

KAUNAS UNIVERSITY OF MEDICINE

## **Final Assessment Report**

Programme under assessment:

University Master Programme in Pharmacy (60109B101)

## 1. Introduction

Title of study programme	Pharmacy
State Code	60109B101
Kind of study <sup>1</sup>	M
Mode of study <sup>2</sup> (duration in years)	F (5)
Volume of study programme in credits	200
Degree and/or Professional qualification to be awarded	Master of Pharmacy
Programme registration date, order No.	02 08 2001 order No. 1187

This assessment report has been produced as follows: The members of the Expert Group received the self-evaluation report of the program in April 2008. The Expert Group discussed the contents of the self-evaluation report at their first meeting on May 6, 2008 and produced a draft report. The Expert Group conducted a site visit to Kaunas University of Medicine on May 8, 2008, where the experts were able to view the facilities and equipment of relevance to the programme. The Experts met with members of the administrative and academic staff of the institution, current students, recent graduates and employers of graduates of the programme. The responses to the questions posed were documented and discussed among the experts, and this discussion informed the preparation of this Assessment Report, which represents the opinions of expert group as a whole.

The Faculty of Pharmacy is one of 5 faculties of the Kaunas University of Medicine, which also includes several university clinics. The pharmacy study process (teaching) is currently organized into 3 departments: Pharmaceutical Chemistry and Pharmacognosy, Pharmaceutical Technology and Social Pharmacy, Analytical Chemistry and Toxicology. There are plans to re-organise the Faculty by sub-dividing these departments and creating a new department of Clinical Pharmacy. Teaching is delivered on 2 sites and staff from other departments within the university contribute to the teaching of pharmacy students. A new building is planned for the Pharmacy Faculty in 2010.

---

<sup>1</sup> **NU** – Non-university studies; **U** – undergraduate studies; **M** – master studies; **SP** – special professional studies; **I** – integrated studies;

<sup>2</sup> **F** – full-time; **PE** – part-time (evening); **PX** – part-time (extramural).

Research is less formally organized, with scope for flexibility and collaboration between departments.

## **2. Aims and Goals of Study Programme**

According to the self evaluation report the principal aim of the Master's study programme of pharmacy is to educate and train highly qualified pharmacy specialists capable to work in pharmacies, pharmaceutical wholesale enterprises, offices of pharmaceutical companies, toxicology and quality control laboratories, pharmaceutical industrial companies, and teaching and educational-scientific institutions. The aims and goals of this programme should meet the requirements of the Pharmacy Law of the Republic of Lithuania No. X-709 from June 22, 2006.

## **3. Analysis of programmes**

### **3.1 Structure, contents and study methods**

According to the self evaluation report the duration of the Master's study program in pharmacy takes 5 years and includes both theoretical studies and practice studies modules. Compulsory subjects comprise 157 credits (6280 hours), while elective subjects only 36 credits (1440 hours), and freely chosen subjects 7 credits (280 hours). This broad program takes 8000 hours (200 credits): 75 % (6000 hrs) is carried out as an auditorium work (class time) and 25 % (2000 hrs) as independent work.

The design of the curriculum is based on three groups of subjects, i.e. general university subjects, basic study subjects, and special (professional) subjects. The general university education and the basis of study field are covered during the 1<sup>st</sup> and 2<sup>nd</sup> years of the study program. Great attention is paid to botany and chemical disciplines. Some courses of special subjects are offered from the third semester on, but most of the special subjects are studied from the 3<sup>rd</sup> study year until the end of the programme. Few of the elective subjects offered appear to profile the students' development and career needs, and less focus on patient oriented subjects (clinical pharmacy, pharmacotherapy, pharmaceutical care, communication skills) was also evident.

Upon completion of their five year study students have either to pass the State (final) examination or to defend the Master's thesis. Masters' theses are offered only to the best students (10-15 %) having excellent results within the first three years of their study. Theses are prepared during one or two years according to the given topics.

The study program is changing at present according to new legislation.

### **3.2. Execution of studies and support for students**

Class (contact) time is divided into lectures, seminars, and practical work. The amount of contact hours per course is very high, and the time for student-oriented self study is limited. The overall impression of the study execution is a heavily teacher-oriented contact hour loaded programme.

In the self-assessment material it was postulated that The Faculty encourages cooperation between teachers and students not only in the process of studies, but also in scientific research. Teachers assist students in scientific activity and supervise this activity, and thus students become familiarized with research methods and engage in experimental-research work. In the site visit it was revealed that only about 10-15 % of students are involved in scientific research during their studies. The research areas were identified as phytotherapy, social pharmacy, determination of toxic agents in plant material, and synthesis of new chemical entities. The options for the students are master thesis or final examination, and only 10 % of students are able to prepare master thesis. This was said to be due to limited laboratory space and insufficient of research equipment. During this academic year 2007, 11 students of pharmacy prepared and defended their Master's theses, and all of these theses were evaluated as "excellent" (10). This is an extraordinary good result, and the experts expressed some concern about this.

The students find the execution of their studies, and the academic support they receive from teachers and staff adequate. They felt that teachers are easy to approach and they receive advice and help for their problems in studies. Staff listen to student suggestions but the outcome of those suggestions is unclear. The feedback from the students is collected at the end of every semester and handled by the faculty committee. However, students do not get any response to their feedback. Further, there is no official body for the teachers and students, in which they could together discuss the issues on the study program.

### **3.3.Variation in the number of students**

In the years 2002-2006, the number of class A applicants has varied between 210-309 per year, showing decreasing tendency. The number of entrants has been around 100 per year, corresponding to acceptance rate between 30-50 % of class A applicants. This can be considered to be appropriate acceptance rate, and indicates good popularity of the program.

### **3.4.Teaching staff**

In the provided background material, 24 professors, 44 associate professors, and 113 other teacher were listed in teaching staff. During the site visit we learned that 55 of them, including 6 professors, are the members of Faculty of Pharmacy. The remainder of the teachers are members of other faculties at the Kaunas Medical University. However, the overall quality and

quantity of teaching staff is appropriate, and sufficient for the execution of the program. Students are also generally satisfied with the staff.

### **3.5.Strengths and Weaknesses of the programme**

Strengths:

- Comprehensive curriculum with the inclusion of at least some clinical subjects underpinned by pharmaceutical sciences
- Potential for an interdisciplinary learning environment with medical and dentistry students.
- Wide range of learning, teaching and assessment methods employed
- Opportunity for students to develop language skills
- Availability of teaching staff from within the Faculty and from other university departments to cover a wide range of subjects
- Staff from hospitals and industry involved in teaching on the programme
- Wide range of elective courses in different areas of pharmacy/science and healthcare

Weaknesses:

- Language issues preclude use of many standard text books. Books in Lithuanian language of uncertain quality
- Lack of facilities (laboratories, lecture rooms) for number of students on programme.
- Need for teaching on Saturdays
- Limited and old laboratory equipment
- System in which not all students are required to produce a Master's thesis – State examination is currently the predominant route for graduation (2007: 11 Masters thesis, 86 State exam)
- Syllabus is currently dominated by chemistry and botany subjects at the expense of other important subjects such as biopharmacy and communication skills.

### **4.Material conditions**

Laboratory equipment is outdated and insufficient. Under these conditions sufficient practical training is complicated and students cannot participate properly in scientific activities and thus obtain their research skills.

There is a project to construct a new building of the Faculty of Pharmacy. It is planned that the number of classrooms and laboratories will increase and the laboratory equipment will be updated.

The new modern University library has been recently opened, the reading room of the library may simultaneously house over 60 students and there are more than 56 computers there.

However, the amount of special literature, international periodicals and textbooks for pharmacy students is not sufficient.

## **5.External relations**

The Faculty of Pharmacy is taking part in Socrates/Erasmus program for students and lecturers in Italy, Portugal, Poland, Czech Republic, Spain and France.

## **6.Feedback**

At the end of semester students fill in the anonymous questionnaire regarding the course contents, teaching quality.

However, there is no well defined system for student and staff communication.

There is no well defined system for relations between the faculty and employers or professional associations as well.

## **7. Internal assurance of study quality**

There appears to be no formal procedures for maintaining study quality. The self assessment report of 2007 produced by the programme staff provides a useful review of quality issues, but there is no system to record and document actions taken on deficiencies described in this report. A group convened from the Faculty Board has responsibility for an overview of the curriculum, but there was no apparent mechanism for monitoring the quality of learning, teaching or assessment.

## **8.General assessment of the programme within the study field**

In the opinion of the experts the university Master's programme of pharmacy at Kaunas University of Medicine provides an appropriate education for students wishing to enter the pharmacy profession. The University already has a new library building and a new building for pharmacy will soon be under construction, with completion scheduled for May 2010. This will significantly improve the facilities for the delivery of this programme.

The expert panel learned that all students will be required to prepare a Master's thesis within 3 years. This is a welcome development. The student and employer groups expressed a wish that the range of elective subjects should be reviewed and that subjects of relevance to pharmaceutical care, communication skills and modern pharmaceutical analysis should be added. There was also concern that the programme is rather traditional and that some of the chemistry and botanical content could be reduced to allow inclusion of the emerging areas in pharmaceutical care and clinical pharmacy. Despite the above comments, it was our opinion that the academic staff involved with this programme recognised the need to develop these new areas of pharmacy. The proposed creation of a new Department of Clinical Pharmacy is clear evidence of this. However, the staff-student contact time (6000 hours total) is very high, and there is scope for the introduction of more problem-based learning.

### **8.1 Specific Recommendations**

- A staff-student liaison committee should be created and should meet each semester
- Creation of a committee/discussion forum for academic staff and pharmacy employers
- Carefully consider the proposed re-organisation of the Faculty of Pharmacy. The creation of too many departments could increase bureaucracy.
- Reduce the contact (auditorium) hours and introduce more problem-based learning.
- Update library text books, particularly in rapidly developing fields (e.g. molecular pharmacology).
- Revise elective (optional) subjects to include psychology/communication skills, modern analytical chemistry, clinical pharmacy, and marketing/financial management skills
- Reduce the amount of chemistry and botany to produce a more balanced syllabus which accurately reflects the needs of modern pharmacy practice.

