GUIDELINES OF COMPETENCE DEVELOPMENT IN THE STUDY FIELD OF MEDICINE
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1. OVERVIEW OF MEDICINE STUDY FIELD. CHARACTERISTICS OF MEDICINE AND HEALTH SCIENCES STUDY FIELD GROUP

Medicine study field is specific and special, as the professional activity of specialists trained in this field is attributed to the group of professions regulated by the State, just as the activity of graduates of dentistry, pharmacy, nursing, midwifery, veterinary medicine and architecture. It means that the State sets the rules and regulations of respective activities.

In order to abolish obstacles and ensure the free movement of persons and services between EU Member States, special EU directives have been adopted that have established the rules for the harmonisation and assurance of rights and responsibilities of individual Member States, conditions of the automatic recognition and application of acquired qualifications. Currently, Directive 2005/36/EC of 7 September 2005 of the European Parliament and of the Council on the recognition of professional qualifications is in force. The said directive establishes requirements for the training of doctors (Annex 1).

The provisions of European Union legislation have been transposed into the legal documents of the Republic of Lithuania. The main document based on which medical training is performed in Lithuania is Resolution No 1359 of 31 October 2003 of the Government of the Republic of Lithuania on the training of doctors (Annex 2).

Degree programme requirements for the doctors of medicine were approved by Order No ISAK-480/V-210 of 11 April 2003 of the Minister of Education and Science and the Minister of Health of the Republic of Lithuania on minimum requirements for the training of doctors, dental practitioners, nurses responsible for general care, midwives and pharmacists. The order is directly based on the provisions of directives of the European Parliament and of the Council.

Thus, the Lithuanian legislation establishes cycles of the training of doctors and the key requirements of degree programmes in line with the general EU legislation. Albeit not using the Tuning approach, these documents state the key learning outcomes.

Some of the degree programmes of medicine and health sciences study field do not fall within the general legal jurisdiction of the European Union; therefore, they are not subject to respective regulation. Such degree programmes are designed according to the general requirements for programme structure and curriculum design provided by Order No V-501 of 9 April 2010 of the Minister of Education and Science of the Republic of Lithuania on the approval of the description of general requirements for degree awarding first cycle and integrated degree programmes. Public health and pharmacy degree programmes are also designed with due consideration to respective study field regulations, viz. specific requirements for curriculum design and implementation. Knowledge, practical and transferable skills that the graduates of such degree programmes should have are stated in a certain form.

Thus, the legal framework and requirements of degree programmes of medicine and health sciences study field are heterogeneous. Some programmes are regulated in greatest detail, others are only outlined by providing a general design framework, duration and key learning outcomes.
References


Resolution No 1749 of 23 December 2009 of the Government of the Republic of Lithuania on the approval of the list of study areas and fields in which studies are offered in higher education institutions, and the list of qualification degrees. Official Gazette Valstybės žinios, 2009, No 158-7135.


Order No ISAK-222 of 19 February 2010 of the Minister of Science and Education of the Republic on the approval of the list of branches of study fields. Official Gazette Valstybės žinios, 2010, No 22-1054.


2. STANDARD DEGREE PROGRAMMES OF MEDICINE AND HEALTH SCIENCES STUDY FIELD GROUP. IDENTIFICATION OF DEGREE PROFILES AND OPPORTUNITIES OFFERED BY PROFILES

The key degree programmes of medicine and health sciences study field group are State-regulated, while the characteristics of their curriculum design and implementation, requirements for graduates, competences acquired by graduates, employability, fields of employment and improvement are provided by respective legislation, e.g. professional activities of doctors are regulated by the Law on Medical Practice, while professional activities of dental practitioners – by the Law on Dental Practice. The Minister of Health has approved medical standards that established and thoroughly defined the scope of professional activities. The development of degree profiles is mostly based on legal regulation of the key degree programmes of medicine and health sciences study field.

As we know, the description of the degree profile is the description of the uniqueness of the degree programme, the key characteristics, features and specific purposes of the degree programme. It can be stated that the degree profile is the summary of learning outcomes indicating the specific character and academic or practical line. As it was mentioned before, due to the rather detailed legal regulation, the designers of programmes for internationally accepted establishing of competences and their levels of the majority of degree programmes in this field do not have the absolute freedom to define the characteristics of the programme. The description of medicine and health sciences study field degree profile should not only describe the content or provide a list of competences to be developed. The specific character and advantages of the implementation of the degree programme should be emphasised, viz. whether the learning is problem-oriented and whether the design is modular, how study subjects are interlinked, the relationship between practical and theoretical activities, the specific character of independent work, organisation of practical training, the system of developing competences, student support and control, other aspects of learning. The entirety of these characteristics would allow to precisely describe the degree programme, to reflect the intentions of its designers and implementers, and would provide conditions to learn the specific character of the degree programme without the need to perform any detail analysis, also to compare the degree programme with other degree programmes in the same study field and to identify the differences and similarities between them.

As medicine and health sciences study field group also includes quite a few degree programmes not falling within the area subject to State regulation, the description of their profile can be more flexible, viz. an additional emphasis can be placed on the list of competences, their development, employability, etc.

Directive 2005/36/EC of 7 September 2005 of the European Parliament and of the Council on the recognition of professional qualifications provides that specialised doctors are trained in residency programmes, i.e. in the second cycle of training medical and dental specialists. Presently, there are 59 registered residency programmes. Detail requirements for special competences of the graduates of residency programmes are established by respective medical standards.

The description of a residency programme profile also does not leave much freedom for providing variations of competences to be developed. However, we still can define certain characteristics of the curriculum design, to emphasise some competences and to less focus on others, to describe the characteristics of the implementation of the programme.
References


3. PROFESSIONAL ACTIVITY UPON THE COMPLETION OF MEDICAL TRAINING AND RESIDENCY. GENERAL PRACTITIONER

Upon the completion of medical training, the professional training of the graduates of the Lithuanian University of Health Sciences and Vilnius University is continued in specialised residency. Having completed the residency, doctors practise as specialists in a respective field. The principal document regulating professional activities of medical doctors, general practitioners and specialised doctors is the Law on Medical Practice and related implementing legislation. As universities train a wide range of specialised doctors, we shall discuss the professional activity of one of them, viz. a general practitioner, below. A general practitioner is a cornerstone figure in the primary healthcare system.

3.1. Structure of the primary outpatient healthcare

In the Republic of Lithuania, healthcare services are divided into the following levels: primary (primary healthcare), secondary (secondary healthcare) and tertiary (tertiary healthcare). Such services can be provided by budgetary and public establishments subordinated to municipalities or the Ministry of Health. The majority of healthcare establishments have the status of a public non-profit establishment. Such establishments have been incorporated by municipalities or the Ministry of Health (MH). Municipal executive authorities organise the primary healthcare. The procedure for the organisation of the primary healthcare shall be established by the Government or its authorised body.

Primary outpatient healthcare (POH) is a complex of non-specialised qualified healthcare services provided in an outpatient healthcare establishments (i.e. in establishments that do not provide any inpatient healthcare services) in line with Medical Standards MN 14:2005 General practitioner: Rights, duties, competence and responsibility, MN 28:2011 Nurse responsible for general care: Rights, duties, competence and responsibility, MN 57:2011 Community nurse: Rights, duties, competence and responsibility. For the purpose of science and research, such services can also be provided in other healthcare establishments.

In 2009, the total of 391 primary healthcare establishments (221 of them were private) provided primary outpatient healthcare services. The number of private establishments rendering the said services is annually growing. In recent years the number of general practitioners has been rapidly increasing, while the number of doctors working in a team has been respectively decreasing: in 1998, the number of practicing general practitioners was 230, while in December 2009 this number was 1,951. The majority of general practitioners are employed in municipal primary healthcare centres, slightly less general practitioners are employed in private family medical centres or offices.

A small number of general practitioners practise as doctors in the admissions units of specialised secondary or tertiary establishments, also as ambulance doctors or doctors in hospice or palliative care establishments. Inpatient primary palliative care or hospice services for patients suffering from chronic illnesses or for handicapped patients are provided in inpatient healthcare establishments that have a licence to provide palliative care or hospice services. Referrals for palliative care or hospice services shall be issued to patients by doctors of outpatient or inpatient healthcare establishments. Patients are hospitalised in such hospitals once the final diagnosis is made and no additional testing is required. The duration of the patient’s hospitalisation is determined by the need for inpatient hospice services, the objective condition of the patient, the course and gravity of the illness.
3.2. Financing of the primary outpatient healthcare

The majority of establishments (both public and private) providing primary outpatient healthcare services operate under contracts with the territorial subdivisions of the National Health Insurance Fund under the Ministry of Health (NHIF under the MH). Payments for primary outpatient healthcare services are as follows: basic payment for the number of people on the list to whom services are provided; additional payment for the rendered motivating primary outpatient healthcare services; additional payment for the implementation of preventive programme measures. Motivating primary outpatient healthcare services shall be services that are subject to separate accounting and additional payment in order to have more active activities in individual primary healthcare areas. The provision of motivating primary outpatient healthcare services to residents is organised by establishments that render primary outpatient healthcare services.

An institution that has concluded an agreement with a health insurance fund is paid for each resident registered with it. Payments for child and elderly health care are higher. In addition, as already mentioned before, motivating services are paid for additionally.

The National Health Insurance Fund under the Ministry of Health pays over LTL 500 million annually for services provided by primary outpatient healthcare establishments. This amounts to 12.5% of all funds of the Compulsory Health Insurance Fund allocated for healthcare.

3.3. Legislative provisions regulating activities of a general practitioner

Family doctors are obliged to observe laws and other legal acts of the Republic of Lithuania, medical standards established by the Ministry of Health, the articles of association (regulations) of the institution they work for, the internal rules of procedure and their job description. One of the main legal acts governing the rights and obligations of doctors is the Law on Medical Practice. The purpose of this Law is to regulate the conditions for the medical practice of medical doctors, family doctors and specialised doctors in the Republic of Lithuania. This Law establishes conditions for the acquisition of professional qualifications of doctors, conditions for the acquisition, implementation and loss of the doctor’s right to engage in medical practice, and the basic professional rights, duties and responsibilities of doctors.

The activities of family doctors are governed by Lithuanian Medical Standard MN 14:2005 Family Doctor. Rights, Duties, Competence and Responsibilities. This medical standard governs the areas of activity, rights, duties, competence and responsibilities of family doctors and is binding on all family doctors, their employers as well as the institutions training these specialists, licensing and controlling their activities. A family doctor works independently, cooperating with other specialists, public health care and other professionals. Family doctors’ professional competence consists of knowledge, abilities and skills acquired by them upon completion of studies awarding the professional qualifications of family doctors, regularly improving their professional qualifications and taking into account continuing progress in medical science and practice. Compulsory minimum competence of family doctors is specified in the paragraphs of this medical standard indicating the diseases that family doctors must diagnose and treat as well as what they must be able to do. The competence of a family doctor substantially differs from the competence of other health care professionals as family doctors cooperate with other health care professionals by referring patients to them for consultation in unclear cases or in cases specified in the medical standard. However, they try to solve most problems on their own. The basis of the competence of a family doctor is constant cooperation with other specialists and patients.
Various terms of general medical practice are also provided in Medical Standard MN 14:2005 *General practitioner: Rights, duties, competence and responsibilities*. A general practitioner is a medical doctor who acquired the professional qualification of a general practitioner. The qualification is acquired upon the completion of University medical training and residency in general medical practice.

In addition to other legal acts, relations between a family doctor and a patient are governed by the Law on the Rights of Patients and Compensation for Damage to their Health. Doctors’ labour relations, the implementation and defence of labour rights and duties are governed by the Labour Code.

### 3.4. Problems encountered by general practitioners upon the commencement of their practice

The analysis of infrastructure reveals significant imbalance between rural and urban areas. Establishments in rural areas are insufficiently provided with material facilities and human resources, which are unevenly allocated. The functional and financial separation of primary and secondary healthcare is present not in all municipal establishments providing primary healthcare services. There is evidence that activities of general practitioners practising in such establishments fail to include all areas described in the respective medical standard, while patients are unreasonably referred to specialised doctors. Insufficient financing of primary healthcare and the increasing scope of activities of a general practitioner prevent young people from choosing the professional of a general practitioner. Therefore, the increasing need for healthcare services should result in the increasing financing of primary healthcare.

### 3.5. Characteristics of activities of a general practitioner

European Union countries are seeking to create a national health care system that would best meet the requirements of access for all and would help to use resources more rationally. Countries paying adequate attention to community-orientated and family medicine-based primary health care have achieved better health indicators that have been determined by a more effective health care system. Family medicine is the first level of the relationship between a patient and the health care system.

Family doctors are professional medical specialists taught the principles of family medicine. These doctors are responsible for the provision of comprehensive and regular medical assistance to any person seeking it, regardless of age, sex and disease. Family doctors take care of patients being aware of the connection between family, community and cultural identity, and always taking into account their patients’ autonomy. Family doctors also recognise their professional responsibility for their community. Discussing treatment and health care plans with their patients, family doctors integrate physical, psychological, social, cultural and existential factors. Carrying out their professional duties, family doctors promote a healthy lifestyle, disease prevention, treat and take care of their patients (Table 3.1).
Table 3.1. Characteristics of the subject of general medical practice

- Patient-oriented holistic approach in the context of community and family.
- Activities determined by patient needs.
- Various unclassified health disorders.
- Low incidence of serious diseases.
- Early stages of diseases.
- Related treatment of the majority of complaints and pathologies.
- Long-term, coordinated, continuous and effective care.
- Preventive work in the community.

This is performed either directly or through services provided by other specialists, with due consideration to health-related needs and the available community resources. General practitioners also help patients who need access to healthcare services. General medical practice is based on the principles of the availability, continuity, longevity and efficiency of healthcare. The practice of a general practitioner shall be the primary or continued healthcare of a person, family or community, regardless of age, sex and disease, provided by a doctor in line with the acquired professional qualification and competence of a general practitioner, when patients are admitted in the doctor’s office or at their home. Such practice meets the major share of healthcare needs, undoubtedly considering the cultural, socioeconomic and psychological environment of patients. Personal responsibility for comprehensive and continuous care of patients is also assumed. The general practitioner’s commitment to the patient does not end with the treatment of the disease; the commitment continues on and on, regardless of the current condition of the patient’s health or the course of the disease. This allows the general practitioner to consider not only the patient but also his/her environment. Continuous doctor-patient relations become a strong bond that can be described as trust, loyalty and responsibility. The more frequent and longer the communication with the patient is, the better position the doctor is in to identify early signs of an organic disease and to differentiate such illness from functional problems. Patients who regularly visit their general practitioner are less likely to be hospitalised or undergo a surgery, and they less frequently visit specialised doctors. A general practitioner who observes the patient for a long time knows his/her problems and can prevent complications that would require hospitalisation. Healthcare also costs less, as various radiological and lab tests or visits to emergency healthcare establishments are seldom required.

Patients whose problems are caused by social and emotional conflicts can be most efficiently treated by doctors who know the patient, his/her family and home environment very well. Such knowledge is acquired only from long-term observation of the patient and considering his/her response to various stress situations. Such continuous observation is especially significant in the case of child development. A bond established with a young patient ensures the ability to help when the patient encounters difficulties as a teenager, while searching for a job, in his/her married life or as a result of the changing social environment.

3.6. List of competences of medicine (general medical practice) study field

The final list of competences has been drawn with due consideration to the recommendations from Tuning experts, which has been used for the professional activity study involving the graduates of Vilnius University and Kaunas University of Medicine who graduated in 2007-2010, and their employers. The final list of competences of medicine (general medical practice) study field consists of subject-specific competences (23) that were developed by representatives
of medicine (general medicine practice) subject area group, viz. specialised researchers, and generic competences (31) that were used in the quantitative research of employers of all study fields (Tables 3.2 and 3.3).

Table 3.2. Subject-specific competences of medicine (general medical practice) study field

<table>
<thead>
<tr>
<th>Subject-specific competences</th>
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<tbody>
<tr>
<td>1. To perform general, special physical and mental examination of the patient according to the requirements set forth in the medical standard of the general practitioner.</td>
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<tr>
<td>2. To choose, prescribe and perform medical (diagnostic) tests and to diagnose health problems and diseases provided in the medical standard of the general practitioner.</td>
</tr>
<tr>
<td>3. To establish, prescribe and administer the treatment of health problems (diseases) diagnosed to the patient, to formulate the plan for the restoration of the patient’s health in line with the requirements of the medical standard of the general practitioner.</td>
</tr>
<tr>
<td>4. To prescribe medicine being aware of their indications, contraindications and side-effects, also indications pointing to the need for a consult by a specialised doctor and hospitalisation.</td>
</tr>
<tr>
<td>5. To provide emergency medical care to patients (in case of a trauma, accident, poisoning, acute illness, to patients in labour, etc.).</td>
</tr>
<tr>
<td>6. To enter data on case history (anamnesis), examination, diagnosis, prescribed treatment, tests, preventive measures, the results of treatment, tests and preventive measures, and the patient’s condition in medical documents.</td>
</tr>
<tr>
<td>7. To issue all kinds of prescriptions, certificates of sick leave, certificates of maternity leave, death certificates, and to fill out other primary healthcare medical documents.</td>
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<tr>
<td>8. To carry out expert examination of temporary incapacity of work, disability and level of incapacity of work.</td>
</tr>
<tr>
<td>9. To carry out preventive healthcare programmes and programmes for the improvement of health (preventive vaccination, etc.).</td>
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<tr>
<td>10. To advocate, teach persons and families to lead a healthy life, improve their health, take disease preventive measures, hygiene skills, and to encourage them to give up bad habits.</td>
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<tr>
<td>11. To consult (also by telephone) patients and their family members.</td>
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<tr>
<td>12. To use consulting skills (consulting techniques, patterns, encouragement of the patient to cooperate during consulting, resolution of a conflict situation, giving of a bad news, etc.), to provide explicit and concise information to the patient.</td>
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<tr>
<td>13. To assess psychological and social needs of the patient, the relationship between the patient’s health condition and his/her physical and social environment.</td>
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<td>14. To cooperate with other specialists (healthcare staff, other general practitioners, specialised doctors, social workers, etc.).</td>
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<tr>
<td>15. To cooperate with various authorities (public health centres, police, when providing respective information).</td>
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<td>16. To use information technologies in the field of medicine (e.g. e.health).</td>
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<td>17. To use knowledge gained in medicine-related subjects (physics, biochemistry, general and bioorganic chemistry, general and human biology, general and human genetics, biochemistry, human anatomy, histology, physiology, microbiology, pharmacology, pathology, biostatistics, etc.) in practice.</td>
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<td>18. To follow the principles of the professional ethics of the doctor, to respect the patients’ rights and not to violate them.</td>
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<td>19. To apply scientific principles and methods as well as principles and methods of evidence-based medicine in the everyday practice of the general practitioner.</td>
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<td>20. To be able to reflect on one’s professional activity and to improve it (the ability to solve problems and admit one’s boundaries, leadership and decision-making skills, etc.).</td>
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<tr>
<td>21. To improve the professional qualification as provided by the legislation of the Republic of Lithuania.</td>
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<tr>
<td>22. To follow the requirements of laws and documents regulating professional activities of general practitioners, and legal provisions of medical standards.</td>
</tr>
<tr>
<td>23. To apply knowledge of the health policy, social insurance, organisation of healthcare and social security, fundamentals of primary healthcare management, fundamentals of family healthcare and social security, legal and social guarantees of healthcare of women and children.</td>
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</tbody>
</table>
### Table 3.3. Generic competences

<table>
<thead>
<tr>
<th></th>
<th>Generic competences</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Capacity for abstract thinking, analysis and synthesis</td>
</tr>
<tr>
<td>2</td>
<td>Capacity for applying knowledge in practice</td>
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<tr>
<td>3</td>
<td>Capacity for organisation and planning</td>
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<td>4</td>
<td>Knowledge of the subject area and understanding of one’s own profession</td>
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<td>5</td>
<td>Oral and written communication in native language</td>
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<td>6</td>
<td>Capacity to communicate in a foreign language</td>
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<td>7</td>
<td>Information and communication technology skills</td>
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<td>8</td>
<td>Research skills</td>
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<tr>
<td>9</td>
<td>Capacity to learn</td>
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<td>10</td>
<td>Capacity to retrieve, process and analyse information from different sources</td>
</tr>
<tr>
<td>11</td>
<td>Capacity for critical and self-critical thinking</td>
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<td>12</td>
<td>Capacity to adapt to new situations</td>
</tr>
<tr>
<td>13</td>
<td>Capacity for generating new ideas (creativity)</td>
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<tr>
<td>14</td>
<td>Problem solving</td>
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<tr>
<td>15</td>
<td>Decision-making</td>
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<td>16</td>
<td>Capacity to work in a team</td>
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<tr>
<td>17</td>
<td>Interpersonal skills</td>
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<tr>
<td>18</td>
<td>Ability to motivate people to seek common goals</td>
</tr>
<tr>
<td>19</td>
<td>Ability to communicate with people who are not professional area experts</td>
</tr>
<tr>
<td>20</td>
<td>Appreciation of diversity and multiculturality</td>
</tr>
<tr>
<td>21</td>
<td>Ability to work in an international context</td>
</tr>
<tr>
<td>22</td>
<td>Ability to work autonomously</td>
</tr>
<tr>
<td>23</td>
<td>Capacity for organising and implementing projects</td>
</tr>
<tr>
<td>24</td>
<td>Concern for safety</td>
</tr>
<tr>
<td>25</td>
<td>Initiative and entrepreneurial spirit</td>
</tr>
<tr>
<td>26</td>
<td>Capacity to act ethically (ethical commitment)</td>
</tr>
<tr>
<td>27</td>
<td>Capacity to assess and maintain the quality of work (concern for quality)</td>
</tr>
<tr>
<td>28</td>
<td>Determination and perseverance in performing the tasks assigned and obligations assumed</td>
</tr>
<tr>
<td>29</td>
<td>Environmental commitment</td>
</tr>
<tr>
<td>30</td>
<td>Social responsibility and citizenship</td>
</tr>
<tr>
<td>31</td>
<td>Adherence to equal opportunities and tolerance principles</td>
</tr>
</tbody>
</table>

### 3.7. Preparedness of graduating residents of general medical practice to practise medicine upon their graduation

The professional activity study involving the graduates of Vilnius University and Kaunas University of Medicine who graduated in 2007-2010 revealed that the majority of general practitioners commence their employment while still being residents of general medical practice. According to graduates of general medical practice, theoretical knowledge acquired at the university is sufficient for their employment. However, there is not enough practical things and
practical knowledge (e.g. prescription of medicines, shortage of knowledge of individual medical fields). Upon the commencement of their employment, young doctors lack legal information. The practice of a general practitioner is extremely regulated by laws; therefore, a general understanding must be developed during the learning process. Upon the commencement of their employment, general practitioners had to independently search and master legal information or had to ask their fellow-colleagues to help them. Some general practitioners lack skills of communication or of getting into contact with patients (Table 3.4).

Table 3.4. Assessment of the level of subject-specific skills and capacities that the employer had at the start of his/her employment (%)

<table>
<thead>
<tr>
<th>Subject-specific skills and capacities</th>
<th>Capacity level of the employee at the start of his/her employment at the company/establishment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Non-existent</td>
</tr>
<tr>
<td>To perform general, special physical and mental examination of the patient according to the requirements set forth in the medical standard of the general practitioner.</td>
<td>–</td>
</tr>
<tr>
<td>To choose, prescribe and perform medical (diagnostic) tests and to diagnose health problems and diseases provided in the medical standard of the general practitioner.</td>
<td>–</td>
</tr>
<tr>
<td>To establish, prescribe and administer the treatment of health problems (diseases) diagnosed to the patient, to formulate the plan for the restoration of the patient’s health in line with the requirements of the medical standard of the general practitioner.</td>
<td>–</td>
</tr>
<tr>
<td>To prescribe medicine being aware of their indications, contraindications and side-effects, also indications pointing to the need for a consult by a specialised doctor and hospitalisation.</td>
<td>3,0</td>
</tr>
<tr>
<td>To provide emergency medical care to patients (in case of a trauma, accident, poisoning, acute illness, to patients in labour, etc.).</td>
<td>3,0</td>
</tr>
<tr>
<td>To enter data on case history (anamnesis), examination, diagnosis, prescribed treatment, tests, preventive measures, the results of treatment, tests and preventive measures, and the patient’s condition in medical documents.</td>
<td>5,0</td>
</tr>
<tr>
<td>To issue all kinds of prescriptions, certificates of sick leave, certificates of maternity leave, death certificates, and to fill out other primary healthcare medical documents.</td>
<td>6,0</td>
</tr>
<tr>
<td>To carry out expert examination of temporary incapacity of work, disability and level of incapacity of work.</td>
<td>7,0</td>
</tr>
<tr>
<td>To carry out preventive healthcare programmes and programmes for the improvement of health (preventive vaccination, etc.)</td>
<td>5,0</td>
</tr>
<tr>
<td>Subject-specific skills and capacities</td>
<td>Capacity level of the employee at the start of his/her employment at the company/establishment</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Non-existent</td>
</tr>
<tr>
<td>To advocate, teach persons and families to lead a healthy life, improve their health, take disease</td>
<td></td>
</tr>
<tr>
<td>preventive measures, hygiene skills, and to encourage them to give up bad habits.</td>
<td></td>
</tr>
<tr>
<td>To consult (also by telephone) patients and their family members.</td>
<td>5,0</td>
</tr>
<tr>
<td>To use consulting skills (consulting techniques, patterns, encouragement of the patient to cooperate</td>
<td>7,0</td>
</tr>
<tr>
<td>during consulting, resolution of a conflict situation, giving of a bad news, etc.), to provide</td>
<td></td>
</tr>
<tr>
<td>explicit and concise information to the patient.</td>
<td></td>
</tr>
<tr>
<td>To assess psychological and social needs of the patient, the relationship between the patient’s</td>
<td>4,0</td>
</tr>
<tr>
<td>health condition and his/her physical and social environment.</td>
<td></td>
</tr>
<tr>
<td>To cooperate with other specialists (healthcare staff, other general practitioners, specialised</td>
<td>8,0</td>
</tr>
<tr>
<td>doctors, social workers, etc.).</td>
<td></td>
</tr>
<tr>
<td>To cooperate with various authorities (public health centres, police, when providing respective</td>
<td>8,0</td>
</tr>
<tr>
<td>information).</td>
<td></td>
</tr>
<tr>
<td>To use information technologies in the field of medicine (e.g. e.health).</td>
<td>3,0</td>
</tr>
<tr>
<td>To use knowledge gained in medicine-related subjects (physics, biochemistry, general and bioorganic</td>
<td>7,0</td>
</tr>
<tr>
<td>chemistry, general and human biology, general and human genetics, biochemistry, human anatomy,</td>
<td></td>
</tr>
<tr>
<td>histology, physiology, microbiology, pharmacology, pathology, biostatistics, etc.) in practice.</td>
<td></td>
</tr>
<tr>
<td>To follow the principles of the professional ethics of the doctor, to respect the patients’ rights</td>
<td></td>
</tr>
<tr>
<td>and not to violate them.</td>
<td></td>
</tr>
<tr>
<td>To apply scientific principles and methods as well as principles and methods of evidence-based</td>
<td>2,0</td>
</tr>
<tr>
<td>medicine in the everyday practice of the general practitioner.</td>
<td></td>
</tr>
<tr>
<td>To be able to reflect on one’s professional activity and to improve it (the ability to solve</td>
<td>6,0</td>
</tr>
<tr>
<td>problems and admit one’s boundaries, leadership and decision-making skills, etc.).</td>
<td></td>
</tr>
<tr>
<td>To improve the professional qualification as provided by the legislation of the Republic of</td>
<td>5,0</td>
</tr>
<tr>
<td>Lithuania.</td>
<td></td>
</tr>
<tr>
<td>To follow the requirements of laws and documents regulating professional activities of general</td>
<td>5,0</td>
</tr>
<tr>
<td>practitioners, and legal provisions of medical standards.</td>
<td></td>
</tr>
</tbody>
</table>
3.8. Competences that employers expect from general practitioners when hiring them

Employers often do not focus on competences of graduating residents of general medical practice as a result of a big shortage of general practitioners in healthcare establishments. It is rather easy to find employment of a general practitioner, especially in rural areas. There is some competition in major cities; therefore, employers do consider references. The ability of young employees to work, their sense of duty and responsibility, the stability of their temper and the speed of providing patients with services is important for the employers. Humanity, communication skills, empathy is extremely important as well. The assessment of subject-specific skills and capacities is provided in Table 3.5.

Table 3.5. Comparison of the assessment of the relevance of subject-specific skills and capacities for professional activities given by employers and job experts (assessment is performed on the scale 1 to 4 [1 – completely irrelevant, 2 – irrelevant, 3 – relevant, 4 – highly relevant]).

<table>
<thead>
<tr>
<th>Subject-specific skills and capacities</th>
<th>Employer</th>
<th>Job expert</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Standard deviation</td>
</tr>
<tr>
<td>To perform general, special physical and mental examination of the patient according to the requirements set forth in the medical standard of the general practitioner.</td>
<td>3,82</td>
<td>0,44</td>
</tr>
<tr>
<td>To choose, prescribe and perform medical (diagnostic) tests and to diagnose health problems and diseases provided in the medical standard of the general practitioner.</td>
<td>3,90</td>
<td>0,30</td>
</tr>
<tr>
<td>To establish, prescribe and administer the treatment of health problems (diseases) diagnosed to the patient, to formulate the plan for the restoration of the patient’s health in line with the requirements of the medical standard of the general practitioner.</td>
<td>3,84</td>
<td>0,37</td>
</tr>
<tr>
<td>To prescribe medicine being aware of their indications, contraindications and side-effects, also indications pointing to the need for a consult by a specialised doctor and hospitalisation.</td>
<td>3,90</td>
<td>0,30</td>
</tr>
<tr>
<td>Subject-specific skills and capacities</td>
<td>Employer</td>
<td>Job expert</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------------------------------------</td>
<td>----------</td>
<td>------------</td>
</tr>
<tr>
<td></td>
<td>Mean</td>
<td>Standart deviation</td>
</tr>
<tr>
<td>To provide emergency medical care to patients (in case of a trauma, accident, poisoning, acute illness, to patients in labour, etc.).</td>
<td>3,78</td>
<td>0,47</td>
</tr>
<tr>
<td>To enter data on case history (anamnesis), examination, diagnosis, prescribed treatment, tests, preventive measures, the results of treatment, tests and preventive measures, and the patient’s condition in medical documents.</td>
<td>3,88</td>
<td>0,33</td>
</tr>
<tr>
<td>To issue all kinds of prescriptions, certificates of sick leave, certificates of maternity leave, death certificates, and to fill out other primary healthcare medical documents.</td>
<td>3,80</td>
<td>0,45</td>
</tr>
<tr>
<td>To carry out expert examination of temporary incapacity of work, disability and level of incapacity of work.</td>
<td>3,64</td>
<td>0,53</td>
</tr>
<tr>
<td>To carry out preventive healthcare programmes and programmes for the improvement of health (preventive vaccination, etc.)</td>
<td>3,46</td>
<td>0,58</td>
</tr>
<tr>
<td>To advocate, teach persons and families to lead a healthy life, improve their health, take disease preventive measures, hygiene skills, and to encourage them to give up bad habits.</td>
<td>3,46</td>
<td>0,59</td>
</tr>
<tr>
<td>To consult (also by telephone) patients and their family members.</td>
<td>3,26</td>
<td>0,60</td>
</tr>
<tr>
<td>To use consulting skills (consulting techniques, patterns, encouragement of the patient to cooperate during consulting, resolution of a conflict situation, giving of a bad news, etc.), to provide explicit and concise information to the patient.</td>
<td>3,48</td>
<td>0,58</td>
</tr>
<tr>
<td>To assess psychological and social needs of the patient, the relationship between the patient’s health condition and his/her physical and social environment.</td>
<td>3,48</td>
<td>0,58</td>
</tr>
<tr>
<td>To cooperate with other specialists (healthcare staff, other general practitioners, specialised doctors, social workers, etc.).</td>
<td>3,34</td>
<td>0,75</td>
</tr>
<tr>
<td>To cooperate with various authorities (public health centres, police, when providing respective information).</td>
<td>3,30</td>
<td>0,58</td>
</tr>
<tr>
<td>To use information technologies in the field of medicine (e.g. e.health).</td>
<td>3,46</td>
<td>0,58</td>
</tr>
<tr>
<td>To use knowledge gained in medicine-related subjects (physics, biochemistry, general and bioorganic chemistry, general and human biology, general and human genetics, biochemistry, human anatomy, histology, physiology, microbiology, pharmacology, pathology, biostatistics, etc.) in practice.</td>
<td>3,24</td>
<td>0,59</td>
</tr>
</tbody>
</table>
3.9. Competences of a general practitioner acquired on-the-job

The following competences are usually acquired on-the-job: the ability to find the required laws and to use them; filling out of documents; response to patients’ requests. The average graduating resident of general medical practice learns it within one year. General practitioners would like to acquire such competences during their residency of general medical practice. Upon the commencement of their employment, graduating residents of general medical practice lack relationship among healthcare-related laws, the legislators (MH) and the implementers of these laws, i.e. doctors. “The Ministry of Health operates for itself, doctors practise for themselves” (quotation).

3.10. Proposals for the improvement of residency programmes of general medical practice

Graduating residents of general medical practice involved in the professional activity study propose to supplement the programme of general medical practice with the following aspects (to more focus on them): more practical training; more focus on information about laws, various work-related documents (e.g. a cycle on legal framework (laws) and handling of documentation (how to write a prescription, various certificates, a death certificate, etc.). A certain concentrated information file could provide references of where to look for the required information; residency training should be supplemented with “human relations” subjects covering knowledge and skills of management and philosophy, communication and cooperation skills, teamwork and other related skills; based on foreign experience, to use various training programmes and tests on potential
(occurring) medical cases in the process of training (e.g. description of a situation, X-rays, cardiograms, other documents; provision of questions that require responses revealing detailed information about the specific case, provisions of feedback). When submitting proposals for the improvement of residency programmes of medicine and general medical practice, the participants of the discussion groups discuss aspects related to the organisation of training: to perform a certain selection of students before the commencement of training; there is a need for the sole supervisor of the residency of general medical training who would help resolve problems arising in the course of training; to design and use the system for the evaluation of quality of work of such supervisors; to define the criteria of the quality of training. The professional activity study demonstrated that the assessment of the quality of work of residency supervisors, work control, possible rotation of supervisors and linked labour remuneration could improve the quality of residency training. According to employers, the upgrading of degree programmes should include the consideration of the legal framework (that regulates the patients’ rights, cooperation with various authorities, provision of information, etc.) and the development of computer literacy.

**References**


*Report on professional activity study: Medicine (general practitioners) 2010.* Vilnius University, Faculty of Philosophy, Department of Sociology (unpublished material).
4. GENERIC COMPETENCE MAP FOR MEDICINE AND HEALTH SCIENCES STUDY FIELD GROUP

The first task for the designers of university degree programmes of medicine and health sciences study field group is to contemplate and select the most relevant competences that the specialist should acquire. There are several definitions that describe competences. According to Tuning Project, a competence is a dynamic combination of knowledge, understanding, capacities and skills. The goal of each degree programme is to form and develop provided competences of the future specialist. Competences are perceived as knowing and understanding (theoretical knowledge of a certain subject, ability to know and understand), knowing how to behave (practical application of knowledge in certain situations), knowledge how to be. In other words, competences consist of a combination of characteristics (related to knowledge and its application, attitudes, capacities and responsibility) describing how well the person can apply them. Competences are not finite; the already acquired competences can be improved in different cycles of university learning process and through lifelong learning, thus the levels of competences may differ.

There are two types of competences:

- Subject-specific competences are related to the branch of study or the discipline studied. Subject-specific competences are defined as knowledge, abilities and skills related to a certain subject;
- Generic competences that are not related to any specific degree programme, yet that are relevant for the expression of subject-specific competences within the professional and public context. They are defined as a combination of transferable and multifunctional knowledge, abilities and attitudes, which is necessary for a successful job search, working activities and careers.

4.1. Position of generic competences in a degree programme

Designers of programmes view competences as guidelines indicating the direction of subjects or subject-specific programmes. Subjects aiming to develop generic competences may either be included into degree programmes or not. This depends upon the structure of the medicine programme and the specific character of the university. For instance, a foreign language is a mere instrument allowing to collect the required subject-specific information, convey it internationally and communicate with patients or visitors who speak that language. Thus, the generic competence of the ability to communicate in a foreign language is related to several subject-specific competences, and the latter are developed by achieving certain outcomes, including outcomes that are not related to the teaching of a foreign language. For the purpose of comprising a set of subject-specific competences and outcomes of the degree programme, the organic integration of the key generic competences must be ensured. Figure 1 shows how generic competences merge into the types of various subject-specific competences. Some generic competences would be developed per se during the implementation of outcomes of the degree programme through certain subjects. For instance, the ability to work in a team is developed by all studies when the expected result can only be achieved by joint efforts of a team of students.
Quite a few studies have been performed within the framework of the Tuning Project in order to select generic competences; the studies resulted in the identification of 85 generic competences. After the generalisation, 30 competences remained.

The professional activity study of medicine (general medical practice) has been carried out within the framework of project Development of the Concept of the European Credit Transfer and Accumulation System (ECTS) at the National Level: Harmonisation of the Credit and Implementation of the Learning outcomes Based Study Programme Design (No VP1-2.2-ŠMM-08-V-01-001) implemented in Lithuania. The initial list of competences of this professional activity has been drawn based on the analysis of documents related to professional activities of graduates of medicine (general medical practice) study field. After specialised researchers of medicine (general medical practice) analysed the drawn list of competences as well as submitted proposals, and with due consideration to the recommendations of Tuning experts the final list of competences has been drawn, which has been used for the quantitative research of employers. The final list of competences of medicine (general medical practice) study field consisted of 23 subject-specific and 31 generic competences.

There are three types of generic competences with due consideration to their relevance to learning or professional activity, three types, viz. instrumental, interpersonal and systemic competences.

Instrumental competences are as if an instrument to achieve a certain goal. They include cognitive capacities, methodological capacities, technological skills and linguistic capacities:

- Capacity for organisation and planning,
- Oral and written communication in native language,
- Oral and written communication in native language,
- Knowledge of the subject area and understanding of one’s own profession,
- Decision-making,
- Problem solving,
- Capacity to retrieve, process and analyse information from different sources,
- Capacity to communicate in a foreign language,
- Capacity for critical and self-critical thinking,
- Capacity for critical and self-critical thinking,
- Capacity to learn.
Interpersonal competences are capacities necessary for successful intercommunication of people in the working and social environment. Such capacities are much appreciated by employers who expect them from University graduates. This type of competences include certain individual and social capacities:

- Capacity to work in a team,
- Interpersonal skills,
- Capacity to act ethically (ethical commitment),
- Capacity to adapt to new situations,
- Ability to communicate with people who are not professional area experts,
- Social responsibility and citizenship,
- Concern for safety,
- Adherence to equal opportunities and tolerance principles,
- Appreciation of diversity and multiculturality,
- Ability to work in an international context.

Systemic competences are knowledge, perception and capacities required for merging information or activities of various fields. The already acquired instrumental and interpersonal competences are necessary for the improvement of systemic competences:

- Capacity for applying knowledge in practice,
- Capacity to assess and maintain the quality of work (concern for quality),
- Capacity for generating new ideas (creativity),
- Ability to motivate people to seek common goals,
- Determination and perseverance in performing the tasks assigned and obligations assumed,
- Ability to work autonomously,
- Initiative and entrepreneurial spirit,
- Research skills,
- Environmental commitment,
- Capacity for organising and implementing projects.

The entirety of these competences forms professional characteristics of a doctor, and the development of such characteristics is the main focus of the degree programme in medicine. Thus, once such list is drawn, it can be further broken down by attributing generic competences to certain professional characteristics required for the doctor’s work. The process of attribution of generic competences to certain professional characteristics is described under chapter 4.3 Integration of generic competences into subject-specific competences of medicine degree programme and their importance for developing professional characteristics of a doctor. However, the designers of the degree programme should monitor whether these competences are consistently developed in the course of intended learning. For instance, the development of the generic competence of retrieving, processing and analysing information from different sources is rather simple, provided the degree programme is based on the problem-oriented learning. Its development in the subject-specific degree programme shall be carried out through the interrelated assignments of certain subjects. Thus, in the latter case the programme designers should not forget interdisciplinary integration of knowledge. Its actual implementation is the problem of structural or functional subdivisions of a higher education institution. Irrespective of the nature of the degree programme (whether problem-oriented or subject-specific), this competence is being developed from a more simple to a more complex level.
4.2. Methods of revealing generic competences

While designing a new degree programme, identifying the need for it, employment sectors for graduates, preparing a short annotation of the programme, the designers need to find out the key competences that the graduate has to acquire; this will facilitate the formulation of subject-specific competences and learning outcomes. These competences are revealed through the so-called professional activity analysis. A poll has to be conducted involving potential employers, graduates of the degree programme, members of the commission that designs the programme, university teachers and students. The opinion of the members of each of the group involved in the said study is known by filling out the questionnaire. The obtained data are analysed, if required, similar generic competences are merged.

The importance of competences is assessed by awarding certain points the scale of which is arbitrary. Table 3.5 (providing a comparison of the opinion of two respondent groups) in chapter 3.8 Competences that employers expect from general practitioners when hiring them may serve as an example of the analysis of data.

4.3. Integration of generic competences into subject-specific competences of medicine degree programme and their importance for developing professional characteristics of a doctor

The efficient improvement of generic competences is a mandatory condition of the acquisition of all subject-specific competences. The key subject-specific competences developed by university degree programmes of medicine and health sciences study field are provided within the framework of the Tuning Project (Medicine). This project was carried out in 2004-2008 and it was intended for adapting the methods of designing learning outcomes-oriented degree programmes in the field of medicine. One of the project performance results – the list of generic and subject-specific competences that have to be developed by the medicine degree programme. These competences have also been discussed by experts of Lithuanian medicine degree programmes; there were no material differences between competences deemed to be important in Lithuania and competences provided by the said project. The goal of all generic competences of the medicine degree programme is to develop characteristics of a future doctor that are important for his/her professional activity and further career. The said publication distinguishes four types of expected outcomes. Each of them has a certain set of generic competences in line with generic competences identified after the poll conducted in Lithuania. The four most important areas and characteristics of the professional activity of a doctor are as follows:

• Provisions of professional activity:
  ◦ Ability to act in good faith and observe ethical commitments,
  ◦ Application of the principles of good medical practice at work, quality assurance,
  ◦ Critical and self-critical thinking,
  ◦ Empathy,
  ◦ Creativity,
  ◦ Ability to take the initiative, achieve the goal,
  ◦ Interpersonal skills;

• Professional behaviour:
  ◦ Ability to assess the limits of one’s competence and, if necessary, ask for help,
  ◦ Ability to act in new situations and to adapt to them,
Guidelines of Competence Development in the Study Field of Medicine

- Interpersonal skills,
- Problem solving,
- Decision-making,
- Ability to work together with specialists engaged in other fields,
- Ability to communicate with experts of other sciences,
- Capacity for organisation and planning;

- Dissemination of professional experience:
  - Analytical and synthesis skills,
  - Capacity of independent and lifelong learning,
  - Capacity for applying knowledge in practice,
  - Capacity to teach others,
  - Research skills;

- Professional erudition:
  - Ability to appreciate the diversity and multiculturality,
  - Ability to understand and appreciate customs of other cultures,
  - Ability to work in an international context,
  - Capacity to communicate in a foreign language,
  - Generic knowledge not related to medical science.

The development of these professional characteristics is the common outcome of the development of all subject-specific competences of medicine degree programme, as generic competences form an integral part of subject-specific competences. We shall provide several examples of how generic competences merge, whether directly or through respective learning outcomes, into subject-specific competences of a graduate of medicine degree programme.

Subject-specific competence of a graduate of medicine degree programme: ability to consult a patient. Different subject-specific knowledge in the field of medicine, capacities and generic competences are needed: a) capacity to communicate with people; b) capacity to analyse information; c) ability of critical thinking; d) ethical commitments, etc.

Subject-specific competence of a graduate of medicine degree programme: capacity to assess the clinical condition of the patient, to assign tests, to perform differential diagnostics and to discuss a treatment plan. The graduate demonstrates this competence when he/she recognises and assesses clinical presentations, decides on the required tests and discusses a treatment plan with his/her colleagues and the patient. Quite a few generic competences merge into these actions, e.g. ability to organise and plan, ability to work in a team, ability to apply knowledge in practice, critical thinking, etc.

Subject-specific competence of a graduate of medicine degree programme: capacity to apply legal and ethical principles in medical practice. This competence directly indicates that it covers the following generic competences: capacity to act ethically (ethical commitment), adherence to equal opportunities and the principle of tolerance, social responsibility and citizenship, etc.

Final complex development of subject-specific and generic competences is the outcome of long consultations by the commission that designs the programme, academic community (academic staff and students) and social partners. It is important that the programme does not include any generic competences unrelated to subject-specific competences.


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http://www.ects.cr.vu.lt/Projekto_rezultatai


5. METHODOLOGICAL GUIDANCE FOR IDENTIFYING SUBJECT-SPECIFIC COMPETENCES IN A PROGRAMME OF A SPECIFIC PROFILE

5.1. General provisions

For the purpose of this methodological guidance:

*Competence* (Lat. *competentia* – conformity, capacity) is a capacity of a person to perform a certain work based on the available knowledge, skills and personal characteristics, experience. Publications of the Tuning Project describe a competence as a dynamic combination of knowledge, understanding, capacities and skills. Degree programmes aim to develop competences. Competences are developed when studying certain subjects and are assessed during various stages of learning. Competences are classified into subject-specific and generic competences.

*Module* is a course unit in a system in which each course unit carries the same number of credits or a multiple thereof.

*Skill* is an automatic action of thinking and objective, practical activity.

5.2. Methods of identifying subject-specific competences

Competences must be developed in a progressive way: they are formed in a number of course units or modules at different stages of the programme. During the design phase of the programme it has to be decided in which units a particular competence has to be formed. The development of subject-specific competences can be assisted by a teaching paradigm, i.e. a methodological assistance system for an individual or for groups seeking to inherit the social culture and experience of the mankind and of their own in the form of knowledge, capacities, extended personal characteristics and important values. This system highlights motivation for learning and organisation of learning actions. Educational effects are emphasised in this case (you learn when I teach you).

Learning outcomes (subject-specific competences to be developed) of each course unit or module and practice must be formed.

Depending on the size of a unit or module, learning outcomes for that unit should include the maximum of 6 to 8 competences.

Although there might be other competences which can be trained implicitly in a programme, the description of a degree programme should explicitly mention only competences which are directly trained by the programme and which can actually be assessed.

Expectations of employers, results of the professional activity study, changes in the labour market, the development of science and new technologies must be taken into consideration when identifying subject-specific competences and learning outcomes.

The following Table 5.1 shows a possible approach for dividing subject-specific competences over degree programmes.
Table 5.1. Subject-specific competences of degree programmes

<table>
<thead>
<tr>
<th>Module / course unit learning outcomes</th>
<th>Competences</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A  B  C  D  E  F  G  H  I</td>
</tr>
<tr>
<td>Module 1 / Course unit 1</td>
<td>X   X</td>
</tr>
<tr>
<td>Module 2 / Course unit 2</td>
<td>X   X   X</td>
</tr>
<tr>
<td>Module 3 / Course unit 3</td>
<td>X   X</td>
</tr>
<tr>
<td>Module 4 / Course unit 4</td>
<td>X   X</td>
</tr>
</tbody>
</table>

Competences are understood as to include knowing and understanding (theoretical knowledge of an academic field, the capacity to know and understand), knowing how to act (practical and operational application of knowledge to certain situations), knowing how to be (values as an integral element of the way of perceiving and living with others and in a social context). Competences represent a combination of attributes (with respect to knowledge and its application, attitudes, skills and responsibilities) that describe the level or degree to which a person is capable of performing them.

Identification of subject-specific competences involve the following stages:

- Competences formed according to a specific professional training standard (standard of a specialised doctor) or by a study field regulation are transferred to a degree programme (unit, module). It should be remembered that a competence cannot be identified with a qualification. Qualification is the knowledge, skills, capacities of a person acquired in the learning process and most frequently certified by an official diploma, certificate attesting the potential of that person to perform work in the particular field;
- Learning outcomes are formed by including generic competences;
- The particular entirety of knowledge, cognition and actions (learning (course unit, module) information or material) is provided for the development of each competence;
- The sign of affinity of each subject-specific competence may be stated;
- A sequence of acquiring subject-specific competences is established upon merging subject-specific competences with identical signs of affinity;
- With due consideration to the complexity and number of subject-specific competences, the size of each unit (module) must be established in conventional units of measure (credits, hours);
- It is advisable to plan specific methods and means of achieving subject-specific competences.
- Subject-specific competence assessment criteria must be formulated.
- Throughout the years of study, subject-specific competences must be developed based on the principle of repetition where previously learnt educational material is repeated in order to consolidate knowledge or practices (skills).
- The staircase method should be used in the development of subject-specific competences, i.e. the increasingly comprehensive and through mastering of skills. It is a vertical development of competences, which aims at developing a specialist of his/her respective area.

Table 5.2 below shows a possible relationship among subject-specific competences of a degree programme, learning outcomes of a course unit, learning and assessment methods.
Table 5.2. Relationship among subject-specific competencies of a degree programme, learning outcomes of a course unit, learning and assessment methods

<table>
<thead>
<tr>
<th>Subject-specific competences of a degree programme</th>
<th>Learning outcomes of a course unit</th>
<th>Course unit title</th>
<th>Learning methods</th>
<th>Student achievement assessment methods</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 5.3. Subject-specific competences

While implementing the Tuning Project (Medicine), European universities thoroughly analysed, summarised and grouped competences that must be developed by medicine degree programme. 12 subject-specific and 4 generic competences have been formed (Annex 3).

Professional activity studies of medicine (general medical practice) have been carried out within the framework of project Development of the Concept of the European Credit Transfer and Accumulation System (ECTS) at the National Level: Harmonisation of the Credit and Implementation of the Learning Outcomes Based Study Programme Design (No VP1-2.2-ŠMM-08-V-01-001) implemented in Lithuania, and, with due consideration to the Lithuanian legislation and recommendation of Tuning experts, 23 subject-specific competences have been formed, which are basically very similar to the above competences formed within the framework of the Tuning Project (Medicine). The poll revealed that Lithuanian employers and job experts in the field of general medical practice gave a positive evaluation of the importance of the states competences and the necessity to develop them. No mention was made of any competences of paramount importance for doctors that were omitted. The summary of the study data allows to conclude that the list of competences developed by medicine degree programmes is the same all over Europe. Competences that doctors must have are developed over several study cycles (the only difference being the level); therefore, the competences themselves must form the basis of all medicine degree programmes.

### 5.4. Requirements for teachers of subject-specific competences

The basis of the development of subject-specific competences is competent and qualified teachers and clinicians who help students to prepare for professional activities, and an appropriate material basis. Requirements for university teachers of subject-specific competences:

- at least half of subject-specific competences to be acquired must be taught by teachers with an academic degree;
- clinicians helping students to acquire subject-specific competences must have at least five years’ work experience according to their professional qualifications.
5.5. Improvement and updating of subject-specific competences

The quality of subject-specific competences in a degree programme is ensured through regular monitoring and internal and external evaluation. Subject-specific competences must be improved and updated in view of employers’ expectations, professional activity research results, labour market changes, scientific development and new technologies.

5.6. Final provisions

Universities are recommended to approve only such degree programmes the course units (modules) of which explicitly define subject-specific competences and the procedure for their acquisition.

References


6. STUDENT WORKLOAD AND METHODOLOGY FOR DETERMINATION THEREOF

Learning outcomes and the size of the course unit or module are closely related; therefore, it is extremely important to assess and rationally plan the size of a particular part of the degree programme (unit, module, course) and at the same time the student workload. Standardisation of the workload under ECTS is based on the cornerstone provision that 60 credits measure the workload of a full-time student during one academic year. If the workload of such student ranges from 1,500 to 1,800 hours for an academic year, one credit corresponds to 26 to 30 hours. Credits are allocated to all educational components of a degree programme (such as modules, courses, placements, graduation thesis, etc.). Credits reflect the quantity of work each component requires to achieve its specific objectives or learning outcomes in relation to the total quantity of planned work necessary to complete a full year of study.

In Lithuania, one academic year amounts to 60 credits, which corresponds to 1,600 hours. Thus, one credit is equivalent to 26.7 hours.

Credits in ECTS can only be obtained after successful completion of the work required and appropriate assessment of the learning outcomes achieved. The more complicated course or module is, the more credits are awarded.

Student workload in ECTS consists of the time required to complete all planned learning activities such as attending lectures, seminars, independent study, preparation of projects, examinations, and so forth.

Approaches to teaching, learning and assessment have an impact on the workload. Methods of teaching and the complexity of the expected learning outcomes have a significant impact on student workload. Medicine degree programmes are offered by two universities in Lithuania; therefore, the time required to achieve the same learning outcomes may differ: it is influenced by learning traditions, the curriculum design, teaching organisation, ability and diligence of students.

6.1. An approach for determining student workload

The duration of an academic year is determined by the legislation of the Republic of Lithuania and orders issued by authorities supervising the learning process. Each academic year of medicine degree programme is divided into two semesters. The student workload per each semester cannot exceed 30 ECTS credits. Therefore, the student workload over the semester or during the semester period must be determined. The following elements are of relevance:

- The specific character of the degree programme (whether classical or problem-oriented);
- The curriculum design: the complexity of learning outcomes as well as the number and complexity of courses required to achieve such learning outcomes;
- The type of assessment;
- The specific character of the module or course, which determines the ratio of contact and independent work. In medicine degree programme, the nature of the subject of the programme has a major impact on the said ratio. Theoretical courses in fundamentals of medicine may require less independent work than clinical studies of medical courses.

Student workload is determined for an average student; therefore, it needs constant revision. The opinion of teachers is very important in developing a programme for a module or course, as they know the purpose of assignments and the actual time consumption required to carry out such assignments.
The curriculum design and the ratios of workloads of programme modules or courses are determined by a certain legal body of universities, e.g. a committee for the design and upgrading of a study programme.

6.2. Steps for estimating the student workload

The preparatory estimation and assessment of the student workload covers several steps.

Introducing modules or course units of the degree programme. The method of structuring a degree programme shall be chosen by the committee for the design and upgrading of a study programme. A study programme can be either modular or non-modular. The meaning of a module is not the same in different universities. In Tuning, a module is defined as a course unit in a system in which each course unit carries the same number of credits or a multiple thereof.

A non-modular system consists of course units corresponding to certain subjects. Each course unit can have a different number of credits although the total credits for each academic year cannot exceed 60.

Estimating student workload. The length of a module or a course unit in credits is based on the complexity of learning outcomes. The more complex learning outcomes are, the more assignments the student has to perform. When designing a new degree programme, the committee for the design and upgrading of the study programme shall decide on the number of credits it may take for an average student to achieve the expected learning outcomes of one or another module or course unit of the degree programme. Teachers may also provide valuable information about the initial length of a module or a course unit. The number of credits must also be given in work hours. For example, a course unit of 5 credits allows for 125-150 hours of student work. The number of work hours required to achieve learning outcomes can be determined only after a decision is made regarding the modes of instruction, types of learning activities and types of assessment to be employed and whether they will be useful. They shall also be selected by teachers.

Modes of instruction shall be types of teaching and learning activities: lecture, seminar, research seminar, exercise course, practical, laboratory work, guided personal study, tutorial, independent studies, placement, fieldwork, project work.

Types of learning activities shall be the areas of student work: attending lectures, performing specific assignments, practicing laboratory or clinical skills, writing records/reports of laboratory assignments, writing medical records, independent study, reading scientific articles and preparing papers, constructive criticism of the work of other students, chairing seminars or discussions, etc.

Types of assessment also have an impact on student workload. It is also important to what length of the leaning stage does the assessment pertain: an interim assessment for a module or a certain course unit topic is a process that does not require much work or time, while much more time is needed in order to prepare for and take a final examination in a module or a course unit. Still more time shall be consumed for the writing and presentation of the graduation thesis of the degree programme. The following types of assessment of medical student achievements prevail in practice: oral or written examination (suitable at any stage of learning), oral presentation (suitable for interim assessment), test of practical skills at the patient’s bedside; the final theses is expected to be introduced in future.

Checking the estimated workload through students evaluations. Questionnaires quite fairly reflect the workload and its rational distribution. Questionnaires ensure feedback among the process of learning, a teacher and a student. Students complete them during certain stages of learning, e.g. upon the completion of a module/course unit and the degree programme (it is recommended to complete the questionnaire by and before the final examination or the final
thesis). In line with Tuning methodology, two questionnaires have been developed to check the student workload: the first one is for the teacher and the second one is for the student. The teacher completes his/her questionnaire while planning the module or course unit when he/she has to estimate the student working hours (Annex 4). The second questionnaire shall be completed by students upon the completion of a module or course unit (Annex 5). Here students indicate the actual amount of time spent on the assignments. The comparison of both questionnaires allows to check whether the estimated workload was the same as the actual workload. This methodology is informative and easily applied for the studies of medicine in Lithuanian universities.

**Adjustment of student workload and educational activities.** The outcome of the questionnaire verification of student workload might lead to an adjustment of the time allotted for the performance of assignments of the course unit/module. It will be easier to change the amount of teaching material, modes of instructions, types of learning activities and types of assessment of the adjustable course unit, because the aggregate number of credits awarded by course units or modules studies during a semester cannot exceed 30. The adjustment level depends upon the difference between the estimated and actual workload. Such adjustment shall be performed by teachers. The next questionnaire shall reveal whether the adjustment was successful.

**Assessment of the quality of studies.** Universities have internal mechanisms to ensure the quality of studies, e.g. a regular analysis of the academic progress of students, the analysis of reasons behind the termination of studies.
7. GUIDANCE FOR SUBJECT-SPECIFIC AND MODULAR CURRICULUM DESIGN

When designing a new or upgrading an existing degree programme, the study committee must decide upon the goals of this programme and what the graduate must know, can and be able to do. Degree programmes must be student-oriented. Seeking to acquire a qualification degree, students must develop the level of competences defining it, which is named in the description of the degree programme as intended learning outcomes. Each of them is achieved upon completing one or several modules. Learning outcomes must be established on the degree programme level as well as on the module or course unit level. In a student-centred and learning outcome-based degree programme all course units/modules are interrelated. Electives must supplement and improve the degree programme profile. Competences shall be developed by progressively studying course units/modules of each level of the degree programme. Learning outcomes and competences of medicine degree programme are available at www.tuning-medicine.com and are very beneficial for designing a new or upgrading the old degree programme.

In the vision of Tuning a degree programme can be seen as a large cake, with different layers, in which all slices are linked to one another, either in a horizontal or in a vertical way. The learning outcomes of the individual units or modules add to the overall degree programme learning outcomes and competences, taking into full consideration the learning outcomes to be achieved in other units. The model presumes progression regarding the achievement of learning outcomes expressed in terms of competences.

The curriculum design can be either subject-specific or modular. If the degree programme is subject-specific, each course is awarded a different number of credits; however, the number of credits per semester shall remain stable and fixed, viz. 30 ECTS credits, while the number of ECTS credits for an academic year shall be 60.

The key characteristic of a modular degree programme is the fact that the programme is divided into modules of the same size, the length of which is stated in ECTS credits. The recommended number (e.g. 5, 6, 10) is the number from which we should be able to divide 60 ECTS credits (equivalent to the number of credits for one academic year). Other modules can be designed according to the principle of repetition.

Modular studies are considered to be best suited to meet the priorities of the European higher education and research area: student and academic staff mobility, recognition of qualification, lifelong learning, better preparation for employability and further education. Modular degree programmes offer opportunities for purposeful differentiation and individualisation of the programme content, to complement modules of the major degree programme with a related specialisation of the same or another study field. This improves the quality, flexibility and openness of learning. A modular system of study facilitates updating of curricula, orientating towards the competences developed and integrating several course units. It ensures greater freedom of choice for students and co-operation opportunities for teachers. Modular study allows optimising the learning calendar, teaching specific modules more concisely and intensively to enable teachers to easier plan their teaching and scientific work as well as improvement of their qualifications.

The modular system consolidates a strict guide towards goals and developed capacities. The student knows what capacities he/she must acquire in order to achieve the ultimate goals, i.e. a bachelor’s or a master’s degree; if there are several modules that can develop such capacities, the student may select from them.
8. GUIDANCE FOR THE LENGTH OF A MODULE/COURSE UNIT IN CREDITS

Credits are units used for determining the student workload required to achieve the designated learning outcomes. Credits awarded for a module define the student workload of theoretical and work based learning that develops competences, i.e. contact work and independent study necessary to achieve the designated learning outcomes. One ECTS credit corresponds to 25 to 30 hours of student work. It is recommended to allocate at least 30% of the length of a module for contact work. In Tuning, depending on the length of a course unit/module, one module should develop the maximum of 6 to 8 competences. The description of a programme, a module or a course unit must explicitly mention only competences which can actually be assessed.

Independent work is the collection, reading and studying of course unit-related material, preparation for an examination, thesis work, thesis writing, independent work at a laboratory, practical skill development centre, etc. It is difficult to calculate the amount of independent work, which largely depends on the complexity of a course unit or module as well as on the individual abilities of students.

The complexity or importance of a course unit or module as such is not the basis for credit allocation. Credits depend only on the amount of time it takes to learn the subject matter and to complete the course unit successfully. The teacher has to decide on the level of complexity of the material to be studied per course unit or module. Prior experience plays an essential role, with much information provided by regular student surveys, which should contain questions on student workload, motivation and time allocated for a course unit. The student has a crucial role in the monitoring process to determine whether the estimated student workload is realistic, although monitoring is also a responsibility of the teaching staff.

In any kind of system, modular or non-modular, the question of the allocation of credits can be approached from the top to bottom, with due consideration to learning outcomes desired to be developed by the entire degree programme, the programme of each year, each course unit or module (integrated studies).

In a bottom-up approach the course unit is the central point of attention. Teachers may incorrectly estimate the importance of the course units they teach for the degree programme. This is reflected in the amount of work that a student is asked to do for a course. The students will not be able to use their time in the most profitable way because their total workload is too heavy or too light.

Workload, modes of instruction and learning outcomes are interrelated. A teacher must clearly know what competences should be developed, how to organise the achievement of particular learning outcomes, how must time the student must spend for doing each assignment. Learning activities consist of the following:

- **modes of instruction**, such as lectures, seminars, laboratory work, practical work, work with stimulators, tutorials, internship, independent work and project work;
- **types of learning activities**, such as attending lectures, seminars, development of practical skills during practical work, internship, at a practical skill development centre, etc.
- **types of assessment**, such as written and oral examinations, assessment of practical skills, practical work reports, etc.

Teachers must estimate the optimal time required to complete the foreseen activities. Nevertheless, the student should be the most important person in the monitoring process to determine whether the workload estimated for a module or course unit is realistic. Student
surveys can help to answer this question. Tuning offers two forms that can be helpful in making decisions on the student workload. Both of them are described in the previous section and can be useful in assessing whether the length of a module is appropriate. If necessary, student workload and/or types of educational activities may have to be adjusted.

The length of modules may vary: some modules may be intensive, others may be continuing, but must not be longer than one academic year. One module is implemented by several cooperating teachers, but the final reporting is common. Continuous and cumulative assessment is applied. A module is considered to have been completed after reporting on all course units contained in it. The method of assessment must be clearly set out in a module description.

In terms of their purpose, modules can be divided into general university education and study field modules. In terms of the type of selection, modules are divided into compulsory and elective, with the latter divided into major and minor. General university education modules are usually optional. It is recommended to allocate at least 15 credits for them. Students can choose from a proposed list, e.g. three modules consisting of five credits each or one module consisting of 15 credits.

Information on modules and course units is provided in the module description, which should indicate the code and name of the module, the module coordinator and other teachers, the volume of the module in credits, conditions for registration, the module level, requirements for auditors, the length, the volume of contact hours and independent work in hours (expanded and justified), etc. It is particularly important to clearly describe the objectives of the module, the desired learning outcomes and competences to be achieved, methods of study, module content (abstract and topics), assessment methods, the structure of the final assessment, assessment criteria and a list of references.

In the opinion of Tuning experts, legal acts should not regulate the volume of a module. This is the prerogative of higher education institutions. Each higher education institution must decide what type of degree programmes – course unit- or module-based – it should choose. Most importantly, a degree programme must be student-oriented, based on learning outcomes and competences, and meet the needs and expectations of students and employers.

**Guidance for the design of a degree programme of integrated studies**

A degree programme must meet the following basic conditions:

- The need of students and the society for the degree programme has been determined in consultation with employers, experts and authorities operating in that field;
- Funds required for the programme, instruments available within and, if necessary, outside the authority have been assessed;
- Programme goals and learning outcomes have been determined with due consideration to knowledge, understanding, competences and capacities;
- Generic and subject-specific competences acquired in the course of the degree programme have been identified;
- Identified competences have been transferred to the curriculum: content and structure (modules or course units and credits);
- Studies have been divided into learning elements and activities in order to achieve the defined learning outcomes;
- Modes of instruction and learning (studies) and types of assessment have been determined;
- A system of assessment of the degree programme has been designed for the purpose of continuous improvement of quality.
References


9. GUIDANCE FOR TEACHING, LEARNING AND ASSESSMENT OF MEDICINE STUDIES

Education of the society, standards of living and expectation continuously grow; therefore, it is expected for modern medicine degree programmes to be cost effective (effective use of human and financial resources), meet the increasing needs for the professional capacity of healthcare specialists, be designed with due consideration to the principles of evidence-based medicine, and to have a positive effect on the quality of healthcare services and general public health indexes. Therefore, the latest medicine degree programmes are designed in order for the future doctors to acquire not only excellent theoretical and practical knowledge of their profession, but also to have excellent interpersonal communication skills, to be able to work in a team and wisely use the available resources, to develop other capacities required for their professional activities (such as altruism, a sense of duty, ability to make ethical decisions, etc.).

When organising university and postgraduate (internship, residency) medical studies, it is important to consider several key aspects:

• Studies (teaching, independent learning and assessment of achievements) must be organised so that students acquire the abilities, skills and knowledge foreseen in a degree programme;
• Students and residents are transferred to a higher cycle of study only after adequately preparing for it;
• Areas of knowledge and skills that students must spend more time to master should be determined in due time, and students should be offered assistance;
• After completing planned studies, a doctor must be prepared to work independently.

For the purpose of achieving these goals, a wide range of teaching techniques is used in universities. The set of teaching techniques strongly depends on the instructional form of education (e.g. face to face education or distance education). The selected technique may vary widely, depending on the focus of the teaching and the intended learning outcomes. However, the same teaching technique can vary immensely in format and function. One way of gaining some insights into the teaching techniques used is to look at what learning activities students are also required to do in a programme or part of a programme of study. Apart from the ubiquitous lecture, the following teaching techniques are also used:

• seminars (learning in small groups);
• tutorials;
• research seminars;
• exercises in class or course;
• workshops (classroom-based practical classes);
• problem-solving sessions;
• laboratory teaching;
• demonstration classes;
• placement: internship / traineeship;
• work based practice;
• fieldwork;
• online / distance arba e-learning.

To ensure that the teaching and learning process is homogeneous, effective and cost-efficient, all major learning activities must be interrelated (both within a module and between individual modules) and must complement one another. The implementation of an efficient and proper system for the assessment of learning outcomes (examination) is one of the ways to
ensure the compliance of the teaching and learning process with all the applicable requirements. The amendment of the degree programme must lead to respective amendment of the assessment system. The assessment system should meet the following requirements:

- there must be a clear objective of each assessment or examination;
- based on the assessment results, students can assess their achievements and progress during their studies;
- based on the assessment results, teachers can assess student achievements and progress;
- based on the assessment results, study organisers can assess the learning process and the effectiveness of teaching;
- the assessment system must be transparent (assessment criteria and methodology clear and understandable to all);
- appropriate assessment methods and instruments must be used;
- the assessment system itself must be regularly checked and optimised, because at the end of studies, graduates will be awarded a relevant academic degree and professional qualifications;
- assessment criteria and tasks must correspond to course material, practical training, etc.;
- clear rules for the submission and consideration of appeals and complaints must be established;
- the assessment system must be cost-effective (human and financial resources must be used effectively);
- assessment results must enable external experts to assess student achievements and competences;
- only competent and duly trained staff must participate in the assessment and examination process.

Of course, in any degree programme, or parts of it, there is a need for **summative** assessment. Sometimes the coursework discussed above performs both a formative and a summative function. The grade given is the summation of the student’s achievement in that element, and the feedback from lecturer – and sometimes peers as well – is the formative part. Traditionally, however, and still commonly used for a variety of reasons, there are some forms of assessment which are usually only summative: they assess achievement at the end of a programme or part of it, and students may receive only their mark or grade (which does have its formative aspect!) rather than feedback from the lecturer. If the examination has a follow-up seminar or tutorial to discuss the results it then contains a greater amount of the formative function. The choice of the assessment method depends upon a variety of factors, such as the size of a student group, assessment goals (whether the assessment is formative or summative), learning outcomes of the course unit, what level of such learning outcomes has been achieved by the student, the nature of the level of the assessed results (knowledge, understanding, competences, etc.), which should be taken into consideration by the lecturer who designs his/her own assessment system.

Almost any form of assessment can have a diagnostic function for both student and lecturer. By seeing what has not been achieved, what has been achieved with little effort, what is excellent, and so on, both the teacher and the learner know where more work is needed or where effort can be diverted. The most frequently applied methods of assessment of learning outcomes-centred studies are as follows:

- Test of knowledge or skill
- Oral presentations
- Laboratory reports
- Analyses, e.g. of texts, data
• Performance of skills while being observed e.g. in work placements, laboratories
• Work placement reports or diaries
• Professional portfolios
• Fieldwork reports
• Written essays or reports or parts of these, e.g. a written review of relevant literature; a critique of contrasting research papers.

It is impossible to thoroughly check all developed competences by using a sole assessment method (e.g. by using only an oral test or only in writing). A larger number and more diverse assessment methods allowing to check the level of learning of all the learners and its compliance with learning outcomes defined in the description of a degree programme, a module or an individual course unit must be employed, i.e. examinations must be complex. It is also extremely important in medical studies that the majority of teaching and examination techniques help develop the clinical thinking of students or residents, also their practical skills and other competences that they will need in their practice. Therefore, various simulations, practical skill stations, clinical situation solving and similar practice-centred activities are of a special value. In order to ensure that the degree programme (especially that of the specialised residency) is as closely related to practical work as possible, and that the key practical skills and other competences are developed during studies, the design of degree programmes and the preparation of examinations must involve experts in their field representing professional societies. In many countries national examinations in a particular field (e.g. anaesthesiology and reanimation, surgery, general medical practice, etc.) are prepared or coordinated by national professional societies, while examinations are held in universities or in independent examination centres offering an opportunity to use computer-aided testing systems, various simulators, role playing that involve simulated patients (actors or volunteering patients). So far, in Lithuania examinations in the majority of medicine study field are very formal, uninformative and hardly offering an opportunity to assess the actually acquired skills and knowledge.

Medicine degree programmes offered by different national institutions still focus on the conveying of specific professional knowledge and clinical skills. Therefore, it is no wonder that not only techniques for teaching such skills and knowledge, but also systems of testing and examining them have been developed and very thoroughly assessed. Lithuanian higher education institutions also widely use the majority of the traditional modes of examining and teaching clinical course units: lecture, practical work, seminar, testing orally and in writing (including specially developed tests), solving of theoretical clinical situations (long and short clinical cases), skills records, etc. However, no use is made of any new, yet already validated, teaching and assessment techniques, such as objective structured clinical examinations (OSCE), simulators, moulages, simulated and/or moulaged patients, video and/or audio recordings, software and e-learning area, practical training, etc.

Both in Lithuania and in other countries the biggest challenge in designing new and modern degree programmes of medicine study field lies with the integration of generic competences and skills as well as some specific professional capacities and characteristics (such as altruism, fairness, confidentiality, ethical behaviour, respect for fellow colleagues and patients, teamwork, efficiency and capacity to work independently, education science, etc.) into the traditional teaching and learning process and the assessment of achievements in these areas. The biggest problem is the lack of knowledge of which teaching and learning methods are most efficient for the development of the majority of generic competences; the assessment of achievements in these areas often poses a problem as well. It is known, however, that the acquisition and improvement of many of the listed capacities can be aided during medical studies by employing
structured clinical situations and simulated patients, also the observation of the practical clinical work and practical work, review and analysis of video recordings. Teaching and examination methods are often very similar and are developed according to the same principles with the help of computers and/or simulators, simulated or real patients. Students not only attend lectures, read books or magazines, but perform other types of assignments (the list is not exhaustive):

- conduct searches for relevant materials in libraries and on-line;
- survey literature;
- summarise those readings which seem to be the most relevant to their current needs;
- learn to pose problems as well as solve those set by the lecturer;
- conduct increasingly complex, even if small-scale, research;
- practice laboratory skills;
- practice professional skills (e.g. in nursing, medicine, teaching);
- research and write papers, reports, dissertations of increasing difficulty (in terms of size and complexity of the material);
- work with other students to co-produce a report/design/answer to a problem;
- prepare and make oral presentations, either in groups of individually;
- make constructive criticism of the work of others, and use the criticism of others productively;
- chair and participate usefully in meetings (of seminar groups, for example);
- lead or be successful members of teams;
- work under time constraint to meet deadlines;
- communicate questions and findings with others using a variety of media;
- learn to criticise their own work.

A lot of information on the acquisition of generic skills and specific professional characteristics or competences is provided by conversations with mentors, self-assessment questionnaires as well as questionnaires completed by teachers and students, teamwork evaluations and student diaries containing records of not only acquired special skills or manipulations but also feedback from teachers or fellow doctors. With more and more experience and information accumulated in various countries as regards the use of different strategies and techniques in the development of generic competences and specific abilities and personal characteristics required for a certain profession (e.g. doctor’s profession), we will soon be able to assess which of the teaching, learning and assessment methods are the most effective and the most profitable, but it is time for us to think of the inclusion of these components in updated and modified medical degree programmes.

The experience of some countries (e.g. the United Kingdom or USA) has shown that it is possible to assess most professional education components, not just theoretical knowledge and some necessary professional skills or interventions, during and after completion of studies. According to published studies, competences such as communication skills, medical consultation skills, and critical assessment of decisions and the working environment can be successfully assessed as well. There is also quite much information on ways to develop the ability to work independently, analyse and summarise, work in a team, use modern information technology, apply acquired knowledge and skills. Since these problems are encountered by teachers and students in various degree programmes as well as representatives of various professions and their employers, there is more information on effective development of these competences and assessment of achievements in each of these areas. The teacher, as the organiser of the teaching process, selects a generic competence development method, highlights the connection between generic and subject-specific competences in the learning process, creates tasks helping to develop
them, assesses the acquired competences during the learning process and summation of the results of studies, and advises students on the selection of learning strategies. The role of students is also very important, particularly the role of a group of students. During studies, students should develop personal (instrumental and systemic) and interpersonal generic competences. The latter (e.g. ability to work in a team) can be developed only by interpersonal interaction, i.e. by employing teamwork. Teamwork helps learn how to communicate, critically reflect own learning process and that of the team members, knowingly develop generic competences. The role of students increases, as the teaching and learning process is reformed in line with the Tuning methodology; viz. it becomes a student-centred process. It means the change of didactical emphases of degree programmes. The focus shifts from the activities of teachers to student learning, which gets most of the attention. Therefore, WHO guidelines for the assessment of educational outcomes of medicine study field state that the assessment system should help achieve the goals of the degree programme, reinforce student motivation and encourage independent learning. It is also recommended that clinical examinations, whether on real or simulated patients and using objective structured clinical situation sequences, form a significant component of the overall process of assessment of students, because it is not only one of the best ways to assess clinical skills and clinical thinking of students and residents, but also one of most efficient ways to provide incentive to students to more focus on the improvement of their clinical skills and competences required for their professional activities.

References


Learning Outcomes / Competencies for Undergraduate Medical Education in Europe. The Tuning project (Medicine). http://www.tuning-medicine.com/


Annexes


ARTICLE 24

Basic medical training

1. Admission to basic medical training shall be contingent upon possession of a diploma or certificate providing access, for the studies in question, to universities.

2. Basic medical training shall comprise a total of at least six years of study or 5500 hours of theoretical and practical training provided by, or under the supervision of, a university.

For persons who began their studies before 1 January 1972, the course of training referred to in the first subparagraph may comprise six months of full-time practical training at university level under the supervision of the competent authorities.

3. Basic medical training shall provide an assurance that the person in question has acquired the following knowledge and skills:

   a) adequate knowledge of the sciences on which medicine is based and a good understanding of the scientific methods including the principles of measuring biological functions, the evaluation of scientifically established facts and the analysis of data;

   b) sufficient understanding of the structure, functions and behaviour of healthy and sick persons, as well as relations between the state of health and physical and social surroundings of the human being;

   c) adequate knowledge of clinical disciplines and practices, providing him with a coherent picture of mental and physical diseases, of medicine from the points of view of prophylaxis, diagnosis and therapy and of human reproduction;

   d) suitable clinical experience in hospitals under appropriate supervision.

ARTICLE 25

Specialist medical training

1. Admission to specialist medical training shall be contingent upon completion and validation of six years of study as part of a training programme referred to in Article 24 in the course of which the trainee has acquired the relevant knowledge of basic medicine.

2. Specialist medical training shall comprise theoretical and practical training at a university or medical teaching hospital or, where appropriate, a medical care establishment approved for that purpose by the competent authorities or bodies.

The Member States shall ensure that the minimum duration of specialist medical training courses referred to in Annex V, point 5.1.3 is not less than the duration provided for in that point. Training shall be given under the supervision of the competent authorities or bodies. It shall include personal participation of the trainee specialised doctor in the activity and responsibilities entailed by the services in question.

3. Training shall be given on a full-time basis at specific establishments which are recognised by the competent authorities. It shall entail participation in the full range of medical activities of the department where the training is given, including duty on call, in such a way that the trainee
specialist devotes all his professional activity to his practical and theoretical training throughout the entire working week and throughout the year, in accordance with the procedures laid down by the competent authorities. Accordingly, these posts shall be the subject of appropriate remuneration.

4. The Member States shall make the issuance of evidence of specialist medical training contingent upon possession of evidence of basic medical training referred to in Annex V, point 5.1.1.

5. The minimum periods of training referred to in Annex V, point 5.1.3 may be amended in accordance with the procedure referred to in Article 58(2) with a view to adapting them to scientific and technical progress.

V.5. MIDWIFE

5.5.1. Training programme for midwives (Training types I and II)

The training programme for obtaining evidence of formal qualifications in midwifery consists of the following two parts:

A. Theoretical and technical instruction
   a. General subjects
      • Basic anatomy and physiology
      • Basic pathology
      • Basic bacteriology, virology and parasitology
      • Basic biophysics, biochemistry and radiology
      • Paediatrics, with particular reference to new-born infants
      • Hygiene, health education, preventive medicine, early diagnosis of diseases
      • Nutrition and dietetics, with particular reference to women, new-born and young babies
      • Basic sociology and socio-medical questions
      • Basic pharmacology
      • Psychology
      • Principles and methods of teaching
      • Health and social legislation and health organisation
      • Professional ethics and professional legislation
      • Sex education and family planning
      • Legal protection of mother and infant
   b. Subjects specific to the activities of midwives
      • Anatomy and physiology
      • Embryology and development of the foetus
      • Pregnancy, childbirth and puerperium
      • Gynaecological and obstetrical pathology
      • Preparation for childbirth and parenthood, including psychological aspects
      • Preparation for delivery (including knowledge and use of technical equipment in obstetrics)
      • Analgesia, anaesthesia and resuscitation
      • Physiology and pathology of the new-born infant
      • Care and supervision of the new-born infant
      • Psychological and social factors
B. Practical and clinical training
This training is to be dispensed under appropriate supervision:
• Advising of pregnant women, involving at least 100 pre-natal examinations.
• Supervision and care of at least 40 pregnant women.
• Conduct by the student of at least 40 deliveries; where this number cannot be reached owing to the lack of available women in labour, it may be reduced to a minimum of 30, provided that the student assists with 20 further deliveries.
• Active participation with breech deliveries. Where this is not possible because of lack of breech deliveries, practice may be in a simulated situation.
• Performance of episiotomy and initiation into suturing. Initiation shall include theoretical instruction and clinical practice. The practice of suturing includes suturing of the wound following an episiotomy and a simple perineal laceration. This may be in a simulated situation if absolutely necessary.
• Supervision and care of 40 women at risk in pregnancy, or labour or post-natal period.
• Supervision and care (including examination) of at least 100 post-natal women and healthy new-born infants.
• Observation and care of the new-born requiring special care, including those born pre-term, post-term, underweight or ill.
• Care of women with pathological conditions in the fields of gynaecology and obstetrics.
• Initiation into care in the field of medicine and surgery. Initiation shall include theoretical instruction and clinical practice.

The theoretical and technical training (Part A of the training programme) shall be balanced and coordinated with the clinical training (Part B of the same programme) in such a way that the knowledge and experience listed in this Annex may be acquired in an adequate manner.

Clinical instruction shall take the form of supervised in-service training in hospital departments or other health services approved by the competent authorities or bodies. As part of this training, student midwives shall participate in the activities of the departments concerned in so far as those activities contribute to their training. They shall be taught the responsibilities involved in the activities of midwives.

GOVERNMENT OF THE REPUBLIC OF LITHUANIA
RESOLUTION
ON THE TRAINING OF DOCTORS

No 1359 of 31 October 2003
Vilnius


1. To determine the following stages for the training of doctors:

1.1. Studies of medicine shall be integrated university studies of medicine of at least six years or awarded at least 240 credits, upon the completion of which the graduates shall receive a diploma of higher education specifying the awarded qualification of a doctor, and an internship certificate specifying the awarded professional qualification of a medical doctor. Medical internship shall be a part of medical studies not exceeding one year (40 credits), which the student studies, undergoes the general practical training in medicine under the supervision of an internship supervisor and acquires general medical knowledge, skills and clinical experience. If the mandatory minimum practical training is acquired separately through the organised medical internship, the diploma of higher education shall be granted prior to the said studies.

1.2. Medical residency shall be the third cycle university studies of medicine and intended for a doctor wishing to either acquire or change the doctor’s professional qualification in a particular area of medical practice.

Amendments of the paragraph:


1.3. Specialised medical practice shall be the acquisition of additional medical practice knowledge, skills and the respective professional qualification in specialised medical practice. Upon the completion of specialised medical practice the graduates shall be awarded a certificate in specialised medicine.

2. To establish that:

2.1. A person who completed the six years’ integrated university studies of medicine according to the degree programme registered before this Resolution came into force, and who seeks to acquire a professional qualification of a medical doctor, a general practitioner or a specialised doctor shall be offered an individually organised one-year (40 credits) medical internship studies that will be sufficient to gain clinical experience of general medicine. These studies shall be organised
and financed in accordance with the Medical Residency Regulations approved in line with this Resolution. Graduates shall be awarded an internship certificate.

2.2. A certificate of professional qualification evidencing the awarded qualification of a doctor of medicine shall be equivalent to an internship certificate.

2.3. The professional qualification of a doctor of general medical practice shall be equivalent to the qualification of a general practitioner.

2.4. Upon the completion of medical residency, a person shall be entitled to study medical science in a doctoral programme for the duration set forth by the law free of charge.

2.5. Upon the completion of the doctoral programme of medical science, a person shall be entitled to undergo medical residency for the duration set forth by the law free of charge.

2.6. At his/her request, a person who commenced medical residency before this Resolution came into force must be provided with the opportunity to continue such residency studies in line with the Regulation on Residency approved before this Resolution came into force.

3. To approve the following enclosures:
3.1. Medical Residency Regulations;
3.2. The duration of residency training of doctors by specialisation.

4. To authorise the Ministry of Education and Science to approve requirements of medical residency programmes and regulations for the assessment and selection of residency facilities jointly with the Ministry of Health by 1 April 2004.

5. To offer Kaunas University of Medicine and Vilnius University to harmonise degree programmes of medicine with Articles 2(26) and 41(3) of the Law of the Republic of Lithuania on Higher Education (Official Gazette Valstybės žinios, 2000, No 27-715; 2003, No 47-2058) and with the present Resolution by 1 May 2004.


Prime Minister
Algirdas Brazauskas

Minister of Health
Juozas Olekas
Annex 3. List of subject-specific competences of medicine degree programme

A graduate of integrated studies of medicine will have the following subject-specific competences:

**Carry out a consultation with a patient:**
- Take a history
- Carry out physical examination
- Make clinical judgements and decisions
- Provide explanation and advice to a patient
- Provide reassurance and support to a patient
- Assess the patient’s mental state

**Assess clinical presentations, order investigations, make differential diagnoses and negotiate a management plan:**
- Recognise and assess the severity of clinical presentations
- Order appropriate investigations and interpret the results
- Make differential diagnoses
- Negotiate an appropriate management plan with patients and carers
- Provide care of the dying and their families
- Manage chronic illness

**Provide immediate care of medical emergencies, including First Aid and resuscitation:**
- Recognise and assess acute medical emergencies
- Treat acute medical emergencies
- Provide basic First Aid
- provide basic life support and cardio-pulmonary resuscitation according to current European guidelines
- Provide advanced life support according to current European guidelines
- Provide trauma care according to current European guidelines.

**Prescribe drugs:**
- Prescribe clearly and accurately
- Match appropriate drugs and other therapies to the clinical context
- Review the appropriateness of drug and other therapies and evaluate potential benefits and risks
- Treat pain and distress.

**Carry out practical procedures:**
- Measure blood pressure
- Venepuncture
- Cannulation of veins
- Administer IV therapy and use infusion devices
- Subcutaneous and intramuscular injection
- Administer oxygen
- Move and handle patients

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• Suturing
• Blood transfusion
• Bladder catheterisation
• Urinalysis
• Electrocardiography
• Basic respiratory function tests.

**Communicate effectively in a medical context:**
• Communicate with patients
• Communicate with colleagues
• Communicate in breaking bad news
• Communicate with the patient’s relatives
• Communicate with disabled people
• Communicate in seeking informed consent
• Communicate in writing (including medical records)
• Communicate in dealing with aggression
• Communicate by telephone
• Communicate with those who require an interpreter.

**Apply ethical and legal principles in medical practice:**
• Maintain confidentiality
• Apply ethical principles and analysis to clinical care
• Obtain and record informed consent
• Certify death
• Request autopsy
• Apply national and European law to clinical care.

**Assess psychological and social aspects of a patient’s illness:**
• Assess psychological factors in presentations and impact of illness
• Assess social factors in presentations and impact of illness
• Detect stress in relation to illness
• Detect alcohol and substance abuse, dependency.

**Apply the principles, skills and knowledge of evidence-based medicine:**
• Apply evidence to practice
• Define and carry out an appropriate literature search
• Critically appraise published medical literature.

**Use information and information technology effectively in a medical context:**
• Keep accurate and complete clinical records
• Use computers
• Access information sources
• Store and retrieve information.

**Ability to apply scientific principles, method and knowledge to medical practice and research.**
Promote health, engage with population health issues and work effectively in a health care system:

- Provide patient care which minimises the risk of harm to patients
- Apply measures to prevent the spread of infection
- Recognise own health needs and ensure own health does not interfere with professional responsibilities
- Conform with professional regulation and certification to practise
- Receive and provide professional appraisal
- Make informed career choices
- Engage in health promotion at individual and population levels.
Annex 4. Planning form for a module/course unit

(To be completed by the teacher)

Degree programme....................................................................................................................

Title of module/course unit....................................................................................................

Type of course (major, elective)............................................................................................

Number of ECTS credits...........................................................................................................

Competences to be developed:
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<th>Learning activities</th>
<th>Estimated student workload in hours</th>
<th>Assessment</th>
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Annex 5. Form for checking workload of a module/course unit

(To be completed by the student)

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