  Renata Bižienė, lect. Ph.D.  Kristina Morkūnienė, lect. Ph.D.  Rūta Insodaitė, assistant  Kamilė Račkelytė, Delegated Member of the LSMU Student Union  Giedrė Šinkūnaitė – Maršalkienė, Ph.D. Social Partner  Representative (UAB Thermo Fisher Scientific Baltics). |