



STUDIJŲ KOKYBĖS VERTINIMO CENTRAS

Vilniaus universiteto  
**STUDIJŲ PROGRAMOS *MEDICINOS BIOLOGIJA* (valstybinis  
kodas - 621B91001)  
VERTINIMO IŠVADOS**

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**EVALUATION REPORT  
OF *MEDICAL BIOLOGY* (state code - 621B91001)  
STUDY PROGRAMME  
at Vilnius University**

1. **Prof. Jozef Kobos (team leader)**, *academic*,
  2. **Prof. Brigitte Volk-Zeiher**, *academic*,
  3. **Prof. Simon van Heyningen**, *academic*,
  4. **Dr. Natalija Norvilė**, *representative of social partners*,
  5. **Ms. Monika Stančiauskaitė**, *students' representative*.
- Evaluation coordinator – Ms. Dovilė Stonkutė.**

Išvados parengtos anglų kalba  
Report language – English

## DUOMENYS APIE ĮVERTINTĄ PROGRAMĄ

Studijų programos pavadinimas	<i>Medicinos biologija</i>
Valstybinis kodas	621B91001
Studijų sritis	Biomedicinos mokslai
Studijų kryptis	Medicina ir sveikata
Studijų programos rūšis	Universitetinės studijos
Studijų pakopa	Antroji
Studijų forma (trukmė metais)	Nuolatinė (2)
Studijų programos apimtis kreditais	120
Suteikiamas laipsnis ir (ar) profesinė kvalifikacija	Medicinos biologijos magistras
Studijų programos įregistravimo data	1999-09-21

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## INFORMATION ON EVALUATED STUDY PROGRAMME

Title of the study programme	<i>Medical Biology</i>
State code	621B91001
Study area	Biomedical Sciences
Study field	Medicine and Health
Type of the study programme	University studies
Study cycle	Second
Study mode (length in years)	Full-time (2)
Volume of the study programme in credits	120
Degree and (or) professional qualifications awarded	Master of Medical Biology
Date of registration of the study programme	21 <sup>st</sup> September, 1999

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The Centre for Quality Assessment in Higher Education

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## I. INTRODUCTION

### 1.1. Background of the evaluation process

The evaluation of on-going study programmes is based on the **Methodology for evaluation of Higher Education study programmes**, approved by Order No 1-01-162 of 20 December 2010 of the Director of the Centre for Quality Assessment in Higher Education (hereafter – SKVC).

The evaluation is intended to help higher education institutions to constantly improve their study programmes and to inform the public about the quality of studies.

The evaluation process consists of the main following stages: 1) *self-evaluation and self-evaluation report prepared by Higher Education Institution (hereafter – HEI)*; 2) *visit of the review team at the higher education institution*; 3) *production of the evaluation report by the review team and its publication*; 4) *follow-up activities*.

On the basis of external evaluation report of the study programme SKVC takes a decision to accredit study programme either for 6 years or for 3 years. If the programme evaluation is negative such a programme is not accredited.

The programme is **accredited for 6 years** if all evaluation areas are evaluated as “very good” (4 points) or “good” (3 points).

The programme is **accredited for 3 years** if none of the areas was evaluated as “unsatisfactory” (1 point) and at least one evaluation area was evaluated as “satisfactory” (2 points).

The programme is **not accredited** if at least one of evaluation areas was evaluated as “unsatisfactory” (1 point).

### 1.2. General

The Application documentation submitted by the HEI follows the outline recommended by the SKVC. Along with the self-evaluation report and annexes, the following additional documents have been provided by the HEI before, during and/or after the site-visit:

No.	Name of the document
	No additional documents beyond the annexes to the SER were provided during/before/after the visit

### 1.3. Background of the HEI/Faculty/Study field/ Additional information

Vilnius University has 28 units: 12 faculties, 7 research institutes (Institute of International Relations and Political Science, Institute of Foreign Languages (both have a faculty status), Institute of Applied Research, Institute of Biochemistry, Institute of Biotechnology, Institute of Mathematics and Informatics, Institute of Theoretical Physics and Astronomy. A second study cycle - Master’s study programme entitled *Medical Biology* was introduced at the Faculty of Medicine of Vilnius University in the year 2000. Since the last evaluation in 2013, the programme has made progress in the scientifically driven development of subject content, improvement of teaching staff and in providing the latest methodological achievements.

### 1.4. The Review Team

The review team was completed according *Description of experts’ recruitment*, approved by order No. 1-01-151 of Acting Director of the Centre for Quality Assessment in Higher Education. The Review Visit to HEI was conducted by the team on *29th March, 2016*.

1. **Prof. Jozef Kobos (team leader)**, *Head of the Laboratory of Pathology, Institute of Pediatrics, Head of the Chair of Biomedical Bases of Nursing, Head of the Department of Pathology of the Age of Development, Poland.*
2. **Prof. Brigitte A. Volk-Zeiher**, *Research Director, Head of the Research Management of the Faculty of Medicine, Freiburg University, Germany.*
3. **Prof. Simon van Heyningen**, *Emeritus Professor of the University of Edinburgh, Fellow of the Royal Society of Chemistry, Fellow of the Society of Biology, Founding member, Institute for Learning and Teaching in Higher Education, United Kingdom.*
4. **Dr. Natalija Norvilė**, *lecturer at Mykolas Romeris University, expert of UAB „Adduco“, Lithuania.*
5. **Ms. Monika Stančiauskaitė**, *student of Vytautas Magnus University study programme Biochemistry, Lithuania.*

**Evaluation coordinator – Ms. Dovilė Stonkutė.**

## **II. PROGRAMME ANALYSIS**

### **2.1. Programme aims and learning outcomes**

The goal of the *Medical Biology* Master's study programme is in accordance with the mission of Vilnius University and knowledge acquired in the course of studies provides a good background for a wide range of employment opportunities including academic research and work in hospitals, medical laboratories, pharmaceutical and biomedical industry. The Master's study programme *Medical Biology* aims to provide an adequate education for medical biology specialists being able to apply laboratory medicine knowledge through a problem solving approach, using theoretical and practical skills and analytical. The programme aims and learning outcomes are based on the academic and/professional requirements, public needs and the needs of the labour market.

Medical Biology has become more complicated for many reasons, both internal and external. It includes the greater complexity of the working environment, the new technologies that become involved, the growing necessity to make decisions independently, and cooperation with specialists in other fields. In formulating the learning outcomes, keywords have been taken from the aims of the programme that define what a student has to be able to perform after graduation from the programme and the formulations of learning outcomes have been written. In this way the aim and the learning outcomes correlate with each other. Participation in a variety of international organisations such as: International and European Federations of Clinical Chemistry, Laboratory Medicine and the European Register of Specialists in Clinical Chemistry and Laboratory Medicine allow the department keep its curricula up to date. Students are urged to consider working in other countries for a short time, but, in practice, very few do for reasons that are unclear.

The detailed information about the aims and objectives of a subject studied is provided in the Study programme plan published on the website of the VU Faculty of Medicine.

Learning outcomes are renewed according to the changes in the science and practice of laboratory medicine. In order to be consistent with the initial aims of the programme, with the recommendations from evaluation and with the MSc-level educational qualification standards, more emphasis was put on the wider scope of teaching and high-quality, international level research training in the field. Learning outcomes were expanded towards the laboratory

management skills. In conclusion, the programme aims and learning outcomes are consistent with the type and level of studies and the level of qualification necessary for medical biology specialists.

The assessment of students is related to the learning outcomes. The principles of assessment are set out by VU Study Provisions and VU Procedure for the assessment of study results. Resolutions of the Council of VU Faculty of Medicine are described in the course description of each study subject. The requirements for the structure of the assessment grade are set out in VU Senate documents and should be explained in detail in the course unit description of each study subject. Students are informed directly about learning outcomes of their study results and they may find them out in the information system of VU.

In summary, the name of the programme, its learning outcomes, content and the qualifications offered are compatible with each other.

## **2.2. Curriculum design**

The curriculum design of the Study Programme in Medical Biology encompasses a Master Study programme of Vilnius University, Medical Faculty (VU FM) and corresponds to the Law of Higher Education and Research of the Republic of Lithuania (2009-04-30, No.XI-242; 2010-06-03, No. V-826). Study programme requirements have been approved by the Senate Commission (resolution 2012-06-21, No. SK- 2012-12-4). By the order of the Dean of VU FM, signed on the November 30, 2015, No. 150000-V-243, a self-evaluation team performed the SER.

The curriculum design meets legal requirements. The scope of the study programme (two academic years) consists of 120 credit points. The student's workload is 3200 hrs, including auditoria, lectures, seminars and laboratory practise. Within one semester no more than 5 study modules has been introduced. A student's individual work covers no less than 30% of the total hourly time of each study module. The course units in the second cycle study programme encompass a higher quality level within the study field (Table 2.2.1, p.11 of SER) and were credited with 80 credit points. Optional course units are intended for specialized studies and yielded 6 credit points. 34 credits points were given for the graduation thesis, subjects' topics are not repetitive. In conclusion, graduates are expected to present knowledge and skills for independent scientific work and service in diagnostic laboratories.

The content of the study programme is appropriate to achieve the intended learning outcomes using specific laboratory and biology study methods. Each course has a coordinator, who is responsible for teaching quality of the course. In the first study year necessary knowledge in fundamental biomedical sciences and skills for further studies are provided and research work started. The study programme *Medical Biology* consists of well balanced compulsory subjects of theoretical and practical teaching. During the second study year students are gradually provided with an integral approach to the laboratory medicine subjects, developing their manual skills and continue their research work with the final master thesis. So far, the evaluation process of practical skills contains no grading system. It would, therefore, be wise to consider a formalized grading system or, even better, to install a mentoring system, e.g. between representatives from students, staff and senior scientists.

Various methods and tools for the assessment for the evaluation of achievements are employed: observational learning, discussion of cases, observation of direct application of skills, participation in seminars, written colloquium and examination.

In some parts of the programme, there is not enough time for research (e.g. 1 day/week) which should therefore be more adapted to the individual needs and demand of students. More guidance in master's thesis should also be provided as well as a list with proposed titles of master thesis. The study programme could be very much enhanced if students had the option to take part in a short-term visit (1-2 weeks) in e.g. to a scientifically specialized laboratory abroad, in a private company or in another university laboratory in Lithuania.

Learning outcomes of the courses are related to the study programme and are in accordance with the legislation. Each year the content of the study programme is renewed to fit better with the needs of the students and the comments of alumni. The scope of the study programme is appropriate for achieving the intended learning outcomes and fulfilling the Lithuanian and European legislation requirements.

Since the last evaluation in 2013, the programme has made huge progress in the scientifically driven development of subject content, improvement of teaching staff and in providing the latest methodological achievements according to the latest achievements in medical biology.

In the written self-evaluation report all recommendations of the evaluators of 2013 have been taken into consideration. In practise, major efforts have been made to introduce successfully new subjects in "Ethics and Informatics in Biomedicine", "Biotechnology", "Liquid Chromatography" and "Inorganic Biochemistry", each rewarded with 6 credit points. All these changes strengthened the study programme and were very much appreciated by the students. In future, Informatics in Biomedicine and/ or Nonparametric Statistics should be presented more practically according to the needs e.g. in a master's thesis or given as a seminar title: "How to use statistics" and taught in the last year of the study programme. Within the subject "Ethics" some information about actual knowledge in Medical Law should be introduced.

Teaching in the English language to improve professional foreign language skills has also been introduced and intensified, although some teachers are not very comfortable teaching in English. Fundamentals of "Laboratory Management" (6-8 hrs) were added to the subject "Clinical Biochemistry" in order to train professionals in managing a modern laboratory and in up-to-date pathological and molecular laboratory medicine. This subject has been recognized as a full success both for students and social partners.

In general the content of the subjects and/or modules is consistent with the type and level of the master studies, but the portfolio of optional courses has been extended, although there are still not many elective subjects in the curriculum for students to choose from. It is still planned to create a module for more free elective subjects and so far there are no further details on the content of these subjects available.

### ***2.3. Teaching staff***

There are 26 staff members participating in the programme, including 8 professors and 9 associate professors. 92% of staff members have a scientific degree (PhD), and 30% of major study field subjects' volume is taught by teachers holding a Professor's academic degree. More than 85% of staff has more than 10 years teaching experience in his field ranging from 10 to 47 years. Teachers constantly improve their teaching competences, and participation in this kind of courses is compulsory for teachers who are just starting their teaching career, as was stated during the meeting with staff and SER team. Approximately half of the teachers are younger than 50-years, which indicate a good potential for the future. The legal requirement that 80 percent of the subjects in the study field be taught by scientists (researchers who have a PhD) is met. Also, the Lithuanian legal requirements in terms of qualifications and experience are met. In

conclusion, staff members have the high qualifications needed to ensure the learning outcomes and their number is adequate.

Teachers' turn-over rate is moderate, but this may be due to the overall small number of involved teachers (26) and the more specialized requirements for teachers involved in MSc (e.g. compared to BSc) level studies. Teaching staff is selected by means of public competition (except for invited teachers and scientists) for a fixed-term period of five (5) years. The recruiting procedure for the teaching positions at the faculty is enacted by the Law of Higher Education. The teachers' pedagogical, scientific, and practical experience is evaluated during performance evaluation procedures organized every five years.

All the teachers are active researchers, regularly participating in the scientific conferences. Strength of the staff is that they demonstrate active research and a reasonable number of publications in the leading national and/or international journals in the last five years: in total 305 publications, including 130 in internationally peer-reviewed journals listed in ISI Web of Science. Also, a significant number of teachers participated in national and international projects (MOLMED, NOPHO, AIDPATH, PROGENET, CHERISH, UNIGENE, LIGENKOR) and societies. In summary, the University and the faculty provide adequate condition for the professional development for the study programme. Generally, the teachers are up to date with the latest scientific achievements in the respective areas. However, the expert team would encourage the University to support staff to increase publications in international journals; for example, give financial support to research and to the presentation of the results at scientific conferences abroad.

Medical Biology programme teachers are members of editorial boards or reviewers of Lithuanian and international scientific journals. A substantial part of teachers are full members of international professional organizations. The teaching staff actively participates in the seminars in VU, in the meetings of the Lithuanian, Baltic and European Associations of Laboratory Medicine, etc.

The data on student/teacher ratio would be considerably more informative if more details of contact hours were provided. The operation with the 'raw' number of teachers is not a sufficient indicator of the student/teacher ratio because many of the 26 faculty teachers are involved in other programmes as well. There was no information provided on the ratio between the number of students preparing their graduation theses and the number of scientific supervisors.

The mobility of teachers must be strongly promoted, and mechanisms for mobility promotion should be instituted. Also visiting lectures should be engaged. It is advised that the profile of the teaching staff could be improved by recruiting/inviting lecturers from among younger generation specialists from Lithuania and guest lecturers from abroad because scientific exchange is important as the field of medical biology is rapidly evolving.

#### ***2.4. Facilities and learning resources***

The Medical Biology study programme is spread over a high number of facilities in different participating institutions and clinics. Five main lecture rooms (Table 2.4.1, p.21) including different numbers of working places (25-80), 15 auditoria and seminar rooms, 5 teaching laboratories and 3 main scientific laboratories are used for the implementation of the study programme. Practical training takes place in the Centre of Laboratory Medicine, Centre of Medical Genetics of VU Hospital Santariškių Clinics and the National Centre of Pathology. There are four laboratories representing main areas of Medical Biology: Clinical Chemistry, Haematology, Immunology, Transfusion Medicine, Microbiology and Molecular Biology. Each student spends time in all laboratories to practise under supervision. The resources were renewed

between 2011 and 2015 in the light of the requirements of different disciplines. They are currently adequate for the number of the students.

The majority of auditoria and teaching rooms have multimedia equipment and computers. Free wireless internet access is available throughout all facilities both in the Centre of Laboratory Medicine and Medical Genetics. In the Centre of Medical Genetics there is a special computer class with 10 computers for students and one for the tutor for training in bioinformatics. Up-to-date laboratory equipment for the most practical training is provided (e.g. microscopes, karyotyping system, DNA pyrosequencing and sequence analyser, thermocycler, system for amino acid analysis, HPLC, tandem mass spectrometer and UFLC etc.; SER, p.22) with all requirements for the provision of the study programme, but not all of the newest equipment is available for the students.

There are three main Libraries: VU Library, the Library of the FM and the National Open Access Scholarly Communication and Information Centre which provide access to several services like order of publications via internet and constantly updates literature on the field on sciences of biomedicine and provide advice about scientific medical information searching, consults on using Lithuanian and foreign databases on the sciences of biomedicine and support the update of a catalogue with useful medical links. The Library subscribes to 15 electronic databases as for example: BMJ Journals Online Collection, Lippincott Williams & Wilkins Custom 50, MEDLINE (EBSCO), NATURE. The fund of the Library contains 64 000 items of books and medical journals of Lithuania and foreign countries with new publications acquired annually. The renewed literature service takes into account the requests from coordinators of different disciplines, teaching staff and students. It is noteworthy that the study programme provides each student an individual working place both in studies and practice classes, which take place in well equipped classrooms. Therefore, the premises for study are adequate both in size and quality in theoretical and practical classes.

The Library of the MF provides mostly standard and older textbooks and is small. Journals are in a separate closed room with restricted access. This situation seems to be like an old fashioned organized library, which is not a very stimulating place for students to spend much time in. In addition, some newer books are dispersed either in seminar rooms, practical rooms or even on the desk of professors. This situation should be reorganized more conveniently.

### ***2.5. Study process and students' performance assessment***

The adequate rules for the admission of the students are enacted by the Lithuanian Higher Education Institutions Association, and they are publicly announced on the VU site. General and special requirements for master's studies are approved by the order of the Minister of Science and Education of the Republic of Lithuania No. V-826 (03 June 2010) with current updates No. V-727 (07 July, 2015). Mandatory basic courses at the BSc level and demonstrated basic educational background in the field required to enter the MSc programme are provided and relevant. University bachelors of biology, molecular biology, biophysics, biochemistry, public health and genetics (medical and veterinary) can be admitted to Master studies of medical biology. Total number of the admitters varied from 6 to 14 persons in one particular year. The Master's studies of Medical biology were reduced to full-time state-funded studies in 2011 because of the end of covering study costs from the European funds.

The timetable of studies is designed in accordance with the General Requirements for the Integrated Studies of the Republic of Lithuania, the requirements approved by VU Study Regulations (Vilnius University Senate Commission Resolution, No SK-2012-12-4, 21st June, 2012). The programme is focused on integration of theoretical and practical education in

biomedicine. The schedule of classes and exercises is publicly available. The examinations are scheduled in advance and publicly announced via University web-site. In conclusion, the organisation of the study process ensures an adequate provision of the programme and the achievement of the learning outcomes. Students are encouraged to participate in research projects in the framework of the MSc thesis. Student dropout is very low – only 1 person in 2011 (SER p.28)) and no students have been discharged due to academic failure.

The principles of assessment of students' performance are set out by VU Study Provisions, VU Procedure for the assessment of study results, resolutions of the Council of VU Faculty of Medicine, and are described in the course description of each subject. Students are informed directly about the results of the assessment of their study results and they may find them out in the information system of VU. The requirements for the preparation of final MSc theses and assessment policy are approved by the Council of VU FM and are published on the respective website. The research activities should be more structured towards promoting research and the coordinated evaluation (for example at the end of every semester) should be developed. The theses are structured according to scientifically acknowledged general rules, contemporary and use the novel literature. The topics of the master theses offered to students should be more driven by hypothesis and problem based approaches, not by analyzing routinely provided biomedical data.

An opportunity to participate in the Erasmus student exchange programme outgoing and incoming student mobility via the Erasmus Programme is developing and is supported by the VU International Relations Office. The mobility is directed mainly toward the EU Universities, while the incoming students came from both non-EU and EU countries. Students are invited to participate in research projects ongoing at VU Medical Faculty and also are encouraged to start new research projects in the scope of their final project and thesis of Master's degree. 11 students are involved in research projects ongoing at VU Medical Faculty (SER p. 28).

Granting of student scholarships and support is regulated by the Senate of VU legislature. Students may be granted social scholarships, the granting and administration of which lies within the responsibility of the State Studies Foundation under Republic of Lithuania Resolution "On the Approval of the Profile on Granting and Administration of Social Scholarships to Students of Higher Education", No 1801 (Official Gazette, 2009-12-31, No 158-30 7187). Also, VU FM Scholarship Commission may decide to grant incentive scholarships, the fund of which consists of state-budget assigned finances and the study funds from the state budget aimed at motivating students, funds to cover tuition fees of state-funded places, and from tuition fees. Also, incentive scholarships are granted to the best performing students.

Information about the study programme is provided to newly accepted students by the Student Representative bodies, the Administrative Office of the Faculty and the Medicine Programme Committee and also on the University and Faculty and Students Representations web-sites.

The assessment tasks are graded in ten-point system approved by VU Senate in 13Dec2012 (SK-2012-20-6) (SER p. 31). The requirements for the preparation of final master's theses and assessment policy are approved by the Council of VU FM and are published on the website of VU FM.

Graduates of the MSc study programme have been employed by hospitals clinics (private and public), research institutes, academic institutions. Some of the best graduates are invited to continue studies in doctoral studies at VU or other higher education institutions. Vilnius University Career Centre helps students solve career problems, independently make career-

related decisions in a chosen career field. In conclusion, professional activities of the majority of graduates meet the programme providers' expectations.

## **2.6. Programme management**

VU has established an internal study quality assurance system including the Senate, the Department for Studies, the Council of the Faculty of Medicine (VU FM), Vice-Dean for Academic Affairs of VU FM and the Study Committee of the Medical Biology Master's study programme of VU FM. The last of these is responsible for the quality of Medical Biology Master's study programme implementation. In conclusion, responsibilities for decisions and monitoring of the implementation of the programme are clearly allocated. The Study Programme Committee closely cooperates with Vice-Dean for Academic Affairs of VU FM and student representatives. It analyzes the reviews on programme and its implementation by students, teachers, academic departments and social partners (e.g. Lithuanian Laboratory Medicine Society, which unites specialists in laboratory medicine). The procedures for the internal assurance of studies quality are described in "Vilnius University Quality Assurance Guide". In this Guide the detailed procedures of control and reporting, as well as procedures of monitoring of programme and awarded qualifications are described. Student-centred learning is a strong component of the study process in VU, 1 student participates in decision-making process in Study Committee, internal quality assurance measures are effective and efficient.

A student feedback system has been established. At the end of each semester, students are given questionnaires for evaluation of the quality of the University study programmes, and on the teaching quality of each study subject (all students are surveyed 2 times a year at the end of each semester). A student survey (questioning of students about the quality of the Medical Biology programme) is performed every year at the end of each semester, and it shows that students are satisfied with the structure of the programme that allows continuous progress in the programme content, gradually going deeper into every biomedical field. They are also satisfied with the teaching process. In conclusion, information and data on the implementation of the programme are regularly collected and analysed.

The SER and the meeting with social partners indicated that the feedback from social partners is taken into account while reviewing the programme and its implementation, but still there is a need for establishing formal and regular system of communication and exchange with social partners. In expert team's opinion, social partners could cooperate more, i.e. add their questions to opinion polls, share their experience during lectures, and participate in review of program aims. Invitation of prominent local and foreign experts on Medical Biology, more detailed communication with partners about milestones, shortcomings and future development of the programme would be also welcome.

The outcomes of internal and external evaluations of the programme are used for the improvement of the programme. New courses were introduced to the programme (for example, Ethics and Informatics in Biomedicine, Biostatistics, etc.), and an additional 36 hours topic in Laboratory Management Skills was added to Clinical Biochemistry subject content.

In addition, it should be noted that the SER team did not put much effort into preparing the SER, as information in every chapter is often repeated word by word ("copy - paste") from 2013 SER. That is a regrettable sign of carelessness and should be avoided at all costs.

### **III. RECOMMENDATIONS**

1. More time for students' research is needed and guidance in master thesis should be improved (e.g. a list of themes of potential master thesis). A mentoring system could be helpful.
2. Informatics in Biomedicine should be more practically oriented and later in the study programme, e.g. in the last year.
3. Within the "Ethics" module some information about actual Medical Law should be provided.
4. The expert team would encourage the University to support staff to increase publications in international journals; for example, financially support research and presentation of the results at scientific conferences abroad.
5. The mobility of teachers must be strongly promoted, and mechanisms for mobility promotion should be instituted. Also visiting lectures should be engaged.
6. The next SER team should put more effort into preparing the updated report.

### **IV. SUMMARY**

The Master's study programme in Medical Biology aims to provide an adequate education for medical biology specialists, furnishing them with the ability to apply laboratory medicine knowledge through a problem solving approach, using theoretical and practical skills and analytical thinking.

The curriculum design meets Lithuanian and European legal requirements and the scope of the study programme is appropriate to achieve intended learning outcomes. There are plans for the creation of more free elective subjects but so far no further specification on the content of these subjects is available.

There are 26 staff members participating in the programme, including 8 professors and 9 associate professors. 92% of staff members have a scientific degree (PhD), and 30% of major study field subjects' volume is taught by teachers holding a Professor's academic degree. All the teachers are active researches, regularly attending scientific conferences.

The Medical Biology study programme is spread over a high number of facilities in different participating institutions and clinics. The resources were renewed between 2011 and 2015 in the light of the requirements of different disciplines. Currently, they are adequate in terms of the capacity to accommodate the number of the students. There are three main Libraries: Vu Library, the Library of the FM and the National Open Access Scholarly Communication and Information Centre which provide access to several services. The Library of the MF provides mostly standard and older textbooks and is small; journals are in a separate closed room with restricted access. This situation resembles a library run in an outdated manner, which is not very stimulating for students. The admission requirements are well-founded.

The assessment of the students is related to the learning outcomes. The principles of assessment are set out by VU Study Provisions and VU Procedure for the assessment of study results. The schedule of classes and practical training classes is publicly available. The Senate, acting under the principles laid by VU, regulates how student scholarships and support are granted.

The student-centred learning is a strong component of the study process in VU, a student representative participates in the decision-making processes in Study Committee. A student feedback system has been established. The outcomes of internal and external evaluations of the programme are used for the improvement of the programme.

## V. GENERAL ASSESSMENT

The study programme *Medical Biology* (state code – 621B91001) at Vilnius University is given **positive** evaluation.

*Study programme assessment in points by evaluation areas.*

No.	Evaluation Area	Evaluation of an area in points*
1.	Programme aims and learning outcomes	3
2.	Curriculum design	3
3.	Teaching staff	3
4.	Facilities and learning resources	3
5.	Study process and students' performance assessment	4
6.	Programme management	3
	<b>Total:</b>	<b>19</b>

\*1 (unsatisfactory) - there are essential shortcomings that must be eliminated;

2 (satisfactory) - meets the established minimum requirements, needs improvement;

3 (good) - the field develops systematically, has distinctive features;

4 (very good) - the field is exceptionally good.

Grupės vadovas: Team leader:	Prof. Jozef Kobos
Grupės nariai: Team members:	Prof. Brigitte Volk-Zeiher
	Prof. Simon van Heyningen
	Dr. Natalija Norvilė
	Ms. Monika Stančiauskaitė

**VILNIAUS UNIVERSITETO ANTROSIOS PAKOPOS STUDIJŲ PROGRAMOS  
MEDICINOS BIOLOGIJA (VALSTYBINIS KODAS – 621B91001) 2016-05-16  
EKSPERTINIO VERTINIMO IŠVADŲ NR. SV4-105 IŠRAŠAS**

&lt;...&gt;

**V. APIBENDRINAMASIS ĮVERTINIMAS**

Vilniaus universiteto studijų programa *Medicinos biologija* (valstybinis kodas – 621B91001) vertinama **teigiamai**.

<b>Eil. Nr.</b>	<b>Vertinimo sritis</b>	<b>Srities įvertinimas, balais*</b>
1.	Programos tikslai ir numatomi studijų rezultatai	3
2.	Programos sandara	3
3.	Personalas	3
4.	Materialieji ištekliai	3
5.	Studijų eiga ir jos vertinimas	4
6.	Programos vadyba	3
	<b>Iš viso:</b>	<b>19</b>

\* 1 - Nepatenkinamai (yra esminių trūkumų, kuriuos būtina pašalinti)

2 - Patenkinamai (tenkina minimalius reikalavimus, reikia tobulinti)

3 - Gerai (sistemiškai plėtojama sritis, turi savitų bruožų)

4 - Labai gerai (sritis yra išskirtinė)

&lt;...&gt;

**IV. SANTRAUKA**

Medicinos biologijos magistrantūros studijų programos tikslas – suteikti tinkamą išsilavinimą medicinos biologijos specialistams, kad jie gebėtų taikyti laboratorinės medicinos žinias, taikydami problemų sprendimo metodus, naudodamiesi teoriniais ir praktiniais gebėjimais bei analitinio mąstymo įgūdžiais.

Programos sandara atitinka Lietuvos ir Europos teisinį reglamentavimą, o studijų programos apimtis tinkama numatytiems studijų rezultatams pasiekti. Planuojama siūlyti daugiau laisvai pasirenkamų dalykų, tačiau kol kas šių dalykų turinys nėra patikslintas.

Studijų programą dėsto 26 dėstytojai, iš jų 8 profesoriai ir 9 docentai. 92 % dėstytojų turi mokslų daktaro laipsnį, o 30 % pagrindinės studijų krypties dalykų dėsto profesoriaus mokslinį vardą turintys dėstytojai. Visi dėstytojai aktyviai vykdo tiriamąją veiklą ir reguliariai dalyvauja mokslinėse konferencijose.

Medicinos biologijos studijų programa vykdoma daugelyje bazių, esančių skirtingose institucijose ir klinikose. Nuo 2011 m. iki 2015 m. buvo atnaujinti ištekliai, atsižvelgiant į skirtingų dalykų reikalavimus. Šiuo metu jie tinkami, atsižvelgiant į pajėgumą sutalpinti studentus. Yra trys pagrindinės bibliotekos: VU biblioteka, Medicinos fakulteto biblioteka ir

Nacionalinis atviros prieigos mokslinės komunikacijos ir informacijos centras, kuriame teikiama prieiga prie įvairių paslaugų. Medicinos fakulteto bibliotekos fondą iš esmės sudaro įprasti ir senesni vadovėliai, o pati biblioteka yra maža; žurnalai laikomi atskirame uždare kabinete su ribota prieiga. Taigi, panašu, kad bibliotekos valdymas pasenęs, o tai nelabai skatina studentus. Priėmimo reikalavimai yra tinkamai pagrįsti.

Studentų vertinimas susietas su studijų rezultatais. Vertinimo principai išdėstyti VU studijų nuostatuose ir VU studijų pasiekimų vertinimo tvarkoje. Paskaitų ir praktinių užsiėmimų tvarkaraštis prieinamas viešai. Senatas, veikdamas pagal VU nustatytus principus, reglamentuoja, kaip skiriamos stipendijos ir parama studentams.

Į studentus orientuotas mokymasis yra stiprus VU studijų proceso elementas; studentų atstovas dalyvauja Studijų komiteto sprendimų priėmimo procese. Studentų grįžtamojo ryšio sistema funkcionuoja. Vidinio ir išorinio programos vertinimo rezultatai naudojami programai tobulinti.

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### **III. REKOMENDACIJOS**

1. Daugiau laiko turėtų būti skirta studentų tiriamajam darbui ir reikėtų patobulinti vadovavimą magistro darbams (pvz., parengti galimų magistro darbų temų sąrašą). Praverstų mentorystės sistema.
2. Informatika biomedicinoje turėtų būti labiau orientuota į praktinį aspektą ir šis dalykas turi būti studijuojamas vėliau, t. y. paskutiniaisiais studijų metais.
3. Etikos modulyje reikėtų suteikti informacijos apie tikrąją medicinos teisę.
4. Ekspertų grupė ragina universitetą palaikyti darbuotojus, kad jie didintų publikacijų tarptautiniuose žurnaluose skaičių, pavyzdžiui, universitetas galėtų finansiškai remti tyrimus ir rezultatų pristatymą mokslinėse konferencijose užsienyje.
5. Reikia ypač skatinti dėstytojų judumą ir tam reikėtų sukurti judumo skatinimo mechanizmus. Taip pat reikėtų organizuoti kviestines paskaitas.
6. Kitos savianalizės suvestinės rengėjai turėtų labiau pasistengti rengdami atnaujintą suvestinę.

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Paslaugos teikėjas patvirtina, jog yra susipažinęs su Lietuvos Respublikos baudžiamojo kodekso 235 straipsnio, numatančio atsakomybę už melagingą ar žinomai neteisingai atliktą vertimą, reikalavimais.

Vertėjos rekvizitai (vardas, pavardė, parašas)