



STUDIJŲ KOKYBĖS VERTINIMO CENTRAS

**LIETUVOS SVEIKATOS MOKSLŲ UNIVERSITETO
FARMACIJOS PROGRAMOS (601B20001)
VERTINIMO IŠVADOS**

**EVALUATION REPORT
OF PHARMACY (601B20001)
STUDY PROGRAMME
AT LITHUANIAN UNIVERSITY OF HEALTH SCIENCES**

Grupės vadovas:
Team Leader: Damian Richard Day

Grupės nariai:
Team members: Prof.dr. Marek Radomski
Prof.dr. Ruta Muceniece
Dr. Jolanta Gulbinovič

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DUOMENYS APIE ĮVERTINTĄ PROGRAMĄ

Studijų programmeos pavadinimas	<i>Farmacija</i>
Valstybinis kodas	601B20001
Studijų sritis	Biomedicinos mokslai
Studijų kryptis	Farmacija
Studijų programmeos rūšis	universitetinės studijos
Studijų pakopa	Integruotos studijos
Studijų forma (trukmė metais)	nuolatinė (5)
Studijų programmeos apimtis kreditais ¹	200 (300 ECTS)
Suteikiamas laipsnis ir (ar) profesinė kvalifikacija	Vaistininkas, Farmacijos magistras
Studijų programmeos įregistravimo data	2001-08-02

¹ – vienas kreditas laikomas lygiu 40 studento darbo valandų

INFORMATION ON ASSESSED STUDY PROGRAMME

Name of the study programme	<i>Pharmacy</i>
State code	601B20001
Study area	Biomedicine Studies
Study field	Pharmacy
Kind of the study programme	University studies
Level of studies	Integrated (first and second level)
Study mode (length in years)	Full-time (5 years)
Scope of the study programme in national credits	200 (300 ECTS)
Degree and (or) professional qualifications awarded	Master of Pharmacy, Pharmacist
Date of registration of the study programme	02-08-2001

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I. INTRODUCTION

The programme being assessed in this visit is delivered by the Lithuanian University of Health Science (LUHS). The mission of LUHS is:

to create, accumulate, systemize and disseminate scientific knowledge, achievements in science and studies, to train and form creative, fair, initiative, educated, independent and enterprising personality, nurture democracy, welfare and train healthy and educated society; promote economic and cultural prosperity of the state, competitiveness of economy, social concord, irrespective of gender, race, politic and religion, nationality and citizenship of employees and students.

LUHS has a dual function: it is a teaching institution but is also involved in fundamental and applied scientific research activities,

Pharmacy at LUHS dates back to 1922 when the Department of Pharmacy was established in the Faculty of Medicine, Kaunas University. After various reorganizations, what was then the Kaunas University of Medicine merged with the Lithuanian Academy of Veterinary to form LUHS in 2010. In LUHS, there are two academies of medicine and veterinary which comprise faculties; in Medicine there are five, including Pharmacy. The programme under consideration in this report, the Master in Pharmacy is delivered primarily by the Faculty of Pharmacy but other areas contribute also.

Council is the governing body of LUHS, headed by the Rector, who is supported by vice – rectors. The Faculty is managed by the Dean of the Faculty and the Faculty’s Council, which includes staff and student representatives.

The Faculty of Pharmacy comprises 4 departments: analytical & toxicological chemistry, pharmacognosy, drug chemistry and pharmaceutical technology & social pharmacy.

The mission of the faculty of Pharmacy is:

- provide modern pharmacy knowledge and professional skills, striving to advance, welfare and health of society
- educate and raise a qualification of pharmacy specialists,
- form a system of attitudes and values of employees and students,
- participate in scientific research in the field of pharmacy and related areas,
- participate in setting and implementation of health care policy and strategy.

The objectives of the faculty of Pharmacy are to:

- ensure the quality of pharmacy study programme by meeting European Union (EU) requirements,
- pursue the accessibility of pharmacy studies at the faculty for young people, health care specialists, and other related professions,
- integrate pharmacy study programme and research activities in the pharmacy field broadly,
- educate highly qualified pharmacy specialists applying modern informational technologies, effective teaching and learning methods.

The initial basis of this visit was a critical self evaluation prepared by Pharmacy programme self-assessment group. The report was prepared in 2010. Former external evaluation was performed in May 2008. The strengths and weaknesses identified by that expert group were discussed as part of this visit. The visit that preceded this report was conducted 6-8 March 2011. During the visit, the expert team met a group of senior staff from the Faculty, led by the Dean, then the team met a larger group of teaching staff. Pharmacy is in the process of moving to purpose-built accommodation adjacent to a new library. The team had the opportunity to view the new and impressive facility. The team also met a group of students drawn from across the years of the programme and also some alumni, who were working as pharmacists in Lithuania across a variety of sectors, including wholesale, community, hospital and industrial pharmacy.

II. PROGRAMME ANALYSIS

1. Programme aims and learning outcomes

1.1. Programme demand, purpose and aims

1.1.1. Uniqueness and rationale of the need for the programme

The Lithuanian University of Health Sciences (LUHS) is the only university offering master's level degree studies in pharmacy in Lithuania. The main objectives of pharmacy programme are to provide scientific pharmaceutical knowledge and to provide students with the competencies required for a broad spectrum of pharmaceutical activities in various sectors of health care. The need for pharmacists increased from 1990 when a number of new pharmaceutical companies were established. In addition, the free movement of pharmacists in the EU boosted demand. However, since 2008 demand has decreased due to the financial situation in Lithuania.

Demand for the pharmacy programme is strong and the admissions system is run by the Association of Lithuanian Higher Education Institutions. Applicants have to rank their programme choices and in 2010 there were 193 first choice applications for state funded places (and 1016 applications if all pharmacy choices are included); there were 18 first choice applications for non state funded places (and 246 if all pharmacy choices are included). The pattern of applications for state funded and non state funded was similar in 2007, 2008 and 2009. Given that pharmacy is competing for students along with subjects such as medicine, it can be concluded that studying pharmacy at LUHS is seen as an attractive option.

1.1.2. Conformity of the programme purpose with institutional, state and international directives

The pharmacy master's degree programme is five years long with a 6-month period of practice in the final year and is 300 ECTS in total. In general, programme content complies with the general requirements for pharmacy studies, set by European Council (EC) directive 2005/36/EC of September 7, 2005 and legal acts valid in Lithuania (NB see comments on the 6-month practice placement below). The pharmacy programme conforms to the requirements of relevant legal regulations, specifically:

- Law on Higher Education and Research of the Republic of Lithuania (Official Gazette, 2009, No 54–2140).
- Minister of Education and Science Order No V-501 "On approval of schedule of general requirements for degree granting undergraduate and integrated studies programmes" (Official Gazette, 2010, 44–2139; and 2010, Nr. 88–4676)
- Studies Quality Assessment Centre Director's Order No 1–94 (2009, 30 October) "Description of the assessment programme of the implemented study programmes and methodological instructions"
- Order of the Minister of Education and Science No ISAK–1562 "On the approval of the description of the procedure for external evaluation and accreditation of the study programmes" (Official Gazette, 2009, No 96–4083; 2009, No 134–5862; 2009, No 152–6860)
- Order of the Minister of Education and Science No ISAK-1552 „ Regulation of the direction of the pharmacy studies“(Official Gazette, 2008, No 64-2432).

In addition, the pharmacy programme pursued in Lithuania is regulated by law on pharmacy (June 26, 2006), higher education and research (April 30, 2009), orders of Ministry of education and science on the approval of pharmacy studies (May 27, 2008), by the Description of general requirements for consecutive and the degree conferring first level study programmes

(April 9, 2010) and the Description of general requirements for master degree level study programmes (June 3, 2010).

1.1.3. Relevance of the programme aims

Programme aims to educate pharmacy master degree graduates to be able to work in different sectors of pharmacy. The contents of the pharmacy programme in general and topics of particular study subjects are directly oriented towards the main goal – to educate master degree pharmacists. The programme aims are appropriate for the professional and academic education and training of pharmacists.

1.2. Learning outcomes of the programme

1.2.1. Comprehensibility and attainability of the learning outcomes

The comprehensive learning outcomes of the programme are:

“Pharmacy university studies graduates:

- will accumulate and evaluate knowledge on pharmaceutical preparations and materials used in their manufacturing;
- will accumulate and evaluate knowledge on pharmaceutical preparation technologies and physical, chemical, biological and microbiological assay of pharmaceuticals;
- will accumulate and evaluate knowledge on metabolism, affect of pharmaceuticals and toxic substances on organism, and on use of pharmaceuticals;
- will accumulate and evaluate knowledge on scientific data required for supply of correct information on pharmaceuticals;
- will accumulate and evaluate knowledge on legal and professional ethics requirements, related to pharmaceutical activities;
- will know and apply knowledge on human anatomy, physiology, illness signs and syndromes;
- will be capable of summarizing pharmacological groups of pharmaceuticals, considering pharmacodynamic and pharmacokinetic alterations of pharmaceuticals;
- will be capable of systematizing medicinal plants, know principles of biological activity of active ingredients of medicinal plants, their incompatibility, preparation for use and quality evaluation;
- will be capable of understanding physical and chemical properties of drug substances, consider them during manufacture of pharmaceutical preparations, explain incompatibilities of drug substances;
- will be capable of identifying, understanding and analyzing problems of pharmaceutical activities, create plans for solution strategy and tactics;
- will be capable of evaluating information on quality of pharmaceuticals and its analysis, perform calculations;
- will be capable of evaluating and applying new pharmacy science technologies, deal with pharmaceutical waste, protect environment;
- will be capable of understanding and solving new and significant problems related to pharmaceutical research and development;
- will be capable of critical evaluation and application of knowledge of drug substances and pharmaceutical preparations;
- will be capable to evaluate results of pharmaceutical and medicinal research, and determine their reliability;
- will be capable to evaluate pharmaceutical activities with respect to its ethical, social, economical and safety aspects;

- will be able to organize and perform wholesale distribution of pharmaceuticals, sales or dispensation of pharmaceuticals to population, and provision of pharmaceutical services and pharmaceutical care in the pharmacy;
- will be able to organize and perform manufacturing of pharmaceuticals in the pharmacies and on industrial scale, provide quality assurance considering current good manufacturing practices;
- will be able to organize and perform standard laboratory assay of pharmaceutical preparations, starting with naming of the problem and finishing with evaluation and qualification of experimental data;
- will be able to employ modern means of informational technologies to solve problems related to pharmaceutical activities;
- will be able to evaluate objectively theoretical and practical innovations of pharmacy science;
- will be able to apply practically new theories, methods and technologies of pharmacy science;
- will be able to perform independent research, apply known analytical methods creatively, know the limits of method application, know how to evaluate the results of assay, and to determine their reliability;
- will be able to solve practical questions of pharmacotherapy, drug substitution and their proper usage;
- will be able to solve professional problems, related to qualitative and quantitative information, including situations when evaluation has to be made having limited information.” (SAR, p. 10-11)

Meeting the learning outcomes is progressive. In the first 2 years students learn basic knowledge supplemented with an introduction to professional aspects of the discipline (e.g. pharmacy ethics). During the first and second year of studies, students acquire important basic knowledge and competences in general, inorganic and organic chemistry, physical and colloid chemistry, analytical chemistry, biochemistry, plant and animal biology, pharmaceutical botany, human anatomy, physiology, pathological physiology, microbiology, environmental health. Students can select elective courses from general university subjects, basic study subjects and professional subjects. During the programme students can choose from 17 study subjects, which comprises 23% of study volume, and 17% amongst them are elective subjects. Other subjects are obligatory. During later study period emphasis is put on special professional training and more advanced and specialist science.

Overall, the outcomes provide students with a progression from basic knowledge to more specialist knowledge and professional studies later in the programme.

1.2.2. Consistency of the learning outcomes

The programme is expressed in both national credits and ECTS for comparability across education systems.

There is a logical link between the learning outcomes and progression through the programme. Study is organized in two semesters per year, in which each semester includes obligatory courses and elective courses from general university subjects and from basic study field subjects (physical science, biomedicine and social science). Study subjects from the special professional training group dominate in the final phase of the programme, and at the 5th year there is an obligatory professional 6 months in practice. When the visiting team discussed the 6-months in practice with students, it was difficult to establish how the 6-months were integrated with the rest of the programme. Therefore, it is recommended that the Faculty considers how the 6-month practice placement can be more fully integrated into the programme. In particular, this means making clear and meaningful links between the placement and preceding periods of academic study, in order to better prepare students for the placement.

Previously, only some students have undertaken a research project but, moving forward, all students will do this.

1.2.3. Transformation of the learning outcomes

Learning outcomes are reviewed regularly at the course level. 2009-2010 saw the introduction of several laws in Lithuania relevant to pharmacy and the programme complies with the new requirements. In 2005 Directive 2005/36 was introduced: it introduced a certain amount of flexibility in delivery (by introducing part-time study as an option) but it did not alter the content of a pharmacy programme. During the visit, staff was able to give examples of recent changes to the programme which demonstrated that learning outcomes were kept up-to-date. At the Faculty level there is an overview of changes to the programme.

Students evaluate the programme on an annual basis and their views are taken into account. During the study visit, the team discussed programme changes with students and they confirmed that there was a mechanism for raising issues with staff. However, they fed back to the team that they were not always told whether or not changes had been made in response to their requests. For this reason, it is a recommendation that the Faculty re-examine feedback systems to ensure that students (and others) are always made aware of the outcomes of feedback – that is, that the feedback loop is closed.

2. Curriculum design

2.1. Programme structure

2.1.1. Sufficiency of the study volume

European Council (EC) Directive 2005/36/EC requires that the initial education and training of pharmacists is a minimum of five years full time (or part time equivalent) with at least four and a half years of the five years at university. The Kaunas programme complies with this. The programme also complies with national requirements for study volume.

2.1.2. Consistency of the study subjects

The study subjects are consistent with the learning outcomes of the programme, which are, in turn, consistent with national and EC requirements for the initial education and training of pharmacists. The programme has been designed to introduce students to simpler concepts in the earlier years of the programme, moving on to more complex matters in the later years. In the first few semesters, the general university subjects prevail and are then replaced by modules from the physical science group, from the general biomedicine subject group and from social science subject group. Towards the end of the programme it is the professional studies that predominate.

To develop the theme in the previous paragraph, in the first two years, the compulsory subjects are general, inorganic and bioinorganic chemistry, physical and colloid chemistry, organic chemistry, analytical chemistry, biochemistry, plant and animal biology, pharmaceutical botany, human anatomy, physiology, pathological physiology, microbiology, environmental health. Options are available too. From the second year, students study drugs and pharmaceutical products, including their evaluation. This includes physico-chemical analysis and pharmaceutical chemistry. In the third and fourth years the professional areas include pharmacognosy, drug chemistry, pharmacology, clinical pharmacy, pharmacotherapy and toxicological chemistry.

The programme has elective subjects as well mandatory ones throughout. There is a progression in the elective subjects too – from simpler to more complex.

2.2. Programme content

2.2.1. Compliance of the contents of the studies with legal acts

In general pharmacy programme complies with basic requirements for the contents of pharmacy programme set by EC directive 2005/36/EC, national regulation of pharmacy area studies and general requirements for the study programmes. The Directive requires ‘necessary theoretical and practical study subjects: plant and animal biology, physics, general and inorganic chemistry, organic chemistry, analytical chemistry, pharmaceutical chemistry, including drug analysis, general and applicable biochemistry (medicinal), anatomy and physiology, medicinal terminology, microbiology, pharmacology and pharmacotherapy, pharmaceutical technology, toxicology, pharmacognosy, legal acts (law), and professional ethics if required’. The programme complies with this.

2.2.2. Comprehensiveness and rationality of programme content

The contents of the pharmacy study programme in general and topics of particular study subjects are directly oriented towards the learning outcomes of the programme. Study subjects and covered topics are comprehensive and complementary to each other, types and methods employed to deliver knowledge depends on the particularity of study subjects. Various forms of lectures, seminars and laboratory works are used to achieve the outcomes of the pharmacy study programme. Based on analysis of study subject descriptions it may be concluded that study subjects taught are up to date.

During the visit, the team had the opportunity to discuss the content of the programme with existing students and also recent graduates. As a group they felt that most aspects of the programme were appropriate but all felt that the programme should include more pharmacology and pharmacy practice. Therefore it is a recommendation that the Faculty should reconsider the amount of pharmacology, clinical pharmacology and pharmacy practice in the programme, with a view to increasing it. This recommendation is made not only as a result of the experience of the expert team but takes into account the views of students currently on the programme and also Kaunas graduates who are now practicing as pharmacists in Lithuania. It does not relate to specialist or advanced work but core knowledge and experience necessary for effective practice as a pharmacist across all sectors.

When the views of students and recent graduate were fed back to academic staff, the dean informed the visiting team that students did not always know what was good for them and that staff were in a better position to judge what should be included in a programme. This concerned the team somewhat, given that among other things they were feeding back the views of practicing Lithuanian pharmacists (albeit the views of a small group). For this reason the team recommends that the Faculty considers how best to take account of the views of pharmacists in Lithuania across all sectors when redesigning its programme.

3. Staff

3.1. Staff composition and turnover

3.1.1. Rationality of the staff composition

Staffing comprises administrative, academic and technical personnel. Work load is regulated by the state Lithuanian Labor code, regulations of Ministry of Science and Education and internal university decisions on time spend on different types of academic activities.

The pharmacy programme at LUHS is administered by the Faculty dean’s office: dean, vice-dean and secretary.

58 lecturers from Faculty of Pharmacy are employed in the pharmacy programme and additionally teachers from other faculties and departments also contribute to the programme.

Professors and associate professors make approximately 63 % of total number of academic staff.

Approximately 74% of faculty lecturers have scientific doctoral degree. Mainly full-time academic staff is employed. The lecturers from other Lithuanian and/or foreign higher education institutions contribute to the programme on an occasional basis.

Academic staff duties and requirements are regulated by the following documents:

Description of procedure of accreditation for teachers and scientific staff of LUH approved by Senate 2010-03-26, decision Nr. 51-05.

Regulations on employment of lecturers who are older than 65 years were approved by Senate in 2001-04-20.

Regulations on elections of head of department, manager of specialized clinics were approved by Senate in 2001-03-21.

Law on Higher Education and Research (Official gazette, 2009, No. 54-2140).

Statute of LUHS (Official gazette, 2010, No. 81-4231; approved on 2010-06-30).

The ratio of lecturers-students in pharmacy programme is 1:12-1:14. Students studying in Lithuanian on the pharmacy programme are divided in 8 groups, and foreign students studying in English usually form 1 group. Typically a group is 3-8 students. One lecturer supervises no more than 4 master theses in one study year.

Technical personnel participate in lab work. They assist lecturers and help students to use laboratory equipment. Currently there are enough technical personnel in the pharmacy faculty departments – about 16 technicians overall.

Staff composition is appropriate but is constrained by the finances of the Faculty.

3.1.2. Turnover of teachers

Some teachers leave university or change position, e.g. are elected as professors. However, in the last five years changes in academic staff has been small and the staffing in pharmacy is relatively static. Changes in personnel tend to result from retirement or maternity leave.

Academic staff participates in 2-week ERASMUS exchange programmes. 3-6 teachers every year have used ERASMUS fellowships and approximately the same number teachers have come from other EU countries through the scheme. The mobility of lecturers and students is organized by LUHS Centre for International Relations and Studies.

3.2. Staff competence

3.2.1. Compliance of staff experience with the study programme

Majority of academic staff has extensive experience in teaching of pharmacy students. In most cases lecturers are the graduates from the Faculty of Pharmacy, who are invited to stay after finishing their doctoral studies. During ERASMUS teacher exchange programmes, academic staff has obtained experience abroad. Professors participate in working groups at the Ministry of Health, as experts in the Medicine Control Agency, Lithuanian Council of Science, in national and international projects, are members of the editorial boards of Lithuanian and foreign scientific journals or act as reviewers. Academic personnel of the Faculty participated in projects financed by EU structural funds for the preparation of materials for pharmacy studies in Lithuanian.

Academic staff has experience in supervising research, especially students' master's degree theses. However, the new requirement for all students to produce a thesis will increase the supervisory demands on staff. For this reason it is a recommendation that the introduction of this requirement is monitored to ensure that inexperienced staff are prepared for this role.

The number of publications originating from the Faculty of Pharmacy has increased significantly since the previous accreditation. Some lecturers are members of editorial boards of scientific journals and are invited to act as scientific experts and consultants in social groups and commissions.

There are few part-time lecturers in the pharmacy programme. However, some teachers from pharmaceutical companies, institutions and State Medicines Control Agency are invited to

give lectures. Also, some members of faculty academic staff are employed at pharmaceutical manufacturing companies, work in the pharmacies or in pharmaceutical wholesaling companies, some are members of editorial board of professional pharmaceutical journals.

3.2.2. Consistency of teachers' professional development

The academic staff of the Faculty comprises professionals qualified in appropriate scientific fields. It is a requirement that lecturers must pass a 40-hour training programme on educational competence every 5 years. 44 members of faculty of pharmacy academic staff have gone through that training programme. For continuing professional development purposes, they are opportunities to participate in national and international training events, conferences, seminars, intense training programmes, teaching programmes etc.

Lecturers have visited EU universities via ERASMUS exchange programmes with institutions in Poland, Czech Republic, Germany, Finland, France, Italy, Spain, UK, and Netherlands.

At university academic staff has no permanent job contracts. Every five years they have to compete for the position again when qualifications and suitability of lecturers is assessed. If the assessed applicant fails to meet set minimum requirements, his/her academic activities are suspended. Existing system of assessment ensures that academic personnel maintain their competence as both researchers and teachers.

However, usually for associate and full professorships an emphasis is placed on scholarship rather than on academic duties and supervising of programmes. In part this is to ensure that professors are able to contribute to international peer-refereed journals and attract grants for research.

4. Facilities and learning resources

4.1. Facilities

4.1.1. Sufficiency and suitability of premises for studies

Currently, the Faculty of Pharmacy has sufficient infrastructure to support studies. The opening of new Library has been a significant development in this respect. The newly constructed Pharmacy Building will significantly enhance the existing base enabling students the access to the-state-of-the art facilities.

4.1.2. Suitability and sufficiency of equipment for studies

The laboratory equipment is sufficient and appropriate for studies. It is perceived that this will be upgraded and enhanced by the tender of instrumentation to be installed in the new building.

4.1.3. Suitability and accessibility of the resources for practical training

The University Pharmacy provides the vital resource for practical training. The facility fulfils well its function as an indispensable resource for the training of Pharmacy students. Again, the planned relocation of the University Pharmacy to the new building should provide further integration of the practice of pharmacy into the programme. University pharmacy facilities account for about 50% of placements; the remainder are at public or hospital pharmacies, according to the submitted self evaluation document.

The 6 months is split into three two-month blocks. The team was unclear whether all three of the two-month blocks complied with Directive 2005/36's requirement for the six months to be 'in a pharmacy which is open to the public or in a hospital, under the supervision of that hospital's pharmaceutical department' (Directive 2005/36, Section 7, Article 44). This should be clarified. Also, the Faculty may wish to clarify with the Commission whether or not three two-month blocks is equivalent to the requirement for a 'six-month traineeship' (ibid).

4.2. Learning resources

4.2.1. Suitability and accessibility of books, textbooks and periodical publications

This issue was raised during the previous accreditation. The LUHS has invested in pharmacy textbooks and the new Library offers good on-line facilities for students to take advantage of online resources. The modern textbooks and on-line journals are readily available for students.

4.2.2. Suitability and accessibility of learning materials

Learning materials are readily available for students through Library, University Pharmacy and Departmental resources.

The evaluation of this section is brief because it will change substantially when pharmacy moves to its new, purpose-built facilities.

5. Study process and student assessment

5.1. Student admission

5.1.1. Rationality of requirements for admission to the studies

There are no special requirements to enter pharmacy study programme. Students are admitted through the general admissions process in accordance with stated admission requirements. A centralized admission procedure is organized by Association of Lithuanian Higher Education Institutions. In 2009 the “student’s basket” concept was introduced to guarantee financial state support for the best graduates from the secondary schools. The number of students with the government support may vary from year to year, but this does not necessary influence the total number of admitted students. Students who are not supported by the government have to pay for their studies. The number of these students is determined by the university.

5.1.2. Efficiency of enhancing the motivation of applicants and new students

Pharmacy faculty staff present pharmacy programme to the public during “open days” and higher education fairs in Vilnius, Kaunas and some regional locations. Additional information about pharmacy study programme is available on the university’s internet site. The open days and fairs are run by both staff in the faculty and also by the student association. As well as open days and fairs, the faculty and students also visit secondary schools. It is felt that personal contact and hearing about the experiences of current students is a valuable way to promote pharmacy study at Kaunas.

Apart from the general motivation of students to study, LUHS does have a grants system based both on need but also on student achievement, which is rewarded where possible. Being allowed to participate in ERASMUS programmes is competitive and opportunities are given to students on the basis of merit.

5.2. Study process

5.2.1. Rationality of the programme schedule

Timetable design is in accordance with the general regulations of Ministry of Education and Research applicable to integral and second level university studies, to decision of LUHS Senate (No. 43-08, 2009-06-30). The volume of studies in each semester is 30 ECTS credits.

Schedule of the study classes is quite evenly distributed between weekdays despite the long distance between some departments, which are located in different parts of Kaunas. There are some “long days” in the schedule that start at 8 a.m. and last till 8.30 p.m.; however this may be considered as an exception not as a rule. In addition, it should be noted that after new building of

Faculty of Pharmacy will start functioning, most study subjects will be located in a single place thus saving time of the students and positively affecting programme scheduling.

Distribution of control tests or colloquies needs some improvement. It was noticed that control tests or colloquies of different subjects are concentrated during one week or even one day. Such schedule of tests requires a lot of concentration; it may raise unnecessary stress and negatively influence students' performance. Therefore it is a condition that staff should consider planning tests and colloquies in advance in such a way that they are spread more evenly across a semester.

There are not more than 5 examinations in one session and not less than 3 days are given for preparation.

5.2.2. Student academic performance

The student dropout rate has been relatively low during last 5 years (9-14 dropouts in total in one year). Students' decisions to leave the programme in the 1st and 2nd years were due to transferring to another programme or unsatisfactory academic results. Student dropouts in the 3rd and 4th years are minimal and mainly personal reasons dominate. The main cause for dropout in the last year of studies is study debts from previous years. There were no dropouts because of delayed payment for the studies. The university has discretion to defer payment if necessary.

Research-oriented students can participate in research and do present the results of their research in student research conferences.

5.2.3. Mobility of teachers and students

The number of lecturers participating in mobility programmes has remained stable during last 5 years. Every year four to five teachers receive grants to visit other universities. Usually lecturers use Erasmus mobility grants to arrange visits to EU universities. A significant obstacle for academic staff mobility is language; similar problems limit the number of visiting lecturers at LUHS.

The mobility of students is organized by LUHS Centre for International Relations and Studies. This unit organizes the selection of students for studies overseas. The main selection criteria are study results, knowledge of a relevant foreign language and the motivation of a student. Most students travel to other universities through Erasmus academic mobility programmes, and this limits the number of outgoing students to the agreed number of funded places. The results of the studies abroad are evaluated in accordance with regulations set by Ministry of Education and Research and by LUHS. Nine to fourteen students study in other universities through Erasmus programmes yearly.

The mobility of students is stimulated by informing them about possibilities for studies abroad in a weekly paper „Ave vita“, and by placing appropriate information on the student information board, discussing such possibilities individually with interested students and talking about the advantages of such foreign studies, such as the opportunity to participate in scientific research projects during such visits etc.

5.3. Student support

5.3.1. Usefulness of academic support

Students are introduced to the programme during the first few weeks through an introductory programme. The programme and subjects within it are available on the university's website. Any changes to the programme are discussed in advance at Faculty Board where student representatives are members. Students can propose changes to the programme, subjects or even teaching staff.

Students stated that teachers could be approached to discuss their studies when needed.

As a general rule, LUHS is not involved in any discussion concerning the future career and employment of students. This issue is left for students themselves. Students with good academic results may be involved in research and may plan their career at the Faculty. During the last few years, an alumni association, which unites all the graduates from the Pharmacy Faculty, was founded. The association is a useful vehicle for making contacts with employers and finding out about job opportunities. It is planned to create a careers centre at LUHS to supply information about career possibilities in pharmacy.

5.3.2. Efficiency of social support

The amount of student stipends and grants is set by the Senate of LUHS. Students can be awarded social stipends that are regulated by State studies fund in accordance with the resolution of Government of the Republic of Lithuania No. 1801 (*Official Gazette*, 2009-12-31, Nr. 158-7187). LUHS's stipend commission can decide to award amounts from the fund formed from the state budget allocation. Such stipends are awarded to the best students. One-off motivating stipends can be paid for students in cases of specific needs.

Students of LUHS can live in university hostels. Priority is given to first year students.

Stipends and grants are available to students. They are awarded to students on the basis of merit.

Students are able to participate in the following art and sport activities inside university: the sport club „Medikas“, (basketball, football, swimming, tennis and others), choir „Neris“, group of folk dances „Ave Vita“.

5.4. Student achievement assessment

5.4.1. Suitability of assessment criteria and their publicity

Student achievements are directly related to learning outcomes, and the basic principles are set in the LUHS Study regulation and defined in descriptions of each specific study subject.

Composition of assessment grades may vary between different subjects and can be found in the description of every subject. Most often assessment grades comprise the cumulative grade of colloquies or tests and a grade of examination. The percentage of these grades may vary between subjects, but usually the larger part is made up by a cumulative grade from tests or colloquies. However there were some subjects in whom assessment grade also included attendance at lectures or seminars and other subject-specific requirements.

5.4.2. Feedback efficiency

Students are directly informed of their marks, which can be accessed through a password protected database. Students may discuss their marks with teachers.

5.4.3. Efficiency of final thesis assessment

The requirements for the preparation of final theses and principles of evaluation are approved by the Faculty Council and are available on the internet site of the faculty.

Currently, only 10-20% of students have chosen preparation and defense of final theses instead of other forms of assessment. According to new pharmacy programme that has come into force in 2010, all students should to prepare master theses and defend them. Elsewhere in this report the need to plan carefully for a 5-10-fold increase in the number of theses to be supervised has been identified.

5.4.4. Functionality of the system for assessment and recognition of achievements acquired in non-formal and self-education

Because of the construction of the programme, there is no need for a system of this kind: by this we mean that the programme is proscribed. However, ERASMUS study is recognized and the Faculty and students recognize exchange schemes such as these as having a high value.

Also, the 6 months of practical experience in pharmacies is recognized, although while it may not be taught within the Faculty it is managed by the Faculty and is a known quantity.

5.5. Graduates placement

5.5.1. Expediency of graduate placement

Pharmacy graduates from Kaunas are well represented in Lithuanian pharmacy. They are employed across the various sectors of pharmacy, including public and hospital pharmacies, pharmaceutical wholesale companies, pharmacy consulting companies, governmental pharmacy institutions, pharmaceutical manufacturing companies, and representative offices of foreign pharmaceutical companies.

5-8% of pharmacy graduates remain at Kaunas to study for doctorates and 10-12% emigrate to work elsewhere.

LUHS is the monopoly supplier of pharmacy education at this advanced level. Nevertheless, it is clear that LUHS clearly supplies graduates of the right caliber for professional work both in Lithuania and abroad.

6. Programme management

6.1. Programme administration

6.1.1. Efficiency of the programme management activities

The senior Faculty body responsible for the quality assurance of the programme is the Faculty Council. The Faculty Council is made up of lecturers from the programme, the Dean and a student representative. The work of the Council focuses on two areas (commissions): science and studies (the programme). The studies commission meets at least once per semester and can make recommendations to the Council, the Rectorate or the Senate of LUHS. Information relating to the quality assurance of the programme is kept in the Dean's office and is also available on the internet.

6.2. Internal quality assurance

6.2.1. Suitability of the programme quality evaluation

LUHS has an internal quality assurance system for the programme. The system is set in statute and has requirements at departmental, faculty and university levels (and beyond). Each year the Dean reports to the Faculty's Council on the work of the Faculty. Feeding into this is a meeting in the autumn between the Dean and 1st Year students. In addition, students fill in evaluation reports. Evaluations are fed back to staff and the evaluations are published annually in the University's paper 'Ave Vita' and also on the internet.

The quality assurance processes used at LUHS are appropriate however, elsewhere the expert team has commented on the extent to which staff was willing to take account of the views of students. In terms of best practice, it was the team's impression that staff was less willing to take account of student (and graduate) views than would be the case elsewhere.

6.2.2. Efficiency of the programme quality improvement

The programme develops by taking account of formal and informal input from students. Changes made are presented to the Rectorate at least once per semester. When issues are identified, an action plan must be produced to address the concern. 'Ave Vita' is the organ through which changes are made public. Some of the changes are also included in an annual report by the Rector.

6.2.3. Efficiency of stakeholders participation.

Staff and students can contribute to the quality assurance of the programme. The alumni association is used to gather external views. Also, students meet with potential employers to gauge whether or not the programme is meeting their needs. Finally, students are encouraged to participate in relevant conferences.

The team has commented elsewhere on the value of external views: the team has commented that they were concerned about the lack of weight given to these views. The core of the concern is that academic rather than an appropriate balance of academic and professional views form the basis of programme development.

III. RECOMMENDATIONS

Essential

3.1. Reconsider the amount of pharmacology, clinical pharmacology and pharmacy practice in the programme, with a view to increasing it. This recommendation is made not only as a result of the experience of the expert team but takes into account the views of students currently on the programme and also Kaunas graduates who are now practicing as pharmacists in Lithuania. It does not relate to specialist or advanced work but core knowledge and experience necessary for effective practice as a pharmacist across all sectors.

3.2. Monitor proposals for implementing a thesis requirement for all students. The expert team heard that staff had been made aware of the new requirement and that it had been discussed at a senior level within the Faculty. However, more junior staff had a vaguer understanding of what was to be implemented. In particular the expert team recommends that support and guidance is given to staff that have less or no experience of supervising undergraduate master's level theses.

Recommended

3.3 Re-examine feedback systems to ensure that students (and others) are always made aware of the outcomes of feedback – that is, that the feedback loop is closed. The reason for this recommendation is that both students and external participants in the evaluation process told the expert team that they had not always, or had not ever, found out what had been changed as a result of their input.

3.4 Monitor proposals for implementing a thesis requirement for all students. The expert team heard that staff had been made aware of the new requirement and that it had been discussed at a senior level within the Faculty. However, more junior staff had a vaguer understanding of what was to be implemented. In particular the expert team recommends that support and guidance is given to staff that have less or no experience of supervising undergraduate master's level theses.

3.5 Consider how the views of practicing pharmacists in Lithuania across all sectors can inform programme design in the future. This is to ensure that the programme at Kaunas gives students the best possible academic and practice-based preparation for working as a pharmacist, which is why students have enrolled on the programme.

3.6 Consider how the 6-month practice placement can be more fully integrated into the programme. In particular, this means making clear and meaningful links between the placement and preceding periods of academic study, in order to better prepare students for the placement.

IV. GENERAL ASSESSMENT

The study programme *Pharmacy* (state code – 601B20001) is given **positive** evaluation.

Study programme assessment in points by fields of assessment.

No.	Evaluation Area	Evaluation Area in Points*
1.	Programme aims and learning outcomes	3
2.	Curriculum design	3
3.	Staff	3
4.	Material resources	4
5.	Study process and assessment (student admission, study process student support, achievement assessment)	3
6.	Programme management (programme administration, internal quality assurance)	3
	Total:	19

*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:

Damian Richard Day

Grupės nariai:
Team members:

Prof.dr. Marek Radomski

Prof.dr. Ruta Muceniece

Dr. Jolanta Gulbinovič