Programme syllabus for

Study Programme in Audiology, 180 credits

Audionomprogrammet, 180 hp

Basic programme information

Programme code	1AU13
Name of the programme	Study Programme in Audiology
Number of credits	180.0 credits (180.0 ECTS credits)
Starting date	The syllabus applies to students who commence their studies in or after autumn 2013. Approved revisions of the syllabus are described under the heading Transitional Provisions.
Decision date	2012-11-12
Decided by	Board of Higher Education
Last revision	2024-05-29
Revised by	Committee for Higher Education
Reference number	3-2532/2024
Main field of study	Audiology
Qualification	Audionomexamen *Degree of Bachelor of Science in Audiology* Medicine kandidatexamen med huvudområdet audiologi *Degree of Bachelor of Medical Science with a Major in Audiology* Upon request, a student who meets the requirements for a qualification is to receive a diploma.

Outcomes

Outcomes of first cycle education according to the Higher Education Act

First-cycle courses and study programmes shall be based fundamentally on the knowledge acquired by pupils in national study programmes in the upper-secondary schools or its equivalent. The Government may, however, permit exceptions for courses and study programmes in the fine, applied or performing arts.

First-cycle courses and study programmes shall develop:

- the ability of students to make independent and critical assessments
- the ability of students to identify, formulate and solve problems autonomously, and
- the preparedness of students to deal with changes in working life.

In addition to knowledge and skills in their field of study, students shall develop the ability to:

- gather and interpret information at a scholarly level
- stay abreast of the development of knowledge, and
- communicate their knowledge to others, including those who lack specialist knowledge in the field.

Outcomes of the Degree of Bachelor of Science in Audiology according to the Higher Education Ordinance
For a Degree of Bachelor of Science in Audiology the student shall demonstrate the knowledge and skills required for registration as an audiologist.

Knowledge and understanding
For a Degree of Bachelor of Science in Audiology the student shall:

- demonstrate knowledge of the disciplinary foundation of the field and awareness of current research and development work as well as the links between research and proven experience and the significance of these links for professional practice
- demonstrate knowledge of hearing and its importance for the individual as well as factors that affect hearing health, and
- demonstrate knowledge of the relevant statutory provisions.

Competence and skills
For a Degree of Bachelor of Science in Audiology the student shall:

- demonstrate the ability to undertake hearing examinations and also to assess autonomously and, in collaboration with the patient, plan, conduct and evaluate habilitation and rehabilitation interventions
- demonstrate the ability to identify, initiate and participate in health promotion and preventive interventions intended to prevent the occurrence of hearing impairment
- demonstrate the ability to apply his or her knowledge to deal with different situations, phenomena and issues on the basis of the needs of individuals and groups
- demonstrate the ability to inform and instruct different audiences
- demonstrate the ability to present and discuss in speech and writing interventions and treatment outcomes with those concerned and to document them in accordance with the relevant statutory provisions
- demonstrate the capacity for teamwork and cooperation with other professional categories, and
- demonstrate the ability to review, assess and use relevant information critically and to discuss new data, phenomena and issues with various audiences and so contribute to the development of the

profession and professional practice.

Judgement and approach
For a Degree of Bachelor of Science in Audiology the student shall:

- demonstrate self-awareness and the capacity for empathy
- demonstrate the ability to assess interventions using a holistic approach to individuals informed by the relevant disciplinary, social and ethical aspects and taking particular account of human rights
- demonstrate the ability to adopt a professional approach to clients or patients, those close to them and other groups, and
- demonstrate the ability to identify the need for further knowledge and undertake ongoing development of his or her skills.

Outcomes of the Degree of Bachelor of according to the Higher Education Ordinance
Knowledge and understanding
For a Degree of Bachelor of Arts/Science the student shall:

- demonstrate knowledge and understanding in the main field of study, including knowledge of the disciplinary foundation of the field, understanding of applicable methodologies in the field, specialised study in some aspect of the field as well as awareness of current research issues.

Competence and skills
For a Degree of Bachelor of Arts/Science the student shall:

- demonstrate the ability to search for, gather, evaluate and critically interpret the relevant information for a formulated problem and also discuss phenomena, issues and situations critically
- demonstrate the ability to identify, formulate and solve problems autonomously and to complete tasks within predetermined time frames
- demonstrate the ability to present and discuss information, problems and solutions in speech and writing and in dialogue with different audiences, and
- demonstrate the skills required to work autonomously in the main field of study.

Judgement and approach
For a Degree of Bachelor of Arts/Science the student shall:

- demonstrate the ability to make assessments in the main field of study informed by relevant disciplinary, social and ethical issues
- demonstrate insight into the role of knowledge in society and the responsibility of the individual for how it is used, and
- demonstrate the ability to identify the need for further knowledge and ongoing learning.

Outcomes of the study programme at Karolinska Institutet

Judgement and approach
Upon completion of the programme, the students shall:

- be able to apply their knowledge in a professional manner and in accordance with their professional code of ethics.

Description of the main field of study

The disciplinary foundation for the main field of study of audiology (the study of hearing) is interdisciplinary; normal and impaired hearing are described and explained from a number of perspectives through the integration of medical, technical and behavioural audiology.

Medical audiology encompasses knowledge regarding the diagnosis, treatment and rehabilitation of hearing impairments. Technical audiology encompasses knowledge regarding techniques and methods involved in the development, construction and use of audiological apparatus/equipment for diagnostic and rehabilitation purposes. Behavioural audiology encompasses studies of people with hearing impairments and their rehabilitation, based on psychological, sociological, pedagogical and cultural aspects.

Through studies within the main field of study, students develop knowledge of:

- the significance to the individual of hearing and hearing impairment,
- the conditions of deaf persons and persons with impaired hearing on individual, group and social levels,
- factors that affect hearing health, including preventative measures,
- the rehabilitation and habilitation of hearing impairments, based on medical, technical and behavioural perspectives, and
- a scientific approach within the field of audiology.

Knowledge within the main field of study, audiology, aims to optimise the relationship between hearing, hearing technology and communication, based on the needs and preconditions of the hearing-impaired patient. The knowledge is used for the development, practical application, evaluation and documentation of methods and techniques involved in hearing assessment, rehabilitation and habilitation. The knowledge is applied using a pedagogical approach adapted both to the individual and the group.

Content and structure

The course's main content and composition
The Study Programme in Audiology comprises 180 credits and the courses within the main field of study, audiology, constitute about 80 % of these, including several courses that incorporate clinical education. The courses within the main field of study gradually become more detailed as the programme progresses, according to the description below.

Courses in physics, neurology, psychology, neuropsychology and phonetics, which are important for the application of the main field of study, comprise approximately 20 % of the programme. Within the main field of study, courses in scientific method are spread out during the whole programme in a scientific "element" that comprises a total of 15 credits.
The clinical education are either complete courses in their own right or integrated as part of the main field of study courses on diagnostics and the rehabilitation/habilitation of hearing impairments in children and adults. The clinical education is conducted at hearing clinics.

During most of the programme semesters, elements of continuing professional development are provided. These involve students being trained in how to reflect on ethics, the reception of patients, their approach, personal development and their forthcoming professional position. Both individual and group reflection is important and courses run continuously throughout the programme.
Within the main field of study, *the first year* involves the acquisition of fundamental knowledge concerning hearing impairments and their medical background. This involves theoretical and practical knowledge with regards to diagnostic methods that establish the type and severity of the hearing impairment. These measurements form the basis for diagnostics and assessment that are necessary for ongoing rehabilitation. The clinical education starts with classroom observations, in order for the student to first understand their professional role; the education then continues with training in diagnostic skills and the reception of patients. Fundamental technical knowledge regarding signals and systems is imparted.

The courses within the main field of study during*the second year of the programme* cover areas such as sound perception and the technical aspects of hearing aids. The majority of the courses are focused on

hearing rehabilitation and the fitting of hearing aids is central. Rehabilitation is planned on the basis of physiological, psychosocial and psychological conditions. During the clinical education, students are trained and made aware of their therapeutic role and clinical training is interweaved with theoretical training in order to encourage integration and reflection. When student skills are assessed within their clinical training, great importance is placed on their practical examination ability and their approach to patients.

During the third year, courses within the main field of study incorporate a high degree of theoretical and practical knowledge, both in the students' final clinical education and in their individual degree project. Great importance is placed on inspection of the clinical work and the specific clinical skills that an audiologist should possess in order to adapt technical solutions to the specific needs and preconditions of the individual patient. The students' problem solving ability is stimulated by tasks that unite various knowledge paradigms. The degree project requires deeper knowledge, both in the application of scientific method and within the main field of study of audiology.

The courses in scientific method start in the second semester, but an introduction is given as early as the first semester, within the Medical Audiology course. The courses are organised as an "element" studied over several semesters with an increasing degree of specialisation that runs parallel with the specialisation within the main field of study. During the first semesters, the students start to critically examining academic articles and developing their writing process. In-depth knowledge in research methodology is then provided through summaries of academic literature and the preparation of project plans for the individual degree project within the main field of study. The audiologic profession requires knowledge in essentially differing research traditions and students are therefore encouraged to process data both qualitatively and quantitatively. The main aim of this scientific element is to prepare the students for life-long learning and to give them tools for critical thinking and analysis.

Elective course
The programme includes an elective course and the students are encouraged to broaden their knowledge or to acquire specialised knowledge in a specific subject area. The elective courses may be courses with an interprofessional focus within KI, specialisation courses within specific sections of the main field of study or other courses of relevance to the programme. **Pedagogical profile**
The programme's pedagogical profile is characterised by diversity in order to encourage the various learning styles of the students. The study forms aim to encourage active knowledge acquisition, critical thinking and constructive problem solving. The type of instruction varies within the various courses and is suited to the intended learning outcome and to the nature of the subject. Knowledge subject matter is communicated in a systematic and varied manner through lectures, seminars, laboratory work, the students' own presentations, group work, individual supervision and the clinical education.

The examination formats vary between the different courses. Specialisation within the main field of study means that, in the latter parts of the programme, increasingly integrated knowledge is examined. Various types of reflection are encouraged for all courses and this is taught more specifically during the professional development and scientific method elements. These elements are designed to clarify the progress that the students have made.

Transitional provisions

This programme syllabus has been cancelled.

Other guidelines

Grading scale

The grades used are Fail or Pass.

Alternative grading scales may apply to elective courses or cross-programme courses. The grading scale is detailed in the course syllabus.

Language of instruction

The language of instruction is Swedish but courses in English may occur. English and Swedish literature is used.

Specific eligibility requirements within the programme

Within the program there are course-specific entry requirements, these can be found in each respective course syllabus. In those cases where the requirements regulate entrance to a higher semester, these requirements are also found at the course website. Within a semester there may be courses that require specific prerequisites. The elective courses may have entry requirements that differ from other courses given during the same semester.

Guidelines regarding the suspension of clinical educations whilst the course is in progress

A student's clinical education (VFU) can be immediately suspended if the student demonstrates such serious shortcomings, in terms of knowledge, skills or approach, as to jeopardise the safety of the patients, or their trust in their medical care. The administration of such matters must be outlined in the course syllabus.

If the education is suspended in this manner, an individual action plan shall be drawn up stating the activities and testing that will be required for a student to be given the opportunity to recommence the education.

Study plan with constituent courses

Students starting from 2014 or later

Semester	Name of the course	Credits	Cycle	Depth of the course
1	Audiology and Health care*	7.5	First	G1
1	Physics and Acoustics	7.5	First	
1	Nervous System: Structure and Function	7.5	First	
1 and 2	Medical Audiology	12	First	G1
2	Professional Development 1	1.5	First	G1
2	Scientific Methods 1 - Scientific Writing	1.5	First	G1
2	Signal Theory	7.5	First	G1
2	Hearing Assessment 1 *	13.5	First	G1
2	Scientific Methods 2 - Scientific Review	1.5	First	G1
3	Hearing Assessment 2 *	9	First	G1
3	Professional Development 2	1.5	First	G1
3	Speech and Sound - Production and Perception	10.5	First	G1
3	Psychology	9	First	
4	Professional Development 3	1.5	First	G2
4	Technical Aspects of Hearing Aids	7.5	First	G2
4	Adult Education and Learning	6	First	
4	Hearing Rehabilitation 1*	15	First	G2
5	Scientific methods 3 - Quantitative and Qualitative Methods	9	First	G2
5	Hearing Rehabilitation 2	6	First	G2
5	Diagnostics and Habilitation of Children*	7.5	First	G2
5	Elective course	7.5	First/ Second	
	Professional Development			

6	4	1.5	First	G2
6	Scientific Methods 4 - Project Plan	3	First	G2
6	Clinical Education *	10.5	First	G2
6	Degree Project in Audiology	15	First	G2

** = The course includes elements that incorporate clinical education (VFU)*

Students starting from 2013

Semester	**Name of the course**	**Credits**	**Cycle**	**Depth of the course**
1	Audiology and Health care *	7.5	First	G1
1	Physics and Acoustics	7.5	First	
1	Nervous System: Structure and Function	7.5	First	
1 and 2	Medical Audiology	12	First	G1
2	Professional Development 1	1.5	First	G1
2	Scientific Methods 1 - Scientific Writing	1.5	First	G1
2	Signal Theory	7.5	First	G1
2	Hearing Assessment 1 *	15	First	G1
3	Hearing Assessment 2 *	7.5	First	G1
3	Professional Development 2	1.5	First	G1
3	Phonetics	3	First	
3	Scientific Methods 2 - Scientific Review	1.5	First	G1
3	Sound Perception	7.5	First	G1
3	Psychology	9	First	
4	Professional Development 3	1.5	First	G2
4	Technical Aspects of Hearing Aids	7.5	First	G2
4	Adult Education and Learning	6	First	
4	Hearing Rehabilitation 1*	15	First	G2
5	Scientific Methods 3 - Quantitative and Qualitative Methods	9	First	G2
5	Hearing Rehabilitation 2	6	First	G2

5	Diagnostics and Habilitation of Children*	7.5	First	G2
5	Elective Course	7.5	First/ Second	
6	Professional Development 4	1.5	First	G2
6	Scientific Methods 4 - Project Plan	3	First	G2
6	Clinical Education *	10.5	First	G2
6	Degree Project in Audiology	15	First	G2

** = The course includes elements that incorporate clinical education (VFU)*