University of Maribor

Faculty of Medicine

Taborska ulica 8
SI - 2000 Maribor, Slovenia

UNIVERSITY STUDY PROGRAM "GENERAL MEDICINE" AT

THE FACULTY OF MEDICINE

OF THE UNIVERSITY OF MARIBOR

MARIBOR, August 2015

The Senate of the Faculty of Medicine of
The University of Maribor
Taborska 8
2000 Maribor

The Faculty of Medicine of the University of Maribor was founded with the Act on the reorganization of the University of Maribor passed by the National Assembly of the Republic of Slovenia (further: RS) on October 2, 2003.

The recent founding of the Faculty represents an institutional basis for the further development of educational and scientific research activities in the field of medical science within the University of Maribor.

Short arguments in support of the program

The basic contents for the preparation of the study program "General Medicine" are given by the *Higher education master plan* (Official Gazette RS, No. 20/2002), which defines the need for an extended possibility of studying medicine in the RS, as stated under item 2.3.5:
"The central tasks of the Higher education master plan are carried out by the University of Ljubljana and the University of Maribor. The fulfillment of conditions for quality work will make a suitable reform of the present study programs and the introduction of new ones possible, in accordance with the development programs of the universities, the staff situation in individual fields and the need for working places in the country and its regions. Special attention will be given to healthcare – and to extending the possibilities of medical studies in particular …"

The founding of the Faculty of Medicine and the implementation of medical studies are developmental priorities of the University of Maribor, belonging in the broader sphere of a supplement to the educational tender and scientific research activities under the auspices of the new faculty and study programs. Educating home staff in various fields of science is essential for a strong national identity and the prerequisite for an equivalent and competitive position of Slovene intellectuals in the European and broader international intellectual space. This will additionally gain in importance with the entry of the RS into the European Union in the year 2004. The development of medical sciences in the geographic region by the state border will certainly contribute to the fortification of national intellectual potentials.

The central argument in support of the need for additional education in the field of medicine ensues from the need for physicians and from the present educational capacities not being able to provide a sufficient number of such personnel for the RS.

So far, undergraduate education of students in general medicine has only been going on at the Faculty of Medicine in Ljubljana. All these years, enrollment was limited at that Faculty, and in the last years only 150 students were accepted per year[1]. In view of the demographic movement in

[1] For the school year 2003/04, the Faculty of Medicine of the University of Ljubljana for the first time offered 200 places for enrollment in the study program Medicine, which according to experts is the upper

Slovenia and with regard to other significant structural changes in Slovene society in the past decade, it became evident that such a number of graduates could not even warrant the simple replacement of retiring physicians, let alone follow the rapid development of various courses of clinical medicine with their own demand for physicians.

The present number of physicians is a cause for concern. In our healthcare system so far, the number of available physicians was frequently equated with the number of physicians paid according to hours performed. Official institutions generally stated that there were 5300 physicians in Slovenia[2]. However, a precise review reveals a different situation. According to the Medical Association records, in January 2000 Slovenia had 3944 physicians and 1164 dentists. If we subtract the physicians not working with patients (361), 1.9 physicians per 1000 inhabitants are left over. According to data of the Ministry of Health given on May 9, 2002[3], there were 4541 active physicians in Slovenia at the end of the year 2001. A comparison of data with those from some European countries (Switzerland, Denmark, The Netherlands, Austria, Finland, Germany, etc.) shows a relatively large lag. A cause of even greater concern is the analysis of the age-structure of the physicians. The anticipated number of physicians retiring in the next six years in Slovenia is 767, which cannot be replaced by the present number of graduates. If we wanted to decrease the overburdening of our physicians – according to Slovene and European law – by one half within the next 10 years, we would immediately have to employ at least 350 specialists, which we do not have[4]. According to the mentioned evaluation by the Ministry of Health on May 9, 2002, based on an analysis of demographic characteristics of the population of physicians for the period between 2002 and 2020, Slovenia needs 1100 physicians, or 25% more physicians. Other projects regarding the need of physicians in Slovenia for the same period, based on the analysis of demographic characteristics of the population of physicians, were prepared by the Institute of Public Health of the RS. The mentioned documents are found under Enclosure 9.

It needs to be noted that the data revealed by the Faculty of Medicine in Ljubljana itself show that in the past 10 years that faculty had increased the number of enrolled students with the utmost efforts. The nature of medical studies in the period of gaining knowledge in clinical subjects limits the number of students at individual clinics to about 100. Namely, the learning of clinical subjects requires working with patients. Such a study method cannot be avoided, and for obvious reasons it does not allow more than two or three students at the patient's bedside. For that very reason a large part of practical work in clinical subjects has been going on at various Slovene hospitals, Maribor Teaching Hospital carrying a significant part of the burden of the extended enrollment at the Faculty of Medicine in Ljubljana. *From this we gather that Maribor Teaching Hospital represents a great potential regarding the execution of medical studies[5].*

limit for warranting good quality studies (Information of The Council of Higher Education of the RS regarding the procedures for the founding of the Faculty of Medicine at the University of Maribor on April 14, 2003).

[2] Statistical Office of the RS.

[3] Ministry of Health, Evaluation of required immatriculation at the MF in 2002-2003 based on an analysis of demographic characteristics of the population of physicians, May 9, 2002.

[4] Data by FIDES and Slovene Medical Association. ISIS, February 2000.

[5] Vodušek DB. Slovenske in evropske dimenzije razvoja študija nevrologije na Medicinski fakulteti Univerze v Ljubljani. Stanovnik B, Golič L, Kralj A. Razvoj visokega šolstva v Sloveniji. SAZU. Ljubljana 2001.97-100.

The information regarding the situation in the field of education in the RS between 1990 and 2000 is also very important[6]. In this period of time the number of higher education institutions increased from 6 to 17, the number of enrolled undergraduate students increased from 33,565 to 68,427, while the number of students at the MF in Ljubljana practically remained the same. The favorable academic competitive position, lacking in the field of medical studies in Slovenia in the past, also needs to be mentioned.

Dean of the Faculty of Medicine of
the University of Maribor
Prof. Ivan Krajnc, MD, PhD

[6] Statistical Office of the RS

1. GENERAL PROGRAM DATA

1.1 Title of study program:
General Medicine.

1.2 Type of study program:
Undergraduate program for obtaining a university degree.

1.3 Definition of basic aims of the program:
The aim of the proposed study program General Medicine is to prepare the students to work independently as physicians.

- In that sense they will acquire knowledge on health and its preservation, on diseases and preventive measures in the context of the individual and his role in the family and society.
- They will acquire the basic clinical skills such as determining the course of a disease, the performing of physical investigations and interpreting their results. They will be qualified to carry out the basic technical procedures and to communicate with patients.
- The students will acquire the understanding necessary for reaching the high standards of medical practice and ethics in caring for the individual, the population as well as for their personal professional development.

Alongside the select goals originating from medical sciences, broader social goals will also be realized by the execution of the university study program General Medicine:

- Improvement of healthcare and thus the health standard of the population of NE Slovenia.
- Assurance of a sufficient number of physicians in the RS in accordance with the evaluation of the Ministry of Health based on an analysis of demographic characteristics of the population of physicians.
- Assurance of a faster development of medical sciences on the regional level, and with the cooperation of the Faculty of Medicine of the University of Ljubljana on the national level. The University of Maribor (further: UM) also has the infrastructure and substance potential for interdisciplinary collaboration in the field of research and education and the foundation for further international collaboration.

1. 4 Determination of program duration:
The General Medicine undergraduate study program takes 6 years (12 semesters) to complete and is evaluated with 360 ECTS points.

1. 5 Definition of connection with other programs

Regarding the basic preclinical subjects, the program is connected with some of the subjects of existing programs carried out at the UM Faculty of Chemistry and Chemical Engineering, the Faculty of Education, the Faculty of Electrical Engineering and Computer Science, while in clinical subjects it is adjusted to the professional and research activities of Maribor Teaching Hospital. Many university teachers and collaborators of the Faculty of Medicine of the UM will also take part in the teaching process of the College of Nursing Studies in the future, thus contributing to the professional development of this higher education institution as well.

Based on the credit study system elaborated by the UM and carried out with its members since 2000/2001, students in the General Medicine study program will be able to choose individual subjects offered by other faculties of the UM and vice versa, students of other member faculties will be able to choose individual subjects from the General Medicine study program, thus additionally enriching the contents of their studies.

The university study program General Medicine is adjusted to the renovated programs of medical studies within the European Union and allows a transition between individual medical faculties in accordance with the European Credit Transfer System (ECTS). The contents of individual subjects are also adjusted to the university study program Medicine at the Faculty of Medicine of the University of Ljubljana. A detailed comparison is found in *Enclosure 3*, where an evaluation is given of the comparability of the study program General Medicine with those of the medical faculties at the universities of Oulu, Manchester, Graz as well as with the study program Medicine of the Faculty of Medicine of the University of Ljubljana.

1. 6 Manner of including the program into the credit study system

The study program is prepared according to the model of European medical faculties, which have their own programs evaluated in accordance with ECTS points. The subject schedule for the study program General Medicine is also evaluated in accordance with the instructions of the European Commission[7] for the execution of the credit study system. Thus students and teachers will be included in the international exchange within the program Socrates/Erasmus, where the UM is included. The execution of studies based on the ECTS also allows the exchange of students and university teachers with the Faculty of Medicine of the University of Ljubljana.

Apart from the international exchange within the Socrates/Erasmus program, the UM offers its students a variegation of their study with the possibility of choosing from among subjects offered by UM members within the credit system, as mentioned above under 1.5.

1. 7 Manner of including the program into interuniversity and international forms of collaboration

Researchers, physicians and university teachers who will take part in the execution of the study program General Medicine have been collaborating with the Faculty of Medicine in Ljubljana for decades and are currently monitoring the practical work in individual clinical subjects at Maribor Teaching Hospital.

In the past already the programs of the proposed researchers, teachers and physicians at Maribor Teaching Hospital have been included in the international exchange. The proposed study program will be included in similar ways in the interuniversity and international forms of collaboration by way of the UM, which has

[7] European Credit Transfer System: ECTS Users' Guide, 31.03.1998. http://www.crui.It/ECTS/English/guide.htm

signed agreements regarding collaboration with over 50 universities all over the world. The manner of inclusion in the interuniversity and international forms of collaboration by way of the Socrates/Erasmus program and the ECTS has been mentioned above.

From *Enclosure 3* regarding international comparability of the study program General Medicine it is evident that cooperation with various medical faculties already occurred as early as during the preparation of the present study program General Medicine. From the documentation enclosed, an adjustment to the study program Medicine at the Faculty of Medicine of the University in Ljubljana[8] is evident. The management of the Faculty of Medicine of the University of Oulu expressed their readiness to cooperate with the UM in preparing the subject schedule. A similar form of collaboration has also been established with the University of Manchester, which is taking part in the preparation of the subject schedule, with special stress on the formation of the so-called PBL modules. Problem based learning (PBL) is presented under Enclosure 2.3.

1. 8 Program selfevaluation

The execution of the study program will give continuous return information on the quality and the relevance of program contents and the adequacy of its execution, regarding students as well as the teachers and staff involved in the program.

The evaluation of the university study program General Medicine will proceed by:

a) A continuous interaction between subject holders with experience gained by teaching;
b) Making inquiries with students;
c) Constant contact with the most prominent researchers (experts),
d) Constant contact with partner universities abroad and implementation of their experience, under consideration of the specific conditions and requirements in Slovenia.

The evaluation procedures warrant a continuous following and evaluation of quality, working performance and the consistency of study programs with the needs and demands of the profession on a level comparable to the European.

The authors of the study program General Medicine ascribe great importance to these procedures since the design of the study represents a conceptual novelty in Slovenia, as modern approaches in the form of problem based learning (PBL) modules were added to the classical study methods. In this sense the evaluation of experiences will be an important factor in the later supplementation and improvement of the study program.

Through its representatives the Faculty of Medicine of the UM will take part in the Committee for the evaluation of the quality of higher education activities at the UM and follow the guidelines dictated by the National committee for higher education quality.

[8] Encl. 3 contains reports on the reconciliation of subject contents with the Faculty of Medicine of the University of Ljubljana and the statements of subject holders on their reconciliation.

1. 9 Research or professional foundation for execution of program (references of higher education institution and program holders)

References of higher education institution

With respect to the recent founding of the Faculty of Medicine of the UM it is impossible to speak of research references originating within this institution exclusively. A significant research basis is represented by the scientific references of Maribor Teaching Hospital and some other members of the UM, whose staff, research and material infrastructure will partake in the execution of the study program General Medicine.

The teaching process of the study program will comprise the scientific results of the following institutes as well:

- Institute of Applicable Anatomy of the UM, operating within the Center for Interdisciplinary and Multidisciplinary Research and Study (CIMRS),
- Institute of Reproductive Biology of the UM, operating within the CIMRS,
- Interdisciplinary Institute of Balneology and Medical Climatology of the UM, operating within the CIMRS.

The reseach, professional and teaching references of subject holders in individual higher education programs were the basis for their election to the titles of university teacher, researcher worker and research associate. All university teachers were elected according to articles 52-57 of the Law on higher education, either at the Faculty of Medicine of the University of Ljubljana or at any other faculty of the UM and the University of Ljubljana. Some university teachers are among the leading experts of world rank in their field, as is evident from their bibliography and the publication of noteworthy monographies published by eminent publishers. The bibliography of all university teachers and their coworkers is available in the data collection COBISS at the website: http://cobiss.izum.si/bibliografije.

The required data on university teachers, researchers and associates are given in form no. 4 (*Enclosure 4*), the statements of foreseen holders on the type of employment relationship entered into at the Faculty of Medicine of the UM are given in *Enclosure 5*, the agreements of the employers of those holders whose additional occupation will be at the Faculty of Medicine of the UM are given in *Enclosure 6*.

The following **academics of international renown in the field of medicine** have also agreed to take part in the execution of the university study program General Medicine and will be included in the program as visiting professors:

1. **Acad.Prof. Dr. Milan Agbaba – Radiology,**
2. **Acad.Prof. Dr. Vinko Dolenc – Neurosurgery,**
3. **Acad.Prof. Dr. Dr.h.c. Hermann Haken – Biophysics,**
4. **Acad.Prof. Dr. Matija Horvat – Internal medicine,**
5. **Acad.Prof. Dr. Bogdan Jurčič – Biochemistry,**
6. **Acad.Prof. Dr. Ivo Padovan – Otorhinolaryngology,**
7. **Acad.Prof. Dr. Danijel Rukavina – Physiology and immunology,**
8. **Acad.Prof. Dr. Dr.h.c. Felix Unger – Cardiosurgery.**

Apart from those named, many other professors of world renown will be invited to take part in the study program as visiting professors.

1. 10 Staff requirements for program execution and foreseen holders

All collaborating executants of the university study program General Medicine are correspondingly habilitated university teachers (*Table 1*). Detailed information has been given under *Item 1.9* and in the required enclosures. The most important professional and scientific references are collected under *Enclosure 2.2*, the entire bibliography of subjects holders is to be found in the COBISS data collection on the website: http://cobiss.izum.si/bibliografije.

Table 1: Subject holders in the General Medicine program.

Holders	Subject
1. Full prof. Božena Pejkovič	Anatomy with histology
2. Full prof. Mirt Kamenik	Anesthesiology
3. Full prof. Nada Šabec	English
4. Full prof. Milan Brumen	Biophysics
5. Assoc. Prof. Uroš Potočnik	Biochemistry
6. Assist. prof. Saša Lipovšek	Biology of the cell
7. Assoc.prof. Gorazd Lešnjak	Biostatistics
8. Assoc. prof. Jovan Miljkovič	Dermatovenerology
9. Assist. Prof. Zalika Klemenc Ketiš	Family medicine I. Family medicine II.
10. Assist. prof. Polonca Ferk	Pharmacology with toxicology
11. Assist. Prof. Breda Jesenšek Papež	Physical and rehabilitation medicine
12. Full prof. Marjan Slak Rupnik	Physiology
13. Full prof. Radovan Hojs	Geriatrics, PBL moduls
14. Assoc. prof. Gorazd Lešničar	Infectious diseases
15. Full prof. Ivan Krajnc 16. Full prof. Breda Pečovnik Balon Full prof. Radovan Hojs	Internal medicine with propedeutics
17. Assist. prof. Marjan Premik	Public health 1
18. Assoc. prof. Ivan Eržen	Public health 2, Public health 3
19. Full prof. Željko Knez	Chemistry
20. Assoc. prof. Kazimir Miksić 21. Assoc. prof. Anton Crnjac	Surgery
22. Assist. Prof. Pika Meško Brguljan	Clinical biochemistry
23. Assist. Prof. Sebastjan Bevc	Clinical pharmacology
24. Assoc. prof. Bojan Zalar	Clinical psychology
25. Assist. Prof. Bogdan Čizmarevič	Maxillofacial surgery with basic stomatology
26. Assoc. prof. Dejan Dinevski	Medicine and information technologies
27. Assoc. prof. Andrej Čretnik	Medicine in emergency conditions
28. Full prof. Martjaž Zwitter	Medical ethics and law
29. Assist. Prof. Aleš Maver	Medical terminology
30. Full prof. Maja Rupnik	Microbiology I.
31. Full prof. Nadja Kokalj Vokač	Molecular biology
32. Assoc. prof. Tanja Hojs Fabjan	Neurology
33. Full prof. Tadej Strojnik	Neurosurgery
34. Full prof. Dušica Pahor	Ophthalmology
35. Assoc. prof. Marko Hočevar 36. Asst. prof. Irena Oblak	Oncology and radiotherapy
37. Full prof. Mirko Toš	Otorhinolaryngology
38. Full prof. Rastko Golouh	Pathology I. Pathology II.
39. Full prof. Dušanka Mičetić- Turk	Pediatrics

40. Full prof. Iztok Takač	Obstetrics and gynecology
41. Full prof. Mirt Kamenik	First aid
42. Full prof. Blanka Kores Plesničar	Psychiatry
43. Asst. prof. Zlatka Rakovec Felser	Psychology
44. Assoc. prof. Miloš Šurlan	Radiology
45. Assit. Prof. Andrej Naterer	Medical sociology
46. Full prof. Jože Balažic	Forensic medicine
47. Vesna Rauter	Sports education
48. Full prof. Pavel Skok	Introduction to Research
49. Ass. prof. Gregor Pivec	History of medicine

For the execution of PBL modules additional educational conditions are required, resulting from the didactic particularities of this method of learning. The tutors for the execution of this study form can be university teachers who have attended a special course in conducting PBL modules. This study form follows the model of medical faculties of the universities of Oulu and Manchester (see Encl. 2.3 and 3), with which agreements on collaboration have been signed. Based on this agreement, the first qualifications of university teachers have already been carried out, the required remaining ones will follow until the enrollment of the first generation of students.

1. 11 Material conditions for execution of program

The financial conditions for the execution of the program General Medicine will be provided by the UM and her members, Maribor Teaching Hospital and the Health Insurance Institute. More precise data regarding the assurance of suitable premises and equipment for the execution of the study program are given in *Enclosure 7*.

The UM is providing the necessary space at Slomškov trg 15 – the entire left wing of the second floor measuring 632.65 m^2, in nature meaning rooms no. 219 and 222 to 228 as well as rooms in the basement and garret of the south wing of the building. Excepted from the stated rooms are the premises of the communications center of the CCUM. In exchange for the above mentioned rooms, the UM may foresee other suitable rooms. At Maribor Teaching Hospital, building of the Institute of Anatomy and Physiology has begun, and will be terminated in March 2004.

On 21 Jan. 2003 a special committee composed of Prof. Dr. Milan Pogačnik, Prof. Dr. Andreja Kocjančič, Ms Jožica Kramar and Ms Vanda Rode inspected the rooms and the equipment of practical training rooms and laboratories for the Faculty of Medicine of the UM for the subjects of anatomy with histology and pathology; the laboratories for: chemistry, cell biology, physiology, physics, biochemistry and microbiology; the microscopy practical training room at the University College of Nursing, the computer multimedia practical training room at the University College of Nursing, the lecture rooms at Maribor Teaching Hospital and at UM members (University College of Nursing, Faculty of Agriculture, Faculty of Education, Faculty of Chemistry and Chemical Engineering). The UM responded to their observations (letter of 31 Jan. 2003) and solved the problems, with the exception of the Institute of Anatomy and Physiology which, as has been mentioned, is still under construction. Thus material conditions are warranted for the execution of all subjects of the study program General Medicine at the UM.

1. 12 Sources of funding

The study program will be financed predominantly from the budgetary funds of the Ministry of Education, Science and Sport and the Ministry of Health. Starting expenses in the amount of 220 million tolars will be provided by a financial consortium established by Nova Kreditna banka Maribor.

1. The arguments for the proposal of the Decree on changes and supplements of the decree on the reform of the UM (EVA: 2003-3311-0186), prepared by the Ministry of Education, Science and Sport, state that the Faculty of Medicine will start its university study program in the study year 2004/2005. It is stated that the required funds will be provided within the framework of reallocations among programs of primary and tertiary education within budgetary items of the Ministry of Education, Science and Sport. The necessary funds will be secured by rationalization in the field of primary education, reached on account of a decrease in admissionas well as the transition to the new per-unit financing. The functioning of the faculty will also be ensured through the collaboration of the health care activities, in the same way as it has been taking part in financing higher education activities so far, where the UM and the University of Ljubljana will be financed in the same way.
2. Financing of research activities will depend on the funds acquired through national and international razpisih.
3. With the starting expenses of 220 million SIT, ensured by the financial consortium established at Kreditna banka Maribor, the Institute of Anatomy and Physiology will be built and the equipment for preclinical subjects will be acquired.

Enclosure 11 gives an estimation of the necessary funds for the execution of the university study program General Medicine.

1. 13 Foreseen enrollment in the program

The foreseen number of students enrolling in the first year of the study program General Medicine is 80. Later on it will be possible to increase the number.

1. 14 Possibilities of employment for the graduates

GPs can find employment in numerous fields:

- As private practitioners,
- At public institutions as specialists in family medicine or in other medical fields,
- In companies and establishments where knowledge of general medicine is required,
- At research centers or institutes,
- At higher education institutions.

1.15 Composers of the program

The expert group entrusted with performing the analysis, preparation and composition of the program was made up of:
Prof. Dr. Ivan Krajnc, Vojko Flis, M.D., Prof. Dr. Eldar Gadžijev, Prof. Dr. Borut Gorišek, Prof. Dr. Elko Borko, Prof. Dr. Alojz Gregorič, Prof. Dr. Dušanka Mičetič Turk, Prof. Dr. Kazimir Miksič, Ass.Prof. Dr. Radovan Hojs, Ass.Prof. Dr. Erih Tetičkovič, Ass.Prof. Dr. Zmago Turk and Ass.Prof. Dr. Iztok Takač.

Their bibliography is available in the data collection of Slovene researchers COBISS on the website: http://cobiss.izum.si/bibliografije

2. DATA ON THE SUBJECT SCHEDULE

2. 1 Number and list of subjects

The subject schedule of the university study program General Medicine contains 56 subjects, 4 of them are optional and 8 are PBL modules. The titles of subjects and modules are stated in the subject schedule in the following item 2.2.

2.2 The number of program hours per year, credit evaluation of all program elements, type of subjects with respect to their inclusion in the program structure

The study program takes six years to complete and comprises 5500 hours of theoretical and practical studies, which is in accordance with the European directive (Council Directive 93/16/EEC, 1993). The precise number of hours according to semesters and study years is evident from *Table 2.* In Slovenia the academic year lasts 30 weeks (the semester 15 weeks) and is evaluated with 60 ECTS points. The entire studies are evaluated with 360 credit points. The program is in accordance with the ECTS system of European medical faculties. A precise review of credit points is seen in the enclosed subject schedule.

***Table 2*: Number of hours in the General Medicine program acc. to study years and semesters**

STUDY YEAR	HOURS WINTER SEMESTER	HOURS SUMMER SEMESTER	TOTAL HOURS
1.	435	450	885
2.	450	435	885
3.	465	465	930
4.	480	420	900
5.	435	435	870
6.	460 + 570		1030
TOTAL			5500

+ Sports education (30 hrs in each of the first 3 yrs), a total of 90 hrs

SUBJECT SCHEDULE OF THE UNIVERSITY STUDY PROGRAM GENERAL MEDICINE
Review of hours according to study years and ECTS credit points

1. year, 1. semester

No.	Subject	Lectures	Seminar	Practical work	Total	ECTS
1	Anatomy with histology	45	0	60	105	7
2	Biology of the cell	75	0	45	120	9
3	Chemistry	45	0	30	75	5
4	Biophysics	45	0	30	75	5
5	Medical terminology	15	0	0	15	1
I	PBL module – Anatomy and pre-clinics I	0	45	0	45	3
Total		**225**	**45**	**165**	**435**	**30**

+ Sports education (30 hrs per year)

1. year, 2. semester

No.	Subject	Lectures	Seminar	Practical work	Total	ECTS
1	Anatomy with histology	60	0	60	120	8
6	Biochemistry	75	30	30	135	10
7	First aid	15	0	45	60	2
8	History of medicine	15	0	0	15	1
9	Molecular biology	60	0	15	75	6
II	PBL module - Anatomy and pre-clinics II	0	45	0	45	3
Total		**225**	**75**	**150**	**450**	**30**

2. year, 3. semester

No.	Subject	Lectures	Seminar	Practical work	Total	ECTS
10	Physiology	90	30	120	240	16
11	Microbiology I	60	0	30	90	6
12	Medicine and information technology	15	0	15	30	2
13	Public health 1	10	0	5	15	1
14	Sociology of medicine	15	15	0	30	2
III	PBL module - Basic physiology – pathophysiology I.	0	45	0	45	3
Total		**190**	**90**	**170**	**450**	**30**

2. year, 4. semester

No.	Subject	Lectures	Seminar	Practical work	Total	ECTS
10	Physiology	30	0	60	90	5
15	English	30	15	0	45	3
16	Pharmacology with toxicology	105	23	7	135	12
17	Biostatistics	30	0	15	45	3
18	Pathology I	30	42	3	75	4
IV	PBL module - Basic physiology – pathophysiology II.	0	45	0	45	3
Total		**225**	**125**	**85**	**435**	**30**

+ Sports education (30 hrs per year)

3. year, 5. semester

No.	Subject	Lectures	Seminar	Practical work	Total	ECTS
19	Internal medicine with propedeutics	75	60	30	165	11
20	Surgery	75	45	30	150	10
21	Radiology	45	0	30	75	5
22	Optional subject 1	0	30	0	30	1
V	PBL module – Internal medicine – Surgery I.	0	45	0	45	3
Total		**195**	**180**	**90**	**465**	**30**

3. year, 6. semester

No.	Subject	Lectures	Seminar	Practical work	Total	ECTS
19	Internal medicine with propedeutics	75	45	30	150	10
20	Surgery	75	45	45	165	10
23	Anestesiology	15	15	15	45	3
24	Psychology	20	0	10	30	2
25	Clinical Biochemistry	30	0	0	30	2
VI	PBL module – PBL module – Internal medicine – Surgery II.	0	45	0	45	3
Total		**215**	**150**	**100**	**465**	**30**

+ Sports education (30 hrs per year)

4. year, 7. semester

No.	Subject	Lectures	Seminar	Practical work	Total	ECTS
25	Clinical Biochemistry	0	0	30	30	1
26	Pediatrics	75	60	90	225	15
27	Clinical psychology	0	15	15	30	2
28	Family medicine I	15	30	75	120	6
29	Optional subject 2	0	30	0	30	1
VII	PBL module – Family medicine	0	45	0	45	3
Total		**90**	**180**	**210**	**480**	**28**

4. year, 8. semester

No.	Subject	Lectures	Seminar	Practical work	Total	ECTS
30	Medical ethics and law	30	0	0	30	3
31	Forensic medicine	30	15	15	60	4
32	Pathology II	60	15	45	120	10
33	Ophthalmology	45	0	30	75	6
34	Otorhinolaryngology	45	0	30	75	6
35	Physical and rehabilitation medicine	15	0	15	30	2
36	Optional subject 3	0	30	0	30	1
Total		**225**	**60**	**135**	**420**	**32**

5. year, 9. semester

No.	Subject	Lectures	Seminar	Practical work	Total	ECTS
37	Dermatovenerology	45	15	15	75	5
38	Psychiatry	60	60	30	150	10
39	Neurology	45	15	15	75	5
40	Neurosurgery	30	15	0	45	4
41	Medicine in emergency conditions	5	10	0	15	1
42	Geriatrics	15	15	0	30	2
43	Clinical pharmacology	15	30	0	45	3
Total		**215**	**160**	**60**	**435**	**30**

5. year, 10. semester

No.	Subject	Lectures	Seminar	Practical work	Total	ECTS
44	Infectious diseases	30	30	15	75	6
45	Public health 2	45	15	15	75	6
46	Obstetrics and gynecology	75	60	75	210	14
VIII	PBL module – Neurology – Neurosurgery - Psychiatry	0	45	0	45	3
47	Optional subject 4	0	30	0	30	1
Total		**150**	**180**	**105**	**435**	**30**

6. year, 11. semester

No.	Subject	Lectures	Seminar	Practical work	Practice	Total	ECTS
48	Oncology and radiotherapy	30	25	15	0	70	6
49	Public health 3	15	5	15	0	35	3
50	Maxillofacial surgery with basic stomatology	15	0	15	0	30	1
51	Introduction to research	15	30	15	0	60	4
53	Family medicine II	0	15	0	90	105	6
54	Internal medicine practical work – hospital	10	0	0	150	160	10
Total		**85**	**75**	**60**	**240**	**460**	**30**

6. year, 12. semester

No.	Subject	Lectures	Seminar	Practical work	Practice	Total	ECTS
55	Surgery[9] Practical work – hospital	0	0	0	290	290	16
56	Internal medicine Practical work – hospital	0	0	0	280	280	14
Total		**0**	**0**	**0**	**570**	**570**	**30**

[9] Includes the seminar Resuscitation (4S, 4V).

OPTIONAL SUBJECTS

From among the subjects stated below, the students can choose four optional subjects: i.e. in the 3. year (5. semester), 4. year (7., 8. semester), and in the 5. year (10. semester). With respect to their capacity, ability and agreement with their university teachers and associates the students can choose any optional subject in the mentioned study year. Optional subjects allow an individual execution in form of consultations with the subject holder and with the preparation of a seminar paper. If at least 10 students should choose the same subject, it will be carried out in seminar form.

As regards the contents, the optional subjects ensue from the mandatory subjects contained in the subject schedule of the study program General Medicine, and within the framework of optional subjects the students are given the possibility of deepening their knowledge of those subjects, which they are particularly interested in.

Optional subjects from among which the students may choose **in third year**:

1. Anatomy optional subject,
2. Biochemistry I optional subject,
3. Physiology II optional subject,
4. Microbiology I optional subject,
5. Pathology I optional subject ,
6. Internal medicine optional subject,
7. Surgery optional subject,
8. Molecular biology optional subject,
9. Genetics and genomics in medicine optional subject,
10. Biophysics optional subject,
11. Medical informatics optional subject,
12. Selected topics and novelties in propedeutics optional subject.

Optional subjects from among which the students may choose **in fourth year**:

1. Ophthalmology optional subject,
2. Pathology II optional subject ,
3. Pediatrics optional subject,
4. Family medicine optional subject ,
5. Anesthesiology optional subject,
6. Medicine and sport 2 optional subject,
7. Emergency Medicine,
8. Biomedical technology in clinical settings and simulators.

Optional subjects from among which the students may choose **in fifth year**:

1. Medical ethics and law optional subject,
2. Psychiatry optional subject,
3. Obstetrics and gynecology optional subject,
4. Oncology optional subject,
5. Medicine and sport 2 optional subject,
6. Surgical view of disaster medicine,
7. Tropical Medicine,
8. Emergency Medicine,
9. Biomedical technology in clinical settings and simulators.

2. 3 Number and percentage of lectures, seminars and practical work as well as other study forms

The number of hours and the percentages of individual program components (lectures, seminars, practical work) are seen in *Table 3*.

Table 3: Number and percentage of lectures, seminars and practical work in the study program General Medicine.

YEAR	HOURS TOTAL	LECTURES		SEMINAR		PRACTICAL WORK	
		Hours	Percent (%)	Hours	Percent (%)	Hours	Percent (%)
1.	885	450	50.85	120	13,56	315	35,59
2.	885	415	46,90	215	24,29	255	28,81
3.	930	410	44,09	330	35,48	190	20,43
4.	900	315	35	240	26,66	345	39,33
5.	870	365	41,37	340	39,65	165	18,96
6.	1030	85	8,25	75	7,35	60	5,80
TOTAL	**5500**	**2030**	**36,90**	**1330**	**24,20**	**1330**	**24,20**

2. 4 Percentage of practical work in the program, its manner of execution and its credit evaluation

Practical work in a total of 810 hours is carried out by students in the 6. year and is evaluated with 46 credit points acc. to ECTS. In the general OPC (family medicine) they perform a total of 105 hours, 15 of these hours are seminars and 90 hours are in the form of practical training. At the hospital (surgery and internal medicine) they carry out a total of 720 hours of practical work, of these 10 hours seminars and practical training 720 hours (290 hours surgery and 430 hours internal medicine).

Table 4: Practical work (hours and percentages) in study program General Medicine.

PRACTICAL WORK	HOURS TOTAL	LECTURES		SEMINAR		PRACTICAL WORK		PRACTICAL TRAINING	
		Hours	Percent (%)	Hours	Percent (%)	Hours	Percent (%)	Hours	Percent (%)
6. year	1030	85	8,25	75	7,35	60	5,80	810	78,60

2. 5 Vertical and horizontal connection between subjects

Characteristic of the university study program General Medicine is a close interlacement of subjects within individual study years (horizontal) and between years (vertical). The role of coordinator is played by PBL modules, which, based on central problems, cover all fields of medicine in spiral form, from basic theory and practice, qualification in clinical surroundings to a gradual reaching of independence, thus leading the students to the independent career of physician.

In the horizontal sense, the subjects in individual years are connected with regard to contents. Parallel to classical lectures, seminars and practical work, work goes on acc. to PBL, where the subject matter of

lectures and practical work is treated additionally on individual examples in smaller groups lead by a specially qualified teacher (tutor). Individual problems are treated in different study years and together with the remaining subjects, and they pass from the preclinical to clinical ones.

3. SKELETON CONTENT OF THE CURRICULUM

In *Enclosure 2.3* a description of the subjects of the study program General Medicine and a presentation of Problem Based Learning (PBL) is found.

4. CONDITIONS FOR ENROLLMENT

The university study program General Medicine allows the enrollment of anyone who:

a) Has graduated from secondary school,
b) Has completed any 4-year secondary school program prior to 01.06.1995.

Should the resolution on the limitation of enrollment be adopted, the candidates under a) will be chosen with respect to:

- General success at graduation 35 % points,
- General success in the 3. and 4. year 20 % points,
- Success in individual graduation subjects: mathematics, foreign language and one nat. science subject (biology, physics or chemistry) 45 % points;

Candidates under b) will be chosen with respect to:

- General success at final exam 35 % points,
- General success in the 3. and 4. year 20 % points,
- Success in mathematics or foreign language at final exam and success in one nat. science subject (biology, physics or chemistry) at final exam or in the last year of secondary school when the subject was taught 45 % points;

5. CONDITIONS FOR PROMOTION

To progress from year to year, the student must fulfill the following obligations in subjects:

- For enrollment in the 2. year – All study obligations from the 1. year: Anatomy with histology, Biophysics, Chemistry, Biology of the cell, Biochemistry, Medical terminology, PBL Module Anatomy and pre-clinics I, PBL Module Anatomy and pre-clinics II.

- For enrollment in the 3. year – Fulfilled study obligations in the following subjects of the 2. year: Physiology, Biostatistics, Microbiology I, Medicine and information technologies, PBL module - Basic physiology – pathophysiology I., PBL module - Basic physiology – pathophysiology II. and fulfilled study obligations from the 1. year: First aid, Molecular biology.

- For enrollment in the 4. year – All study obligations from the 2. year: Pharmacology with toxicology, Pathology I, Basic epidemiology (for the students of generation 2006/07 subject Public health 1), Sociology and philosophy of medicine, English, and fulfilled study obligations in the following subjects of the 3. year: Internal medicine with propedeutics, Surgery, PBL Module Internal medicine – Surgery I. PBL Module Internal medicine – Surgery II., optional subject 1.

- For enrollment in the 5. year – All study obligations from the 3. year: Radiology, Anesthesiology, Psychology. From the 4. year all study obligations in the subjects Pediatrics and Pathology II, PBL Module Family medicine.

- For enrollment in the 6. year – Fulfilled all study obligations up to the 6. year (remaining study obligations from the 4. year and all from the 5. year), except: Medicine in emergency conditions, Geriatrics, Histroy of Medicine, Public Health 2.

In accordance with the Law on higher education, it is possible to repeat a study year or change the study program only once in the course of studies.

6. METHODS AND FORMS OF EXECUTING THE STUDIES

The studies will be in the form of lectures, practical work, seminars and in individual forms. They are prepared for ECTS and will only be in the form of regular studies.

7. CONDITIONS FOR COMPLETION OF STUDIES

The student concludes his studies by passing all required exams and performing all practical work (family medicine, hospital).

8. PROFESSIONAL TITLE

After completing his studies successfully, the candidate is awarded a professional title in accordance with the Law on professional and scientific titles (Official Gazette of RS, No. 47/1998), which is:

- Doctor of medicine.

Information on supplement to the diploma

In accordance with Article 32 of the Law on higher education and the provisions of the Decree on the supplement to the diploma (Of.Gaz. of RS, No. 36/00), the University of Maribor will also issue a Supplement to the diploma to the graduates from the study program General Medicine. As stated in the mentioned Decree, the document will be issued to all graduates in the Slovene language, and on request also in English. The University of Maribor has prepared electronic support for the Supplement to the diploma. The UM has been issuing this document to its graduates since April 2002.