Programme Syllabus for the Programme in Medicine, 330 higher education credits

Programme in Medicine

1. **Adoption of decision**
The Programme Syllabus for the Programme in Medicine, 330 higher education credits (code in Ladok M2LÅK), has been adopted by the Sahlgrenska Academy Board of the University of Gothenburg on 24/11/2006, and revised by the Dean of Sahlgrenska Academy on 27/06/2007, 14/04/2010, 25/05/2011, 02/11/2011, 18/04/2012 and 17/10/2012.

2. **Aim**
The aim of the Programme in Medicine is for the student to take a degree of Master of Science in Medicine. The Programme is to help the student acquire the knowledge, proficiency, skills and approach required for the medical profession and to complete an internship in a medical practice (AT) which is required in order to be issued a licence by the National Board of Health and Welfare. The Programme also prepares the student for further study at graduate level.

3. **Intended learning outcomes**
The intended learning outcomes of the Programme in Medicine are in part the general objectives as stated in the Higher Education Act (SFS 1992:1434) and in part the national intended learning outcomes of a degree in Medicine as stated in the Higher Education Ordinance (SFS 1993:100), Appendix 2, the System of Qualifications (Appendix 1).

As well as the national intended learning outcomes of a degree in Medicine as stated in the Higher Education Ordinance (SFS 1993:100), Appendix 2, the goal of the Programme in Medicine at the University of Gothenburg is for the student to acquire a defined and broad level of medical competence with a range covering subject-related knowledge, practical skills, personal abilities and a humanistic approach with the emphasis on science. The themes that focus on professional development are divided into five core areas: communication and self-reflection, ethical approach, human rights and gender, leadership and collaboration, and a critical scientific approach. The intended learning outcomes for these core areas are specified in a separate document (Appendix 2). The subject-specific intended learning outcomes are stated in the course syllabuses.

4. **Approach and study route**
The Programme in Medicine provides vocational education and training with a scientific basis. It is academic by nature and more wide-ranging in its aims than simply depending on the natural sciences for its store of knowledge and scientific basis. Knowledge about the basic facts in biomedicine and an understanding of the nature, course and treatment of illness are essential for being able to practise as a doctor. Fundamental to working in medicine is being able to meet the individual with a disease.

The Programme consists of courses. The learning goals in each course are closely tied to research in each area, and these are placed in relation to the student’s progress towards the learning goals of the Programme as a whole. The intended learning outcomes are stated in the course syllabuses, and the student’s progress during the Programme are reflected in these. The teaching elements
and examination in the five core areas of professional development are integrated in the institute-based courses.

The teaching and learning applied at Sahlgrenska Academy are research-based and involve identifying the problems arising in relation to the content of the Programme and to the different kinds of teaching for different content and contexts. Clinically active doctors participate in teaching and supervision. Teaching is provided in a number of ways such as lectures, seminars, group tuition, conferences, laboratory work, clinical training "bedside", supervision involving reflection and feedback, and case studies and field studies.

The Programme in Medicine includes the following courses at undergraduate level (1-180 higher education credits)

**Semester 1**
- Introduction to medical education and early professional contact A, 3 higher education credits
- Overview - Gross Anatomy, Tissue and Cells, 7.5 higher education credits
- Electives in Biomedicine: Pathogenesis, 3 higher education credits
- Molecular Cell Biology, 16.5 higher education credits

**Semester 2**
- Histology, 9 higher education credits
- Physiology, Pharmacology and Biochemistry, 19.5 higher education credits
- Preparatory Vocational Training B, 1.5 higher education credits

**Semester 3**
- Physiology, Pharmacology and Biochemistry (contd.), 21 higher education credits
- Genetics, 3 higher education credits
- Clinical Anatomy and Developmental Biology, 4.5 higher education credits
- Early Professional Contact C, 1.5 higher education credits

**Semester 4**
- Clinical Anatomy and Developmental Biology (contd.), 13.5 higher education credits
- Pathology, 15 higher education credits
- Early Professional Contact D, 1.5 higher education credits

**Semester 5**
- Elective in biomedicine: Pathophysiology, 3 higher education credits
- Medical Consultation, 7.5 higher education credits
- Infection, Microbiology and Immunity, 19.5 higher education credits

**Semester 6**
- Electives in Biomedicine 3 – Critical analysis of medical data, 3 higher education credits
- Internal medicine I, 27 higher education credits
The student at undergraduate level makes progress in terms of depth and breadth and independent thinking in that the content and goals of the courses build upon each other.

and the following courses at graduate level (181 – 330 higher education credits)

**Semester 7**
- Internal Medicine II, 9 higher education credits
- Neurology, 10.5 higher education credits
- General Psychiatry, 10.5 higher education credits

**Semester 8**
- Surgery, 28.5 higher education credits
- Internal Medicine II (contd.), 1.5 higher education credits

**Semester 9**
- Community Medicine, 12 higher education credits
- Dermatology and Venereology, 6 higher education credits
- Ophthalmology, 4.5 higher education credits
- Ear, Nose and Throat Diseases, 6 higher education credits
- Geriatric Medicine, 1.5 higher education credits

**Semester 10**
- Degree project, 30 higher education credits

**Semester 11**
- Radiology, 1.5 higher education credits
- Paediatrics and child psychiatry, 14.3 higher education credits
- Gynaecology, Obstetrics and Clinical genetics, 14.2 higher education credits

The student at graduate level makes progress in terms of understanding the complexity of the skills required and receiving proficiency training at a clinical practice.

5. **Entry requirements for acceptance**
The entry requirements – part from the general entry requirements - for acceptance on the Programme in Medicine are
- Field-specific entry requirements 13
- Mathematics course D
- Physics course B
- Chemistry course B
- Biology course B
Field-specific entry requirements A13:
Biology 2
Physics 2
Chemistry 2
Mathematics 4
The applicant must have achieved a minimum grade of a Pass in each qualifying subject.

6. Degree
Once the student has completed the Programme worth 330 higher education credits, a degree certificate entitled Degree of Master of Science in Medicine will be issued at his or her request. The Degree of Master of Science in Medicine is an academic professional qualification. On application, the National Board of Health and Welfare issues a professional status qualification for the medical profession once the applicant has taken his or her degree and completed the internship in a medical practice (AT).
The courses on the Programme also count towards a general Bachelor’s or Master’s degree.

7. Other
The Programme syllabus has been in force since the autumn semester of 2007.

In order to be accepted for further studies on the Programme in Medicine after taking approved leave from studying, and in order to be accepted on the later part of the Programme (a campus exchange), applicants are ranked in groups in an established order of priority (Reg. no. G2011/84).

Clinical training takes place in outpatient care and in-patient care at the Sahlgrenska University Hospital and in non-institutional care in the Västra Götalnd Region. Certain parts of the clinical training may be provided outside the Gothenburg area which may incur costs for the student.

The Programme uses a two-grade scale: Pass and Fail.

The Programme offers the student an opportunity to gain a better understanding of global health issues for example through international exchange studies. The Sahlgrenska Academy has exchange agreements with a number of foreign universities. As part of the internationalisation process, some of the courses may be given in English.

Goal achievement on the Programme is assessed on an ongoing basis at different levels. Alumni surveys are carried out.

Students are involved in all the decision-making and drafting bodies connected to the Programme and at the meetings held on an ongoing basis at course level (course committees).
Appendix 1

Degree in Medicine (SFS:1993:100, Appendix 2, the System of Qualifications)

Scope
A degree of Master of Science in Medicine is attained once the student has fulfilled the course requirements worth 330 higher education credits.

Knowledge and understanding
To achieve a degree in Medicine the student shall
- demonstrate knowledge of the scientific basis of the discipline and an insight into current research and development, as well as an understanding of the connection between science and proven experience and the significance of this connection for practising the profession,
- demonstrate both the breadth and depth of his or her knowledge in medicine, including knowledge and understanding of the conditions in society which affect the health of different groups and individuals, children as well as men and women,
- demonstrate knowledge about the economic and organisational factors of importance for health and medical care services, and
- demonstrate knowledge about the relevant statutes.

Competence and skills
To attain a degree in Medicine the student shall
- demonstrate a sound ability to make an independent diagnosis of the most common illnesses experienced by patients and to treat these with the cooperation of the patient,
- demonstrate ability to initiate and carry out health-promoting and prevention measures in health and medical care for both individual patients and groups of patients,
- demonstrate ability to integrate and apply his or her knowledge in a critical and systematic way and to analyse and assess complex phenomena, problems and situations,
- demonstrate a sound ability to inform and teach different groups and to carry out supervisory tasks,
- demonstrate ability for teamwork and cooperation with other professional groups both in health and medical care and in health and welfare,
- demonstrate ability to explain orally and in writing the measures and treatment results to the parties affected and to document these in accordance with the relevant statutes,
- demonstrate a sound ability to discuss from a scientific point of view new facts, phenomena and problems in the field of medicine with different groups and to critically examine, assess and use relevant information, and
- demonstrate a sound ability to initiate, cooperate in and carry out improvements and to assess the practice of medical treatment.
Ability to assess and approach
To achieve a degree in Medicine the student shall
- demonstrate self-awareness and the ability to empathise,
- take an overall approach to the patient from a scientific and humanistic perspective while taking human rights into special consideration,
- demonstrate ability to take an ethical and professional approach to patients and those close to them, and
- demonstrate ability to identify his or her need for further knowledge and to develop his or her competence on an ongoing basis.

Independent project (degree project)
To achieve a degree in Medicine the student shall have completed an independent project (degree project worth 30 credits) in compliance with the course requirements.
DEFINED COMPETENCE GOALS FOR PROFESSIONAL DEVELOPMENT ON THE PROGRAMME IN MEDICINE

Professional development (PD) on the Programme in Medicine is divided into five indicative core areas: Communication and self-reflection – Leadership ability and collaboration – Ethical approach – Knowledge and awareness of human rights and gender – Scientifically critical approach.

On completing his or her studies on the Programme in Medicine, the student is expected to be able to:

Communicative ability and self-reflection

Knowledge and understanding
- explain the significance of the patient-doctor relationship for the patient, those close to the patient, the doctor and colleagues
- explain the patient-centred consultation model
- explain the significance of psychosocial anamnesis in collaborating with the patient

Competence and skills
- carry out a patient-centred consultation
- demonstrate a sound ability to listen and work together with the patient; be able to structure the conversation, summarise the facts and provide clear and varied responses
- demonstrate ability to inform and explain in a clear and intelligible way; in small and large groups and in contact with patients, those close to them, colleagues and the society, both orally and in writing
- demonstrate ability to discuss lifestyle and sexuality with the patient in an open and respectful way
- demonstrate ability to gauge the patient’s feelings and adapt the conversation accordingly

Ability to assess and approach
- use a patient-centred approach in clinical work
- demonstrate ability to assess his or her own consultations and reflect on his or her own personal manner when treating patients, both orally and in writing
- demonstrate ability to describe his or her own reactions to demanding encounters with patients and to reflect on these
- identify the need for further improvement of his or her own communication skills
Leadership ability and collaboration

Knowledge and understanding
- describe the organisation of Swedish health and medical care
- observe and describe different behaviours in a group (group dynamic)
- give examples of the leadership provided by the doctor in everyday situations
- explain which people are affected by the medical decisions taken by the doctor and the way in which these decisions are communicated
- describe the limitations of the doctor’s professional remit in relation to other professions and how the rules governing licensing affect the distribution of work in health care
- discuss the doctor’s role in ensuring quality assurance and improvements

Competence and skills
- demonstrate ability to lead a group (e.g. rounds)
- demonstrate ability when part of a group to express his or her own opinion, take note of the opinions of others and sum up the work of the group in terms of both the results and the process
- give and receive feedback

Ability to assess and approach
- assist with learning in groups and have an understanding of the doctor’s responsibility for learning in organisations
- identify his or her own strengths and areas of development in the areas of leadership and collaboration
- reflect on his or her own expectations and those of others regarding the leadership role of the doctor

Ethical approach

Knowledge and understanding:
- summarise what is expected of a doctor as set out in the ethical rules and regulations of the Swedish Medical Association
- explain what is meant by the four ethical principles: the Principle of Goodness, the Principle of Human Dignity, the Principle of Autonomy and the Principle of Fairness.
- explain what is meant by the terms ‘informed consent’ and ‘decision-making ability’

Competence and skills:
- identify and formulate ethical questions which become real issues in clinical practice
- discuss in a structured way ethical questions in health and medical care
- critically examine his or her own ethical arguments and those of others
- discuss the relationship between patient autonomy and the doctor’s other professional obligations
- discuss circumstances under which it is justifiable to refrain from providing or to stop treatment

**Ability to assess and approach:**
- show respect for the patient’s values, integrity and self-determination
- reflect on his or her own values and behaviours, and on medical ethics and professionalism
- defend his or her own position on ethical questions while at the same time acknowledging the fact that other people may take a different view
- show integrity in all written accounts and scientific work

**Knowledge and awareness of human rights and gender**

**Knowledge and understanding**
- describe the Swedish and international rules and regulations governing human rights and the relationship between the two
- give an overview of the ethical, political and legal bases for human rights
- explain what the right to the highest attainable standard of health means and understand the connection between the right to health, functioning health systems and public health
- explain what gender perspective means in the field of health care

**Competence and skills**
- discuss the way health care services engage with patients and those close to them, and analyse cases from different human rights perspectives, including the gender perspective
- discuss how the ability to exercise one’s human rights affects health, for the individual patient as well as for various groups in society

**Ability to assess and approach**
- apply Swedish and international rules and regulations governing human rights
- treat all patients, those close to them and colleagues with the same respect for their equal worth and rights regardless of gender, ethnicity, religion or other belief, disabilities where these apply, sexual orientation, transgender identity and age.
- analyse the reception and treatment given to a patient from a human rights perspective using the concepts of availability, accessibility, acceptability and quality

**Scientifically critical approach**

**Knowledge and understanding**
- discuss basic scientific and epistemological concepts
- discuss the relationship between science and proven experience
- give an overall description of the basic scientific methods used in the field of medicine and their potential and limitations
- explain the rules and regulations governing research ethics and declarations
- discuss the significance of research for the development of health and medical care

**Competence and skills**
- independently seek, critically examine and apply scientific information within the field of medicine
- demonstrate ability to make judicious use of evidence-based knowledge at individual level
- demonstrate ability to perform an independent analysis and assessment of complex phenomena in everyday clinical practice, including on the basis of limited information
- demonstrate ability when working within the framework of a project to distinguish and formulate scientific problems, to examine these using appropriate scientific methods, and to summarise and interpret the results
- demonstrate ability in writing and orally to explain and justify his or her scientific work
- demonstrate ability to criticise and discuss the work of others in an objective and scientific way

**Ability to assess and approach**
- demonstrate ability to take a holistic approach to the patient on the basis of a scientific and humanistic approach
- demonstrate ability to discuss on a scientific basis new facts, phenomena and problems
- demonstrate awareness of his or her own limitations as well as those of science and society
- demonstrate ability to identify and act on his or her own need to acquire further knowledge