The Senate of the Medical Faculty of
The University of Maribor
Slomškove trg 15
2000 Maribor

The Medical Faculty 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 Medical Faculty 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 Medical Faculty 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 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 Medical Faculty 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 Medical

---

\(^1\) For the school year 2003/04, the Medical Faculty 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 limit for warranting good quality studies (Information of The Council of Higher Education of the RS regarding the procedures for the founding of the Medical faculty 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.

Faculty in Ljubljana. From this we gather that Maribor Teaching Hospital represents a great potential regarding the execution of medical studies.5

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.

Date: Maribor, May …, 2004

Dean of the Medical Faculty 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 (see Encl. 9).
• Assurance of a faster development of medical sciences on the regional level, and with
the cooperation of the Medical Faculty 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 Medical Faculty 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 Medical Faculty 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 Medical Faculty 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 Commission⁷ 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 Medical Faculty 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 Medical Faculty 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 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 Medical Faculty of the University in Ljubljana is evident. The management of the Medical Faculty 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 Medical Faculty 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.

**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 Medical Faculty 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 (see Encl. 2.1).

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

---

8 Encl. 3 contains reports on the reconciliation of subject contents with the Medical Faculty of the University of Ljubljana and the statements of subject holders on their reconciliation.
• 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 research, 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 Medical Faculty 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 Medical Faculty of the UM are given in Enclosure 5, the agreements of the employers of those holders whose additional occupation will be at the Medical Faculty 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.

<table>
<thead>
<tr>
<th>Holders</th>
<th>Subject</th>
<th>Field of qualification</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Assoc.Prof. Dr. Božena Pejković</td>
<td>Anatomy with histology</td>
<td>Anatomy</td>
</tr>
<tr>
<td>2. Asst.Prof. Dr. Mirt Kamenik</td>
<td>Anesthesiology</td>
<td>Anesthesiology and reanimatology</td>
</tr>
<tr>
<td>No.</td>
<td>Position</td>
<td>Name</td>
</tr>
<tr>
<td>-----</td>
<td>--------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>3</td>
<td>Full Prof. Dr. Nada Šabec</td>
<td>English</td>
</tr>
<tr>
<td>4</td>
<td>Full Prof. Dr. Milan Brumen</td>
<td>Biophysics</td>
</tr>
<tr>
<td>5</td>
<td>Asst.Prof. Dr. Avrelja Cenčič</td>
<td>Biochemistry</td>
</tr>
<tr>
<td>6</td>
<td>Asst.Prof. Dr. Saška Lipovšek</td>
<td>Biology of the cell</td>
</tr>
<tr>
<td>7</td>
<td>Assoc.Prof. Dr. Gorazd Lešnjak</td>
<td>Biostatistics</td>
</tr>
<tr>
<td>8</td>
<td>Asst.Prof. Dr. Igor Bartenjev</td>
<td>Dermatovenerology</td>
</tr>
<tr>
<td>9</td>
<td>Asst.Prof. Dr. Janko Kersnik</td>
<td>Family medicine I.</td>
</tr>
<tr>
<td>10</td>
<td>Asst.Prof. Dr. Breda Pečovnik Balon</td>
<td>Internal medicine with propedeutics</td>
</tr>
<tr>
<td>11</td>
<td>Asst.Prof. Dr. Matej Breznik</td>
<td>Pharmacology with toxicology</td>
</tr>
<tr>
<td>12</td>
<td>Asst.Prof. Dr. Zmago Turk</td>
<td>Physical and rehabilitation medicine</td>
</tr>
<tr>
<td>13</td>
<td>Asst.Prof. Dr. Marjan Rupnik**</td>
<td>Physiology</td>
</tr>
<tr>
<td>14</td>
<td>Assoc.Prof. Dr. Radovan Hojs</td>
<td>Geriatrics</td>
</tr>
<tr>
<td>15</td>
<td>Full Prof. Dr. Željko Knez</td>
<td>Chemistry</td>
</tr>
<tr>
<td>16</td>
<td>Full Prof. Dr. Eldar Gadžijev</td>
<td>Surgery</td>
</tr>
<tr>
<td>17</td>
<td>Asst.Prof. Dr. Ivana Malešič</td>
<td>Clinical biochemistry</td>
</tr>
<tr>
<td>18</td>
<td>Full Prof. Dr. Jože Drinovec</td>
<td>Clinical pharmacology</td>
</tr>
<tr>
<td>19</td>
<td>Prof. Dr. Gorazd Lešničar</td>
<td>Clinical microbiology</td>
</tr>
<tr>
<td>20</td>
<td>Asst.Prof. Dr. Bojan Zalar</td>
<td>Clinical psychology</td>
</tr>
<tr>
<td>21</td>
<td>Asst.Prof. Dr. Danijel Zerdoner</td>
<td>Maxillofacial surgery with basic stomatology</td>
</tr>
<tr>
<td>22</td>
<td>Prof. Dr. Bogomil Hrašovec</td>
<td>Occupational medicine</td>
</tr>
<tr>
<td>23</td>
<td>Full Prof. Dr. Peter Kokol</td>
<td>Medicine and information technologies</td>
</tr>
<tr>
<td>24</td>
<td>Asst.Prof. Dr. Radko Komadina</td>
<td>Medicine in emergency conditions</td>
</tr>
<tr>
<td>25</td>
<td>Asst.Prof. Dr. Martjaž Zwitter</td>
<td>Medical ethics and law</td>
</tr>
<tr>
<td>26</td>
<td>Ret. Full Prof. Dr. Žinka Zorko</td>
<td>Medical terminology</td>
</tr>
<tr>
<td>27</td>
<td>Asst.Prof. Dr. Maja Rupnik</td>
<td>Microbiology I.</td>
</tr>
<tr>
<td>28</td>
<td>Prof. Dr. Gorazd Lesničar</td>
<td>Microbiology II.</td>
</tr>
<tr>
<td>29</td>
<td>Prof. Dr. Nadja kokylo Vokač</td>
<td>Molecular biology</td>
</tr>
<tr>
<td>30</td>
<td>Asst.Prof. Dr. Erh Tetičkovič</td>
<td>Neurology</td>
</tr>
<tr>
<td>31</td>
<td>Asst.Prof. Dr. Tadej Strojn</td>
<td>Neurosurgery</td>
</tr>
<tr>
<td>32</td>
<td>Asst.Prof. Dr. Dušica Pahor</td>
<td>Ophthalmology</td>
</tr>
<tr>
<td>33</td>
<td>Full Prof. Dr. Stojan Plesničar</td>
<td>Oncology and radiotherapy</td>
</tr>
<tr>
<td>34</td>
<td>Asst.Prof. Dr. Marjan Premik</td>
<td>Elements of epidemiology</td>
</tr>
<tr>
<td>35</td>
<td>Full Prof. Dr. Mirko Toš</td>
<td>Otorhinolaryngology</td>
</tr>
<tr>
<td>36</td>
<td>Full Prof. Dr. Rastko Golou</td>
<td>Pathology I.</td>
</tr>
<tr>
<td>37</td>
<td>Full Prof. Dr. Dušanka Mičetič-Turk</td>
<td>Pediatrics</td>
</tr>
<tr>
<td>38</td>
<td>Assoc.Prof. Dr. Borut Gorišek</td>
<td>Obstetrics and gynecology</td>
</tr>
<tr>
<td>39</td>
<td>Asst.Prof. Dr. Mirt Kamenik</td>
<td>First aid</td>
</tr>
<tr>
<td>40</td>
<td>Asst.Prof. Dr. Blanka Kores Plesničar***</td>
<td>Psychiatry</td>
</tr>
<tr>
<td>41</td>
<td>Asst.Prof. Dr. Zlatka Rakovec Felser</td>
<td>Psychology</td>
</tr>
<tr>
<td>42</td>
<td>Assoc.Prof. Dr. Miloš Šurian</td>
<td>Radiology</td>
</tr>
<tr>
<td>43</td>
<td>Full Prof. Dr. Dražigošt Pokorn</td>
<td>Social medicine and hygiene</td>
</tr>
<tr>
<td>44</td>
<td>Prof. Dr. Jana Bezenšek</td>
<td>Medical sociology</td>
</tr>
<tr>
<td>45</td>
<td>Asst.Prof. Dr. Peter Kadiš</td>
<td>Forensic medicine</td>
</tr>
</tbody>
</table>
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 faculty of the university of Oulu (see Encl. 2.3 and 3), with which agreement 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 m², 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 Medical Faculty 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 Medical Faculty 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 admissions as 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 Gadjijev, 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](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 51 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

<table>
<thead>
<tr>
<th>STUDY YEAR</th>
<th>HOURS WINTER SEMESTER</th>
<th>HOURS SUMMER SEMESTER</th>
<th>TOTAL HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>435</td>
<td>450</td>
<td>885</td>
</tr>
<tr>
<td>2.</td>
<td>450</td>
<td>435</td>
<td>885</td>
</tr>
<tr>
<td>3.</td>
<td>465</td>
<td>465</td>
<td>930</td>
</tr>
<tr>
<td>4.</td>
<td>450</td>
<td>435</td>
<td>885</td>
</tr>
<tr>
<td>5.</td>
<td>450</td>
<td>435</td>
<td>885</td>
</tr>
<tr>
<td>6.</td>
<td>225 + 805</td>
<td></td>
<td>1030</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td>5500</td>
</tr>
</tbody>
</table>

+ Sports education (60 hrs in each of the first 3 yrs), a total of 180 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

<table>
<thead>
<tr>
<th>No.</th>
<th>Subject</th>
<th>Lectures</th>
<th>Seminar</th>
<th>Practical work</th>
<th>Total</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Anatomy with histology</td>
<td>45</td>
<td>0</td>
<td>60</td>
<td>105</td>
<td>7</td>
</tr>
<tr>
<td>2</td>
<td>Cell biology</td>
<td>75</td>
<td>0</td>
<td>45</td>
<td>120</td>
<td>9</td>
</tr>
<tr>
<td>3</td>
<td>Chemistry</td>
<td>45</td>
<td>0</td>
<td>30</td>
<td>75</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>Biophysics</td>
<td>45</td>
<td>0</td>
<td>30</td>
<td>75</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>Medical terminology</td>
<td>15</td>
<td>0</td>
<td>0</td>
<td>15</td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td>PBL – Anatomy, Cell biology, Molecular biology</td>
<td>0</td>
<td>45</td>
<td>0</td>
<td>45</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>225</td>
<td>45</td>
<td>165</td>
<td>435</td>
<td>30</td>
</tr>
</tbody>
</table>
+ Sports education (60 hrs per year)

1. year, 2. semester

<table>
<thead>
<tr>
<th>No.</th>
<th>Subject</th>
<th>Lectures</th>
<th>Seminar</th>
<th>Practical work</th>
<th>Total</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Anatomy with histology</td>
<td>45</td>
<td>0</td>
<td>60</td>
<td>105</td>
<td>8</td>
</tr>
<tr>
<td>6</td>
<td>Biochemistry</td>
<td>75</td>
<td>30</td>
<td>30</td>
<td>135</td>
<td>10</td>
</tr>
<tr>
<td>7</td>
<td>First aid</td>
<td>15</td>
<td>0</td>
<td>45</td>
<td>60</td>
<td>2</td>
</tr>
<tr>
<td>8</td>
<td>History of medicine</td>
<td>15</td>
<td>0</td>
<td>0</td>
<td>15</td>
<td>1</td>
</tr>
<tr>
<td>9</td>
<td>Molecular biology</td>
<td>60</td>
<td>0</td>
<td>15</td>
<td>75</td>
<td>6</td>
</tr>
<tr>
<td>II</td>
<td>PBL – Bio-equilibrium</td>
<td>0</td>
<td>45</td>
<td>0</td>
<td>45</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>225</td>
<td>75</td>
<td>150</td>
<td>450</td>
<td>30</td>
</tr>
</tbody>
</table>

2. year, 3. semester

<table>
<thead>
<tr>
<th>No.</th>
<th>Subject</th>
<th>Lectures</th>
<th>Seminar</th>
<th>Practical work</th>
<th>Total</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Physiology</td>
<td>90</td>
<td>30</td>
<td>120</td>
<td>240</td>
<td>16</td>
</tr>
<tr>
<td>11</td>
<td>English</td>
<td>30</td>
<td>15</td>
<td>0</td>
<td>45</td>
<td>3</td>
</tr>
<tr>
<td>12</td>
<td>Biostatistics</td>
<td>30</td>
<td>0</td>
<td>15</td>
<td>45</td>
<td>3</td>
</tr>
<tr>
<td>13</td>
<td>Medical technology</td>
<td>15</td>
<td>0</td>
<td>15</td>
<td>30</td>
<td>2</td>
</tr>
<tr>
<td>14</td>
<td>Epidemiology</td>
<td>15</td>
<td>0</td>
<td>0</td>
<td>15</td>
<td>1</td>
</tr>
<tr>
<td>15</td>
<td>Social medicine</td>
<td>15</td>
<td>15</td>
<td>0</td>
<td>30</td>
<td>2</td>
</tr>
<tr>
<td>III</td>
<td>PBL – Applied pathophysiology I</td>
<td>0</td>
<td>45</td>
<td>0</td>
<td>45</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>195</td>
<td>105</td>
<td>150</td>
<td>450</td>
<td>30</td>
</tr>
</tbody>
</table>

2. year, 4. semester

<table>
<thead>
<tr>
<th>No.</th>
<th>Subject</th>
<th>Lectures</th>
<th>Seminar</th>
<th>Practical work</th>
<th>Total</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Physiology</td>
<td>30</td>
<td>0</td>
<td>60</td>
<td>90</td>
<td>5</td>
</tr>
<tr>
<td>16</td>
<td>Pharmacology with toxicology</td>
<td>105</td>
<td>30</td>
<td>0</td>
<td>135</td>
<td>12</td>
</tr>
<tr>
<td>17</td>
<td>Microbiology I</td>
<td>60</td>
<td>0</td>
<td>30</td>
<td>90</td>
<td>6</td>
</tr>
<tr>
<td>18</td>
<td>Pathology I</td>
<td>30</td>
<td>42</td>
<td>3</td>
<td>75</td>
<td>4</td>
</tr>
<tr>
<td>IV</td>
<td>PBL – Applied pathophysiology II</td>
<td>0</td>
<td>45</td>
<td>0</td>
<td>45</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>225</td>
<td>117</td>
<td>93</td>
<td>435</td>
<td>30</td>
</tr>
</tbody>
</table>

3. year, 5. semester

<table>
<thead>
<tr>
<th>No.</th>
<th>Subject</th>
<th>Lectures</th>
<th>Seminar</th>
<th>Practical work</th>
<th>Total</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>19</td>
<td>Internal medicine</td>
<td>75</td>
<td>60</td>
<td>30</td>
<td>165</td>
<td>11</td>
</tr>
<tr>
<td>20</td>
<td>Surgery</td>
<td>75</td>
<td>45</td>
<td>45</td>
<td>165</td>
<td>10</td>
</tr>
<tr>
<td>21</td>
<td>Radiology</td>
<td>45</td>
<td>30</td>
<td>0</td>
<td>75</td>
<td>5</td>
</tr>
<tr>
<td>22</td>
<td>Subject of choice 1</td>
<td>0</td>
<td>30</td>
<td>0</td>
<td>30</td>
<td>1</td>
</tr>
<tr>
<td>VI</td>
<td>PBL module Internal medicine – Surgery I</td>
<td>0</td>
<td>45</td>
<td>0</td>
<td>45</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>195</td>
<td>210</td>
<td>60</td>
<td>465</td>
<td>30</td>
</tr>
</tbody>
</table>
### 3. year, 6. semester

<table>
<thead>
<tr>
<th>No.</th>
<th>Subject</th>
<th>Lectures</th>
<th>Seminar</th>
<th>Practical work</th>
<th>Total</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>19</td>
<td>Internal medicine</td>
<td>75</td>
<td>45</td>
<td>30</td>
<td>150</td>
<td>10</td>
</tr>
<tr>
<td>20</td>
<td>Surgery</td>
<td>75</td>
<td>45</td>
<td>30</td>
<td>150</td>
<td>10</td>
</tr>
<tr>
<td>23</td>
<td>Anesthesiology</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>45</td>
<td>3</td>
</tr>
<tr>
<td>24</td>
<td>Psychology</td>
<td>20</td>
<td>0</td>
<td>10</td>
<td>30</td>
<td>2</td>
</tr>
<tr>
<td>25</td>
<td>Clinical chemistry</td>
<td>20</td>
<td>0</td>
<td>10</td>
<td>30</td>
<td>2</td>
</tr>
<tr>
<td>IV</td>
<td>PBL – Internal medicine - Surgery II</td>
<td>0</td>
<td>45</td>
<td>0</td>
<td>45</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>210</td>
<td>150</td>
<td>105</td>
<td>465</td>
<td>30</td>
</tr>
</tbody>
</table>

+ Sports education (60 hrs per year)

### 4. year, 7. semester

<table>
<thead>
<tr>
<th>No.</th>
<th>Subject</th>
<th>Lectures</th>
<th>Seminar</th>
<th>Practical work</th>
<th>Total</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>26</td>
<td>Pediatrics</td>
<td>75</td>
<td>60</td>
<td>90</td>
<td>225</td>
<td>15</td>
</tr>
<tr>
<td>27</td>
<td>Clinical psychology</td>
<td>0</td>
<td>15</td>
<td>15</td>
<td>30</td>
<td>2</td>
</tr>
<tr>
<td>28</td>
<td>Family medicine I</td>
<td>15</td>
<td>30</td>
<td>75</td>
<td>120</td>
<td>6</td>
</tr>
<tr>
<td>29</td>
<td>Subject of choice 2</td>
<td>0</td>
<td>30</td>
<td>0</td>
<td>30</td>
<td>1</td>
</tr>
<tr>
<td>VII</td>
<td>PBL – Family medicine</td>
<td>0</td>
<td>45</td>
<td>0</td>
<td>45</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>90</td>
<td>180</td>
<td>180</td>
<td>450</td>
<td>27</td>
</tr>
</tbody>
</table>

### 4. year, 8. semester

<table>
<thead>
<tr>
<th>No.</th>
<th>Subject</th>
<th>Lectures</th>
<th>Seminar</th>
<th>Practical work</th>
<th>Total</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>Ethics</td>
<td>30</td>
<td>0</td>
<td>0</td>
<td>30</td>
<td>3</td>
</tr>
<tr>
<td>31</td>
<td>Forensic medicine</td>
<td>30</td>
<td>15</td>
<td>15</td>
<td>60</td>
<td>4</td>
</tr>
<tr>
<td>32</td>
<td>Pathology II</td>
<td>60</td>
<td>15</td>
<td>45</td>
<td>120</td>
<td>10</td>
</tr>
<tr>
<td>33</td>
<td>Ophthalmology</td>
<td>45</td>
<td>0</td>
<td>30</td>
<td>75</td>
<td>6</td>
</tr>
<tr>
<td>34</td>
<td>Otorhinolaryngology</td>
<td>45</td>
<td>0</td>
<td>30</td>
<td>75</td>
<td>6</td>
</tr>
<tr>
<td>35</td>
<td>Rehabilitation medicine</td>
<td>15</td>
<td>0</td>
<td>15</td>
<td>30</td>
<td>2</td>
</tr>
<tr>
<td>36</td>
<td>Catastrophic medicine</td>
<td>0</td>
<td>15</td>
<td>0</td>
<td>15</td>
<td>1</td>
</tr>
<tr>
<td>37</td>
<td>Subject of choice 3</td>
<td>0</td>
<td>30</td>
<td>0</td>
<td>30</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>225</td>
<td>75</td>
<td>135</td>
<td>435</td>
<td>33</td>
</tr>
</tbody>
</table>

### 5. year, 9. semester

<table>
<thead>
<tr>
<th>No.</th>
<th>Subject</th>
<th>Lectures</th>
<th>Seminar</th>
<th>Practical work</th>
<th>Total</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>38</td>
<td>Dermatovenerology</td>
<td>45</td>
<td>15</td>
<td>15</td>
<td>75</td>
<td>5</td>
</tr>
<tr>
<td>39</td>
<td>Psychiatry</td>
<td>60</td>
<td>60</td>
<td>30</td>
<td>150</td>
<td>10</td>
</tr>
<tr>
<td>40</td>
<td>Neurology</td>
<td>45</td>
<td>15</td>
<td>15</td>
<td>75</td>
<td>5</td>
</tr>
<tr>
<td>41</td>
<td>Neurosurgery</td>
<td>30</td>
<td>0</td>
<td>15</td>
<td>45</td>
<td>4</td>
</tr>
<tr>
<td>42</td>
<td>Clinical biochemistry</td>
<td>0</td>
<td>0</td>
<td>30</td>
<td>30</td>
<td>1</td>
</tr>
<tr>
<td>43</td>
<td>Geriatrics</td>
<td>15</td>
<td>15</td>
<td>0</td>
<td>30</td>
<td>2</td>
</tr>
<tr>
<td>VIII</td>
<td>PBL – Neurology - Neurosurgery - Psychiatrics</td>
<td>0</td>
<td>45</td>
<td>0</td>
<td>45</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>195</td>
<td>150</td>
<td>105</td>
<td>450</td>
<td>30</td>
</tr>
</tbody>
</table>
5. year, 10. semester

<table>
<thead>
<tr>
<th>No.</th>
<th>Subject</th>
<th>Lectures</th>
<th>Seminar</th>
<th>Practical work</th>
<th>Total</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>44</td>
<td>Microbiology II (infect diseases)</td>
<td>30</td>
<td>30</td>
<td>15</td>
<td>75</td>
<td>6</td>
</tr>
<tr>
<td>45</td>
<td>Social medicine / hygienic</td>
<td>45</td>
<td>15</td>
<td>15</td>
<td>75</td>
<td>6</td>
</tr>
<tr>
<td>46</td>
<td>Obstetrics and gynecology</td>
<td>75</td>
<td>60</td>
<td>75</td>
<td>210</td>
<td>14</td>
</tr>
<tr>
<td>47</td>
<td>Clinical pharmacology</td>
<td>15</td>
<td>30</td>
<td>0</td>
<td>45</td>
<td>3</td>
</tr>
<tr>
<td>48</td>
<td>Subject of choice 4</td>
<td>0</td>
<td>30</td>
<td>0</td>
<td>30</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>165</td>
<td>165</td>
<td>105</td>
<td>435</td>
<td>30</td>
</tr>
</tbody>
</table>

6. year, 11. semester

<table>
<thead>
<tr>
<th>No.</th>
<th>Subject</th>
<th>Lectures</th>
<th>Seminar</th>
<th>Practical work</th>
<th>Total</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>48</td>
<td>Oncology</td>
<td>30</td>
<td>15</td>
<td>15</td>
<td>60</td>
<td>5</td>
</tr>
<tr>
<td>49</td>
<td>Clinical microbiology</td>
<td>0</td>
<td>15</td>
<td>15</td>
<td>30</td>
<td>3</td>
</tr>
<tr>
<td>50</td>
<td>Occupational medicine</td>
<td>15</td>
<td>0</td>
<td>15</td>
<td>30</td>
<td>2</td>
</tr>
<tr>
<td>51</td>
<td>Maxillofacial surgery with basic stomatology</td>
<td>15</td>
<td>0</td>
<td>15</td>
<td>30</td>
<td>1</td>
</tr>
<tr>
<td>52</td>
<td>Family medicine II</td>
<td>0</td>
<td>15</td>
<td>90</td>
<td>105</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>45</td>
<td>45</td>
<td>135</td>
<td>225</td>
<td>16</td>
</tr>
</tbody>
</table>

6. year, 12. semester — Practical work

<table>
<thead>
<tr>
<th>No.</th>
<th>Subject</th>
<th>Lectures</th>
<th>Seminar</th>
<th>Practical work</th>
<th>Total</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Family medicine Practical work</td>
<td>5</td>
<td>40</td>
<td>60</td>
<td>105</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Surgery* – practice</td>
<td>40</td>
<td>45</td>
<td>165</td>
<td>250</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Internal medicine – practice</td>
<td>30</td>
<td>60</td>
<td>230</td>
<td>320</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Individual research work</td>
<td>30</td>
<td>70</td>
<td>0</td>
<td>100</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>105</td>
<td>215</td>
<td>455</td>
<td>775</td>
<td>44</td>
</tr>
</tbody>
</table>

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.

* Includes the seminar Resuscitation (4S, 4V).
Optional subjects from among which the students may choose:
1. Anatomy,
2. Biochemistry I,
3. Physiology II,
4. Microbiology I,
5. Pathology I,
6. Internal medicine,
7. Surgery,
8. Anesthesiology,
9. Ophthalmology,
10. Pathology II,
11. Psychiatry,
12. Family medicine,
13. Medical ethics and law,
14. Pediatrics,
15. Obstetrics and gynecology,
16. Oncology.

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.

<table>
<thead>
<tr>
<th>YEAR</th>
<th>HOURS TOTAL</th>
<th>LECTURES</th>
<th>SEMINAR</th>
<th>PRACTICAL WORK</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hours</td>
<td>Percent (%)</td>
<td>Hours</td>
<td>Percent (%)</td>
</tr>
<tr>
<td>1.</td>
<td>885</td>
<td>50.85</td>
<td>165</td>
<td>18.64</td>
</tr>
<tr>
<td>2.</td>
<td>885</td>
<td>47.46</td>
<td>240</td>
<td>27.12</td>
</tr>
<tr>
<td>3.</td>
<td>930</td>
<td>43.55</td>
<td>360</td>
<td>38.71</td>
</tr>
<tr>
<td>4.</td>
<td>885</td>
<td>35.59</td>
<td>255</td>
<td>28.82</td>
</tr>
<tr>
<td>5.</td>
<td>885</td>
<td>40.68</td>
<td>315</td>
<td>35.59</td>
</tr>
<tr>
<td>6.</td>
<td>225</td>
<td>20.00</td>
<td>45</td>
<td>20.00</td>
</tr>
<tr>
<td>TOTAL</td>
<td>4695</td>
<td>42.49</td>
<td>1380</td>
<td>29.39</td>
</tr>
</tbody>
</table>
2.4 Percentage of practical work in the program, its manner of execution and its credit evaluation

Practical work in a total of 805 hours is carried out by students in the 6. year and is evaluated with 45 credit points acc. to ECTS. In the general OPC (family medicine) they perform a total of 105 hours, 5 of these hours are lectures, 40 hours seminar and 60 hours are in the form of practical training. At the hospital (surgery and internal medicine) they carry out a total of 700 hours of practical work, of these 70 hours are lectures (40 hours of surgery and 30 of internal medicine), seminars 105 hours (45 hours surgery and 60 hours internal medicine) and practical training 525 hours (165 hours surgery and 360 hours internal medicine).

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

<table>
<thead>
<tr>
<th>Practical Work</th>
<th>Hours Total</th>
<th>Lectures</th>
<th>Seminar</th>
<th>Practical Training</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hours</td>
<td>Percent (%)</td>
<td>Hours</td>
<td>Percent (%)</td>
</tr>
<tr>
<td>6. year</td>
<td>805</td>
<td>75</td>
<td>9.32</td>
<td>145</td>
</tr>
</tbody>
</table>

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, First aid, Medical
  terminology, History of medicine, Molecular biology, PBL – Anatomy, Cell biology,
  Molecular biology, PBL – Bio-equilibrium;

• For enrollment in the 3. year – Fulfilled study obligations in the following subjects of the 2.
  year: Physiology, Biostatistics, Microbiology I, PBL – Applied physiology I PBL – Applied
  physiology II;

• For enrollment in the 4. year – All study obligations from the 2. year: English, Medicine and
  information technologies, Basic epidemiology, Sociology and philosophy of medicine,
  Pharmacology with toxicology, Pathology I and fulfilled study obligations in the following
  subjects of the 3. year: Internal medicine with propedeutics or Surgery, PBL module
  Internal medicine – Surgery I, PBL – Internal medicine – Surgery II;

• For enrollment in the 5. year – All study obligations from the 3. year: Internal medicine with
  propedeutics or Surgery, Radiology, Optional subject 1, Anesthesiology, Psychology. From
  the 4. year all study obligations in the subjects Pediatrics and Pathology II, PBL – 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).

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.
• References of Institution of Higher Education
  (Maribor Teaching Hospital, members of University of Maribor, which will take part in the execution of the university program General Medicine)
MARIBOR TEACHING HOSPITAL

RUNNING RESEARCH PROJECTS/STUDIES IN THE YEAR 2003:

I. MINISTRY OF EDUCATION, SCIENCE AND SPORT, Office of Science

National research programs:

a) Holders and execution of research project:

- Basic research projects:

1. CHARACTERISTICS OF ANTRAL FOLLICLES AND MATURATION CAPACITY OF OOCYTES UNDER IN VITRO CONDITIONS
   Project holder: Prof. Veljko Vlaisavljević, MD, PhD
   Duration: 01.07.2002-30.06.2005
   Project No.: J3-4482

- Applicative research projects:

1. TREATMENT OF URINE INCONTINENCE
   Project holder: Ass.Prof. Zmago Turk, MD, PhD
   Duration: 01.07.2002-30.06.2005
   Project No.: L3-4536

2. EMBOLIZATION OF THE UTERINE ARTERY – A NEW MINIMALLY INVASIVE METHOD FOR TREATMENT OF UTERINE MYOMAS
   Project holder: Ass.Prof. Igor But, MD, PhD
   Duration: 07.2001-06.2004
   Project No.: L3-3043

3. FUNCTIONAL MAGNETIC STIMULATION
   Project holder: Ass.Prof. Igor But, MD, PhD
   Duration: 01.07.2002-30.06.2004
   Project No.: L3-4476

4. HUMAN PAPILLOMA VIRUS (HPV) 16 AND 18 IN FEMALE PATIENTS WITH INTRAEPITHELIAL NEOPLASIA OF THE UTERINE CERVIX
   Project holder: Ass.Prof. Iztok Takač, MD, PhD
   Duration: 07.2001-06.2004
   Project No.: L3-3054

5. QUALITY OF LIFE OF CHILDREN, ADOLESCENTS AND ADULTS WITH CELIAC DISEASE
   Project holder: Prof. Dušanka Mičetić-Turk, MD, PhD
   Duration: 01.07.2002-30.06.2005
   Project No.: L3-4545

6. USE OF COMPARATIVE GENOME HYBRIDIZATION (PGH) IN DIAGNOSING LEUKEMIAS AND LYMPHOMAS
   Project holder: Ass.Prof. Nadja Kokalj-Vokač, Univ.Grad.Biol., Ph.D.
   Duration: 01.07.2002-30.06.2005
   Project No.: L3-4549
7. SOME GENETIC FACTORS IN THE OCCURRENCE OF URINARY TRACT ANOMALIES AND HYPERTENSION
   Project holder: Prof. Alojz Gregorič, MD, PhD
   Duration: 01.01.2003-31.12.2005
   Project No.: L3-5367

RHEUMATOID ARTHRITIS AND ATHEROSCLEROSIS
   Project holder: Prof. Radovan Hojs, MD, PhD
   Project No.: L3-5354

DIAGNOSTIC VALUE OF PROCALCITONIN IN PELVIC INFLAMMATION
   Project holder: Prof. Borut Gorišek, MD, PhD
   Duration: 01.01.2003-31.12.2005
   Project No.: L3-5030

CYTOGENETIC INVESTIGATION OF HUMAN OOCYTES AND PREIMPLANTED EMBRYOS
   Project holder: Borut Kovačič, Univ.Grad.Biol., PhD
   Duration: 01.01.2003-31.12.2005
   Project No.: L3-5035

THE SIGNIFICANCE OF TRANSVAGINAL HYDROLAPAROSCOPY IN THE TREATMENT OF INFERTILITY
   Project holder: Ass.Prof. Milan Reljič, MD, PhD
   Duration: 01.01.2003-31.12.2005
   Project No.: L3-5246

THE INCIDENCE OF ERYTHROPOIETIC PROTOPORPHYRIA AND MOLECULAR MECHANISM IN THE POPULATION OF SLOVENIA
   Project holder: Prof. Ivan Krajnc, MD, PhD
   Duration: 01.01.2003-31.12.2005
   Project No.: L3-5024

b) Collaboration in research project, whose holder is another research organization

1. INTRAHEPATIC BRANCHING OF ARTERIAL AND PORTAL SYSTEMS
   Project holder: Prof. Dejan Ravnik, MD, PhD
   Collaborators from MTH: Prof. Eldar M. Gadžijev, MD, PhD, Jožef Matela, MD, Vojko Flis, MD
   Duration: 01.01.2002-31.12.2005
   Project No.: L3-4294

2. THE IMPACT OF STATINS ON CANCER GROWTH
   Project holder: Prof. Mihael Sok, MD, PhD
   Collaborators from MTH: Prof. Radovan Hojs, MD, PhD
   Duration: 01.07.2003-30.06.2005
   Project No.: J3-5359

III. INTERNATIONAL PROJECTS/STUDIES
1. **EUREKA E! 2866** «Correlation Of Anti-Thrombotic/Fibrinolytic Capacity Of Synthetic Arterial Grafts With Their Surface Properties – VASCUCHARGE»
   Executor of project: Srečko Kovačič, MD

2. **SIMBIO – A GENERIC ENVIRONMENT FOR BIO-NUMERICAL SIMULATION**
   Executor of project: Tomaž Tomažič, MD
   Duration: 01.07.2002-30.06.2003

3. **ACST (Asymptomatic Carotid Surgery Trial). Randomization Centre at Oxfordu.**
   Project holder in Slovenia: Prof. Kazimir Miksič, MD, PhD

4. **PERINATAL BRAIN LESION – LIMITS OF PLASTICITY**
   Chief researcher: Prof. Vlatka Mejaški-Bošnjak, MD, PhD
   Institution: Klinika za dječje bolesti Zagreb, Inštitut za istraživanje mozga, Medicinski fakultet, Zagreb
   Collaborating institution: Maribor Teaching Hospital
   Researcher: Silva Burja, MD, PhD, Dept. of Perinatology

5. **INMEDIA – Intelligent analysis of medical data. Bilateral project with the USA.**
   Head of project: Prof. Peter Kokol, PhD
   Collaborators from MTH: Milojka Molan-Štiglic, MD, MSc.
   Funding: Ministry of Education, Science and Sport of the RS and Hospital for Special Surgery, New York.

6. **ISCOMAA – Formation of intelligent systems with autonomous agents. Bilateral project with the Czech Republic.**
   Head of project: Prof. Peter Kokol, PhD
   Collaborator from MTH: Milojka Molan-Štiglic, MD, MSc
   Funding: Ministry of Education, Science and Sport of the RS and the Ministry of Science and Sport of the Czech Republic.

7. **EUNITE – 60P European Union – bilateral project with the USA.**
   National head: Prof. Peter Kokol, PhD
   Collaborator from MTH: Milojka Molan-Štiglic, MD, MSc
   Funding: European Community

8. **CRP Provip – Presentation, evaluation and choice of information system development paradigms in medicine, target development project.**
   Head of project: Prof. Peter Kokol, PhD
   Collaborator from MTH: Milojka Molan-Štiglic, MD, MSc

9. Multicenter randomized study, phase 3 for establishing the effect of docetaxel in combination with doxorubicin and cyclophosphamide (TAC) compared with the effect of doxorubicin and cyclophosphamide, followed by docetaxel (AC-T) in adjuvant treatment of operable breast cancer in Her2neu negative patients with positive axillary glands (BCIRG 005, TAX GMA 301).
   Project holder: Ass. Prof. Iztok Takač, MD, PhD
   Duration: 2001-2010
   Collaborators: Prof. Borut Gorišek, MD, PhD, Nina Čas-Sikošek, MD, Robert Bali, MD, Rajko Kavalar, MD, MSc, Ludvik Puklavec, MD, Marija Horvat, RN
10. Multicenter randomized study phase III., comparing doxorubicin and cyclophosphamide, followed by docetaxel (AC-T), doxorubicin and cyclophosphamide, followed by docetaxel and trastuzumab (AC-TH), as well as with docetaxel, platinum salt and trastuzumab (TCH) in adjuvant treatment of patients with positive nodes and high-risk patients with negative nodes with operable breast cancer, with expressed HER2NEU (BCIRG 006, TAX GMA 302).
   Project holder: Ass.Prof. Iztok Takač, MD, PhD
   Duration: 2001-2010
   Collaborators: Prof. Borut Gorišek, MD, PhD, Nina Čas-Sikošek, MD, Robert Bali, MD, Rajko Kavalar, MD, MSc, Ludvik Puklavec, MD, Marija Horvat, RN

11. Multicenter randomized clinical study of dolžine survival in the application of radioimmunotherapy with monoclonal antibodies: multinational clinical study on the application of HMFG1 antibodies, marked by Ytrium 90 in patients with ovarian carcinoma.
   Project holder: Ass.Prof. Iztok Takač, MD, PhD
   Duration: 2001-2010
   Collaborators: Prof. Borut Gorišek, MD, PhD, Nina Čas-Sikošek, MD, Robert Bali, MD, Marija Horvat, RN

12. 10-14 WEEK SCAN
    Holder: Prof. Kypros Nicolaides,
    Holding institution: The Fetal Medicine Foundation-London
    Collaborators from MTH: Ksenija Ogrizek-Pelkič, MD, MSc

13. Bilateral project - Slovene-French collaboration PROTEUS
    Project holder: Prof. Nadja Kokalj-Vokač, Univ.Grad.Biol., PhD
**FACULTY OF CHEMISTRY AND CHEMICAL ENGINEERING**

At the Faculty of Chemistry and Chemical Engineering, scientific research is going on at the Chemical Research Institute comprising 8 laboratories:

- Laboratory of anorganic chemistry
- Laboratory of analytical chemistry and industrial analysis
- Laboratory of physical chemistry and chemical thermodynamics
- Laboratory of water technology
- Laboratory of process systemic technology
- Laboratory of separation processes
- Group for process integration
- Laboratory of organic and polymer chemistry and technology
- Laboratory of thermoenergy

In accordance with our aim we wish to disclose particularly the studies referring to the following fields:

- Development of modern methods of analysis
- Development of complementary methods for interdisciplinary fields such as:
  - Environmental analytics
  - Determination of metals and therapeutic active substances in human tissues and fluids
  - Analytic procedures for modern technologic materials
- Elaboration of a general strategy for the evaluation of the impact and for dealing with industrial waste waters
- Development of a methodology for the evaluation of processes of biochemical decomposition of substances in surface and waste waters
- Development of the technological procedure of hydrogenation of plant oils according to patented procedures
- Development and validation of analytic methods for the needs of the pharmaceutic industry in the field of biologic and bioactive substances
- Development of new original analytic methods, particularly in the field of separation techniques
- Study of the biosynthesis of primary and secondary metabolites
- Mathematic modelling of the process and simulation of processes using computerized methods
- Optimization of chemical and physical parameters for the growth of microorganisms

**FACULTY OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCE**

At the Faculty of Electrical Engineering and Computer Science, research work is organized at the following Institutes:

- Institute of automatic programming
- Institute of electronics
- Institute of information systems
- Institute of electrical engineering
- Institute of computer science
- Institute of robotics
- Institute of mathematics and physics
In accordance with our aim we wish to disclose particularly the research fields of the Institute of Computer Science and the Institute of Electronics.

The Institute of Computer Science is particularly active in the following fields:
- Development and implementation of domain-specific and aspect-directed program languages
- Parallel processing
- VMRL technology
- Decomposition of combined signals
- Analysis of medical ultrasonic images
- Conceptual learning
- Development of hybrid intelligence approaches
- Algorithms of solutions to geometric limitations
- Algorithms of computer geometry as support for GIS applications.

At the Institute of Electronics work goes on in the following fields in particular:
- Robust processing of acoustic signals in the transfer through various communications channels
- Systems of automatic distinction and synthesis of speech
- Systems of automatic speech dialogue
The basic studies are particularly oriented towards the following procedures:
- Attenuation of noise and disturbances in the spoken signal
- Exclusion of speech characteristics
- Multilingual acoustic modelling
- Statistical language modelling
- Automatic synthesis of Slovene speech
- Planning of automatic telephone speech dialogue systems.

FACULTY OF EDUCATION

At the Faculty of Education, research work is organized at the Science Institute including the following departments:
- Department of pedagogics, didactics and psychology
- Department of preschool education
- Department of class teaching
- Department of geography
- Department of history
- Department of Slavic languages and literature
- Department of Germanic languages
- Department of English and American language and literature
- Department of Hungarian language and literature
- Department of mathematics
- Department of physics
- Department of biology
- Department of chemistry
- Department of technical and production-technical education
- Department of musical education
- Department of art education
- Department of philosophy
- Department of sociology

In accordance with our aim we wish to disclose particularly the research fields in the following departments:

- Department of English and American language and literature
  Preparations for the research project »Literary Understanding of Teacher Trainees«

- Department of physics
  Bilateral Slovene-Italian research project: Structure and dynamics of defects in spatially restricted liquid crystals
  Bilateral Slovene-Austrian project: Liquid crystals: the Laboratory of physics
  Internet: Cosmology in the laboratory, study of the Kibble-Zurk scenario in liquid crystals
  Bilateral Slovene-Brasilian project: Pattern formation in liquid crystals
  Research project: The effect of planar surfaces on the dynamic properties of liquid crystals
  Research project: Development and introduction of the use of network and multimedia technologies for presentational, evaluational and educational activities in the National Council of Slovenia
  Collaboration in the international project: Conceptual teaching of science CoLoS
  Collaboration in the project TEMPUS PHARE DETECH (EU)
  Collaboration in the project VISIOCOM – VIDEO SUPPORTED ONLINE COMMUNITIES
  Collaboration in the project VIDEO UNTERSTÜTZTE MULTIMEDIALE PRÄSENTATION AM WWW
  Collaboration in the project: Learning and teaching in the communication society – Concil of Europe

- Department of biology
  Scientific research project within the Slovene-Austrian scientific collaboration SLO-A/2: "The effect of carbon dioxide from natural springs on meadow and forest ecosystems"
  Scientific research project within the Slovene-Italian scientific collaboration: "Slovenian Natural Air Carbon Dioxide Enrichment"

- Department of chemistry
  Collaboration with the Department of pedagogics, didactics and psychology in the research project »Didactic and methodical renovation and development of education« within the subject project unit: »Didactics of education in chemistry and natural sciences in curricularly renovated primary- and secondary-school programs for education in natural sciences, chemistry and environment«

FACULTY OF AGRICULTURE

At the Faculty of Agriculture, research work is organized at technological centers (TC):

- TC for agricultural engineering
- TC for stockbreeding and fodder production
- TC for viniculture – Meranovo
- TC for fruit growing
- TC for forestry with botanical garden

In accordance with our aim we wish to disclose the research fields:

Biochemistry and molecular biology

Interferons and cytokines
Biochemical research of interferon structures and functions, particularly on the model of the pig leukocyte interferon gamma and comparisons with the trophoblast interferon gamma, which has so far only been proved in pigs and humans and is secreted at the time of embryo implantation. Studies of trophoblast interferon gamma function at the time of implantation on the molecular level.

1. **Probiotics, pathogens and the epithelium and the underlying mucous immune system (comparison of human and pig cell lines for the generation of an *in vitro* experimental model)**
   Molecular mechanisms of interaction in the system of probiotics-pathogens-epithelium-mucous immune system, including prionic proteins. Molecular mechanisms of the interaction probiotics-allergic reactions and the cells of the digestive tract (small intestine).

2. **Differentiation and immunologic functions of macromolecules**
   On the example of pig-blood and whey proteins.