

För alla läkare under hela kariären

Description of the objectives for doctors' specialty training

The Swedish Medical Association's
translation into English

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Validity and area of application of this document

For information purposes, the Swedish Medical Association (Läkarförbundet) has translated parts of the National Board of Health and Welfare's (Socialstyrelsens) publication "Läkarnas specialiseringstjänstgöring Målbeskrivningar 2015" ISBN 978-91-7555-304-7 into English.

In this publication, the knowledge, skills and approaches that the registered doctor undergoing specialty training (the specialty resident, specialty trainee or "ST-läkare" in Swedish) is to develop during his/her specialty training. The descriptions of the objectives specify a number of learning objectives. Learning objectives a apply to all specialties, learning objectives b apply to many specialties while learning objectives c are specific to each specialty. This English translation is only intended to be regarded as an aid that the Swedish Medical Association provides in applying the descriptions of the objectives for doctors' specialty training. Because the translation is a product from the Swedish Medical Association and not of the National Board of Health and Welfare, the translation is not valid for application as regulations. It is the National Board of Health and Welfare's printed publication describing the regulations and general recommendations that applies.

In this document, the Swedish Medical Association has chosen to translate all learning objectives a and learning objectives b as well as the glossary of terms from the National Board of Health and Welfare's publication. In addition, the specialist skills descriptions and learning objectives c for 27 specialties have been translated, which has been done in consultation with and funded by the Swedish Medical Association's specialty associations and the Swedish Society of Addiction Medicine.

Glossary of terms

Clinical attachment	Structured programme where the specialty resident observes the professional practice of one or more colleagues and to some extent performs tasks in the area in question
Supervision	Support and guidance in the form of dialogue provided continuously
Supervisor	Specialist doctor who has completed an educational supervisor course and who supervises the specialty resident, and evaluates his or her professional development The supervisor may be the specialty resident's principal supervisor or another doctor with appropriate specialist skills for that training period
Clinical practice under supervision	The specialty resident's clinical practice under his/her own professional liability and with the support of the supervisor
Course	Structured programme based on set educational goals
Quality and development activities	Quality improvement project that the specialty resident carries out, which is part of the healthcare system's systematic quality management
Independent written project based on scientific principles	Written project undertaken in which the specialty resident independently answers a scientific question using evidence based medicine principles
School health service	Medical interventions in student health

Medical imaging specialties

Radiology

Description of skills

The specialty Radiology features diagnostics, staging, prognostication, treatment and the exclusion of disease as well as the evaluation of therapy with the aid of morphological and functional imaging. This skills area includes knowledge of the pathophysiology, aetiologies and progression of diseases.

This skills area includes knowledge of how the included procedures are used within different organ systems as well as their strengths, limitations and risks.

The specialty Radiology also includes skills in the procedures of other specialties that can provide similar or additional information than that provided by radiology. These skills are at a level where a specialist doctor in radiology can function in an advisory capacity to referring units in order to contribute to the management of the patient.

This specialty has a responsibility for research, procedure development, quality development and training in the skills area.

Central to this skills area is multi-disciplinary collaboration with the referring units and other units that use functional and morphological procedures.

The medical imaging specialties Radiology and Clinical Physiology share a common knowledge base.

Skills requirements

For Radiology, learning objectives a1-a6, b1 and b3 and c1-c13 apply.

Learning objectives a and b

Learning objective a1 Teamwork, leadership and pedagogy	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to take responsibility for his/her continuous learning in the workplace – Be able to exercise leadership in his/her daily work, including lead a healthcare team – Be able to take responsibility for the development of multi-professional teamwork – Be able to take responsibility for cooperation with patients and their families** – Be able to work in networks looking after the patient – Be able to collaborate with agencies outside the hospital healthcare system such as social welfare boards, agencies within the social services, schools and Försäkringskassan (the Swedish Social Insurance Agency) – Be able to present and explain medical information in a way that is understandable to the recipient, orally and in writing – Be able to plan and carry out teaching and training – Be able to supervise and instruct colleagues and students 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups Supervise under supervision Teach under supervision	

Learning objective a2 Ethics, diversity and equality	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate knowledge and understanding of the principles of medical ethics and be able to identify ethical problems and analyse these in a structured way – Be able to handle conflicts in values in his/her daily work – Be able to treat people as individuals and with respect regardless of gender, transgender identity or expression, ethnic origin, religion or other faith, disability, sexual orientation or age. 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups	

Learning objective a3 Infection Prevention and Control	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to take responsibility for the prevention and control of healthcare-associated infections 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor

Learning objective a4 Systematic quality and patient safety management	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Critically examine his/her own practice and be able to conduct a risk and outcome analysis – Be able to take responsibility for systematically implementing measures, processes and procedures to improve patient care – Be able to take responsibility for the integration of new technologies and procedures into his/her daily work as a doctor 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Quality and development work	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	

Learning objective a5 Medical science	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate a deeper knowledge and understanding of medical scientific methodology and ethical principles – Be able to critically examine and evaluate medical science information – Demonstrate a scientific evidence based approach to his/her daily way of working and routines 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Independent written work based on scientific methodology	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	

Learning objective a6 Legislation and other regulations and the health and medical care system's organization	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Demonstrate knowledge of the legislation and regulations which govern the healthcare system and its staff – Demonstrate knowledge of the health and medical care system's organisation and administration – Demonstrate knowledge of the health and medical care system's various financial control systems and their importance for the balancing of priorities in his/her daily work 	<p>Participation in one or more courses</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor</p>

Learning objective b1 Communication with patients and families	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to adapt his/her way of communicating based on the patient’s and their relatives’ individual needs and communication capabilities – Be able to give patients and their families difficult news with respect, empathy and sensitivity – Be able to support the patient's ability to manage a change in life situation as a result of an illness or disability – Be able to consult with patients and their families concerning the patient's self-care 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups Clinical attachment	

Learning objective b3 Medicines	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to adapt pharmacotherapy to the patient’s age, sex, weight, kidney and liver function as well as any comorbidity and other medication – Be able to assess the risks of interactions and side effects with pharmacotherapy – Be able to work with patients and their families to achieve compliance with medications – Be able to work with other parties in the patient care chain with regard to pharmacotherapy – Be able to critically review and evaluate scientific evidence surrounding pharmacotherapy – Demonstrate knowledge of the environmental impacts of pharmacotherapy – Demonstrate knowledge of the health economics aspects of pharmacotherapy 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained required competencies requirements issued by the course provider or the supervisor

Learning objectives c

Specialist skills in radiology requires the specialty resident to have achieved the objectives in the knowledge base shared for Radiology and Clinical Physiology (Learning objectives c1-c4). This means that the specialist doctor shall have knowledge of:

- The advantages and disadvantages of different modalities in radiology and clinical physiology
- The significance of examination findings and their impact on ongoing management of the patient for the most commonly occurring inquiries within the common skills area
- Anatomy, physiology and pathophysiology
- Physical, technical, mathematical and statistical principles
- Image processing
- Radiation biology, radiation physics, and radiation protection, and
- Nuclear medicine investigations of relevance for the specialty resident's own specialty.

In addition, the specialist doctor is to take a holistic approach to the patient's situation, and based on this, guide a referring unit in assessing what procedures within the skills area are best suited for the management of the patient's case in the future.

In addition, the specialist doctor in radiology is to have knowledge of:

- Treatment and intervention in the area
- The risks associated with the diagnostic and therapeutic procedures included in the skills area,
- Physical, technical, mathematical and statistical principles of the most common procedures
- The strengths and weaknesses of the most common procedures
- Medical and technical quality assurance of examination data, and
- How the findings and the therapy can impact the medical management as well as the consequences for the individual patient and for the community.

In addition, the specialist doctor is to:

- Master anatomy, physiology and pathophysiology of relevance to the specialty
- Be able to manage the most common diagnostic and therapeutic inquiries and be able to initially manage others, as well as decide which procedures within the skills area are optimal
- Be able to prioritise patients and examinations based on medical benefit, safety and degree of urgency
- Master the assessment, image processing and documentation of the most common investigations, and be able to initially manage other investigations

- Be able to document and communicate knowledge, results and assessments within the skills area of the specialty
- Master medical image processing within the skills area, and
- Be able to apply legislation and other regulations applicable to the skills area.

Learning objectives c1-c4 are common to the medical imaging specialties Radiology and Clinical Physiology (shared knowledge base). Learning objectives c2 and c3 are formulated partly differently however for each specialty.

Learning objective c1	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Have knowledge of the significance of examination findings for the ongoing management of the patient – Have knowledge of the strengths, weaknesses and risks of the investigation procedures. 	Clinical practice under supervision, or alternatively clinical attachment at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in diagnostic and treatment conferences Theoretical studies	

Learning objective c2	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master anatomy, physiology and pathophysiology of relevance to Radiology – Master anatomy, physiology and pathophysiology of relevance to Clinical Physiology 	Clinical practice under supervision, or alternatively clinical attachment at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c3	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Have knowledge of the physical, technical, mathematical and statistical principles of procedures included in the skills area – Master image processing for the investigation modalities in the skills area – Master radiation biology, radiation physics and radiation protection – Be able to apply legislation and other regulations applicable to radiation physics and radiation protection. 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c4	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Have knowledge of nuclear medicine of relevance for the specialty 	Clinical practice under supervision, or alternatively clinical attachment at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in diagnostic and treatment conferences Theoretical studies	

Learning objective c5	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master the most common radiological investigations of the thoracic organs – Be able to initially manage other investigations of thoracic organs 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in diagnostic and treatment conferences Theoretical studies	

Learning objective c6	Programme activities	Assessment	
The specialist doctor shall: <ul style="list-style-type: none"> – Master the most common radiological investigations of abdominal organs and the gastrointestinal tract – Be able to initially manage other investigations of the organs of the abdomen and the gastrointestinal tract 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor	
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor	
	General recommendations Participation in diagnostic and treatment conferences Theoretical studies		

Learning objective c7	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to handle the most common interventions within Radiology – Have knowledge of other interventions 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in diagnostic and treatment conferences Theoretical studies	

Learning objective c8	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master the most common radiological investigations of the musculoskeletal system – Be able to initially manage other investigations of the musculoskeletal system 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in diagnostic and treatment conferences Theoretical studies	

Learning objective c9	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master the most common radiological investigations within the neurology and neurosurgery areas – Be able to initially manage other investigations within the neurology and neurosurgery area 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	<i>General recommendations</i> Participation in diagnostic and treatment conferences Theoretical studies	

Learning objective c10	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master the most common radiological investigations of children – Be able to initially manage other investigations of children – Be able to identify the signs that arouse suspicion that a child is being neglected or abused 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	<i>General recommendations</i> Participation in diagnostic and treatment conferences Theoretical studies	

Learning objective c11	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Have knowledge of the most common investigations within diagnostic mammography – Be cognisant of other investigations within diagnostic mammography 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	<i>General recommendations</i> Participation in diagnostic and treatment conferences Theoretical studies	

Learning objective c12	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master the most common radiological investigations of the urogenital organs – Be able to initially manage other investigations of the urogenital organs 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competences issued by course provider or supervisor
	<i>General recommendations</i> Participation in diagnostic and treatment conferences Theoretical studies	

Learning objective c13	Programme activities	Assessment
The specialist doctor shall: – Be able to apply legislation and other regulations applicable to the specialty	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor

General recommendations

Programme structure

It is important that specialist training in Radiology can be carried out at both university hospitals and at departments practising general radiology so that the specialty resident gets the opportunity to develop his/her skills in all the areas specified in the learning objectives. It is also important that the programme provides a clear logical progression and continuous skills development. If an ancillary training programme at a university hospital is needed to acquire certain specialised knowledge, this should be done in one continuous period so that the specialty resident acquires this knowledge in a structured way.

The programme should be planned so that the specialty resident can acquire a basic knowledge of the procedures used in radiology for the most common conditions at an early stage. The knowledge base shared with Clinical Physiology may be acquired with great flexibility in terms of its timing, in conjunction with the specialty resident learning about different parts of his/her own area of knowledge.

Theoretical education should consist of both self-study and external knowledge acquisition in the form of international courses and conferences.

The programme should be based primarily on the practical application of the theoretical knowledge that the specialty resident acquires. To be able to develop his/her radiology skills based on a theoretical foundation, enhancing the conditions for an evidence-based approach, it is also essential that time is set aside for advanced studies in theory in direct connection with clinical practice.

It is important that the specialty resident participates in rounds and multi-disciplinary conferences. Cooperation with other clinical specialties is essential, and consequently ancillary training through specialty training within a different point-of-care specialty is appropriate.

Neuroradiology

Description of skills

The specialty Neuroradiology is characterised by advanced skills in diagnostics, staging, prognostication, treatment, evaluation of therapy and exclusion of disease with the aid of morphological and functional imaging procedures in the central nervous system, spine, head and neck.

Central to the skills area is knowledge of how the procedures included in the area can be used within different organ systems as well as knowledge of their strengths, limitations and risks.

The specialty Neuroradiology also includes skills in the procedures of other specialties that can provide similar or additional information than that provided by neuroradiology. The specialist doctor should be able to adopt a consultative role in an investigation using these procedures in order to contribute to the management of the patient.

The specialty has a responsibility to develop and pursue scientific and quality work within the skills area. This responsibility also includes procedure development and the training of colleagues, both within and outside one's own specialty.

Central to this skills area is multi-disciplinary collaboration with the referring units and other units that use functional and morphological procedures.

Neuroradiology is a branch specialty of the core speciality Radiology.

Skills requirements

For Neuroradiology, learning objectives a1-a6, b1 and b3 and c1-c14 apply.

Learning objective a1 Teamwork, leadership and pedagogy	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Be able to take responsibility for his/her continuous learning in the workplace – Be able to exercise leadership in his/her daily work, including lead a healthcare team – Be able to take responsibility for the development of multi-professional teamwork – Be able to take responsibility for cooperation with patients and their families** – Be able to work in networks looking after the patient – Be able to collaborate with agencies outside the hospital healthcare system such as social welfare boards, agencies within the social services, schools and Försäkringskassan (the Swedish Social Insurance Agency) – Be able to present and explain medical information in a way that is understandable to the recipient, orally and in writing – Be able to plan and carry out teaching and training – Be able to supervise and instruct colleagues and students 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	<p>General recommendations</p> <p>Participation in intra- or inter-professional reflection in groups</p> <p>Supervise under supervision</p> <p>Teach under supervision</p>	

Learning objective a2 Ethics, diversity and equality	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate knowledge and understanding of the principles of medical ethics and be able to identify ethical problems and analyse these in a structured way – Be able to handle conflicts in values in his/her daily work – Be able to treat people as individuals and with respect regardless of gender, transgender identity or expression, ethnic origin, religion or other faith, disability, sexual orientation or age. 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups	

Learning objective a3 Infection Prevention and Control	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to take responsibility for the prevention and control of healthcare-associated infections 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor

Learning objective a4 Systematic quality and patient safety management	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Critically examine his/her own practice and be able to conduct a risk and outcome analysis – Be able to take responsibility for systematically implementing measures, processes and procedures to improve patient care – Be able to take responsibility for the integration of new technologies and procedures into his/her daily work as a doctor 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Quality and development work	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	

Learning objective a5 Medical science	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate a deeper knowledge and understanding of medical scientific methodology and ethical principles – Be able to critically examine and evaluate medical science information – Demonstrate a scientific evidence based approach to his/her daily way of working and routines 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Independent written work based on scientific methodology	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	

Learning objective a6 Legislation and other regulations and the health and medical care system's organisation	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Demonstrate knowledge of the legislation and regulations which govern the healthcare system and its staff – Demonstrate knowledge of the health and medical care system's organisation and administration – Demonstrate knowledge of the health and medical care system's various financial control systems and their importance for the balancing of priorities in his/her daily work 	<p>Participation in one or more courses</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor</p>

Learning objective b1 Communication with patients and families	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Be able to adapt his/her way of communicating based on the patient’s and their relatives’ individual needs and communication capabilities – Be able to give patients and their families difficult news with respect, empathy and sensitivity – Be able to support the patient's ability to manage a change in life situation as a result of an illness or disability – Be able to consult with patients and their families concerning the patient's self-care 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	<p>General recommendations</p> <p>Participation in intra- or inter-professional reflection in groups</p> <p>Clinical attachment</p>	

Learning objective b3 Medicines	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Be able to adapt pharmacotherapy to the patient’s age, sex, weight, kidney and liver function as well as any comorbidity and other medication – Be able to assess the risks of interactions and side effects with pharmacotherapy – Be able to work with patients and their families to achieve compliance with medications – Be able to work with other parties in the patient care chain with regard to pharmacotherapy – Be able to critically review and evaluate scientific evidence surrounding pharmacotherapy – Demonstrate knowledge of the environmental impacts of pharmacotherapy – Demonstrate knowledge of the health economics aspects of pharmacotherapy 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained required requirements issued by the course provider or the supervisor

Learning objectives c

Specialist competence in Neuroradiology requires the specialty resident to meet the skills requirements of the specialty Radiology.

In addition, the specialist doctor in Neuroradiology shall:

- Master anatomy of relevance to Neuroradiology,
- Be cognisant of physiology and pathophysiology of relevance to Neuroradiology,
- Master neuroradiology techniques including their indications for use, contraindications, limitations, complications and adverse reactions,
- Be cognisant of neuroradiology techniques including their indications for use, contraindications, limitations, complications and adverse reactions in interventional and functional neuroradiology,
- Be cognisant of diseases, injuries and defects in the central nervous system, spine and head and neck of the adult and the child,
- Master radiological diagnosis of diseases of the central nervous system, spine and head and neck, and have knowledge of the importance of radiological diagnostics for the management and care of the patient,
- Master radiological treatment follow-up and diagnosis of post-therapy conditions in the central nervous system, spine and head and neck,
- Master the paediatric applications of neuroradiology, in particular with regard to the development of the brain, child abuse and radiation protection,
- Be cognisant of the clinical diagnosis and treatment of medical conditions of relevance for neuroradiological diagnostics, and
- Be able to evaluate clinical data that is related to neuroradiological diagnostics, and in multidisciplinary collaboration contribute to creating the optimum care for the patient.

In addition, the specialist doctor is to take a holistic approach to the patient's situation, and based on this, guide a referring unit in assessing what procedures within the skills area are best suited for the management of the patient's case in the future.

Learning objective c1	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Have knowledge of the significance of examination findings for the ongoing management of the patient – Have knowledge of the strengths, weaknesses and risks of the investigation procedures – Have knowledge of the physical, technical, mathematical and statistical principles of procedures included in the skills area – Master image processing for the investigation modalities in the skills area – Master radiation biology, radiation physics and radiation protection – Master the most common radiological investigations and to initially manage other investigations in thoracic, gastrointestinal, urogenital, musculoskeletal and paediatric radiology – Have knowledge of and be cognisant of other investigations within diagnostic mammography – Be able to handle common and have knowledge of other interventions in radiology 	<p>Clinical practice under supervision at one or more units conducting such activities or managing such cases</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the supervisor</p>
	<p>Participation in one or more courses</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor</p>
	<p>General recommendations</p> <p>Participation in diagnostic and treatment conferences</p> <p>Theoretical studies</p>	

Learning objective c2	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master anatomy of relevance to Radiology with special emphasis on Neuroradiology – Be cognisant of physiology and pathophysiology of relevance to Radiology with special emphasis on Neuroradiology 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations	
	Participation in diagnostic and treatment conferences Theoretical studies	

Learning objective c3	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master neuroradiology techniques including their indications for use, contraindications, limitations, complications and adverse reactions 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations	
Theoretical studies		

Learning objective c4	Programme activities	Assessment
The specialist doctor shall: – Be cognisant of the techniques used in interventional neuroradiology, including their indications, contraindications, limitations, complications and adverse reactions	Clinical practice under supervision, or alternatively clinical attachment at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c5	Programme activities	Assessment
The specialist doctor shall: – Be cognisant of the techniques used in functional neuroradiology, including indications, contraindications and limitations	Clinical practice under supervision, or alternatively clinical attachment at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c6	Programme activities	Assessment
The specialist doctor shall: – Be cognisant of diseases, injuries and deformities in the central nervous system, spine and head and neck area of the adult and the child	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in diagnostic and treatment conferences Theoretical studies	

Learning objective c7	Programme activities	Assessment
The specialist doctor shall: – Master the radiological diagnosis of diseases of the central nervous system and spine, and have knowledge of the significance of radiological diagnostics for the management and care of the patient	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in diagnostic and treatment conferences Theoretical studies	

Learning objective c8	Programme activities	Assessment
The specialist doctor shall: – Master radiological diagnosis of diseases of the head and neck, and have knowledge of the significance of radiological diagnostics for the management and care of the patient	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in diagnostic and treatment conferences Theoretical studies	

Learning objective c9	Programme activities	Assessment
The specialist doctor shall: – Master radiological treatment follow-up and the diagnosis of post-treatment conditions in the central nervous system and spine	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in diagnostic and treatment conferences Theoretical studies	

Learning objective c10	Programme activities	Assessment
The specialist doctor shall: – Master radiological treatment follow-up and diagnosis of post-treatment conditions in head and neck	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in diagnostic and treatment conferences Theoretical studies	

Learning objective c11	Programme activities	Assessment
The specialist doctor shall: – Master the paediatric applications of neuroradiology, in particular with regard to the development of the brain, child abuse and radiation protection, – Be able to identify the signs that arouse suspicion that a child is being neglected or abused	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in diagnostic and treatment conferences Theoretical studies	

Learning objective c12	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be cognisant of the clinical diagnosis and treatment of medical conditions of relevance for neuroradiological diagnostics, – Be able to evaluate clinical data that is related to neuroradiological diagnostics, and in cross-speciality collaboration contribute to creating the optimum care for the patient. 	Clinical practice under supervision, or alternatively clinical attachment at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in diagnostic and treatment conferences Theoretical studies	

Learning objective c13	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be cognisant of nuclear medicine of relevance for the specialty 	Clinical practice under supervision, or alternatively clinical attachment at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in diagnostic and treatment conferences Theoretical studies	

Learning objective c14	Programme activities	Assessment
The specialist doctor shall: – Be able to apply legislation and other regulations applicable to the specialty	Clinical practice under supervision in a clinical setting	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor

General recommendations

Programme structure

Specialist training in Neuroradiology should be carried out at a neuroradiology unit at a university hospital that provides care for children and adults in neurology and neurosurgery as well as head and neck diseases.

Each element of the specialist training can be taken in virtually any order.

Since neuroradiology is conducted in close cooperation with many clinical specialties, an ancillary training programme in the form of training or clinical attachment within specialties which are relevant for the programme is important, for example, neurology, neurosurgery, clinical neurophysiology, head and neck diseases, and oncology.

The theoretical elements of the programme should include regular advanced theory studies in connection with clinical work and participation in international courses and conferences.

Ungrouped core specialties

Family Medicine

Description of skills

The specialty of Family Medicine is characterised by:

- The encounter with the patient,
- Skills in the assessment and treatment of patients of all ages with all kinds of health-related problems, including experiences and problems that are not caused by any definable illness, and
- Work that is usually performed at a medical centre operating a general practice in primary care.

This skills area includes being able to follow an individual's various health problems over time and in the assessment of these health problems, weighing in the person's whole life situation.

Skills requirements

For Family Medicine, learning objectives a1-a6, b1-b5 and c1-c14 apply.

Learning objectives a and b

Learning objective a1 Teamwork, leadership and pedagogy	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to take responsibility for his/her continuous learning in the workplace – Be able to exercise leadership in his/her daily work, including lead a healthcare team – Be able to take responsibility for the development of multi-professional teamwork – Be able to take responsibility for cooperation with patients and their families** – Be able to work in networks looking after the patient – Be able to collaborate with agencies outside the hospital healthcare system such as social welfare boards, agencies within the social services, schools and Försäkringskassan (the Swedish Social Insurance Agency) – Be able to present and explain medical information in a way that is understandable to the recipient, orally and in writing – Be able to plan and carry out teaching and training – Be able to supervise and instruct colleagues and students 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups Supervise under supervision Teach under supervision	

Learning objective a2 Ethics, diversity and equality	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate knowledge and understanding of the principles of medical ethics and be able to identify ethical problems and analyse these in a structured way – Be able to handle conflicts in values in his/her daily work – Be able to treat people as individuals and with respect regardless of gender, transgender identity or expression, ethnic origin, religion or other faith, disability, sexual orientation or age. 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups	

Learning objective a3 Infection Prevention and Control	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to take responsibility for the prevention and control of healthcare-associated infections 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor

Learning objective a4 Systematic quality and patient safety management	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Critically examine his/her own practice and be able to conduct a risk and outcome analysis – Be able to take responsibility for systematically implementing measures, processes and procedures to improve patient care – Be able to take responsibility for the integration of new technologies and procedures into his/her daily work as a doctor 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Quality and development work	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	

Learning objective a5 Medical science	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate a deeper knowledge and understanding of medical scientific methodology and ethical principles – Be able to critically examine and evaluate medical science information – Demonstrate a scientific evidence based approach to his/her daily way of working and routines 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Independent written work based on scientific methodology	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	

Learning objective a6 Legislation and other regulations and the health and medical care system's organisation	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Demonstrate knowledge of the legislation and regulations which govern the healthcare system and its staff – Demonstrate knowledge of the health and medical care system's organisation and administration – Demonstrate knowledge of the health and medical care system's various financial control systems and their importance for the balancing of priorities in his/her daily work 	<p>Participation in one or more courses</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor</p>

Learning objective b1 Communication with patients and families	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to adapt his/her way of communicating based on the patient's and their relatives' individual needs and communication capabilities – Be able to give patients and their families difficult news with respect, empathy and sensitivity – Be able to support the patient's ability to manage a change in life situation as a result of an illness or disability – Be able to consult with patients and their families concerning the patient's self-care 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups Clinical attachment	

Learning objective b2 Prevention of disease and ill-health	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to guide patients in matters of lifestyle choices in order to: – Prevent the development of diseases associated with one or more lifestyle habits – Improve the prognosis in patients with diseases associated with one or more lifestyle habits 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Attendance at large professional gatherings	

Learning objective b3 Medicines	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Be able to adapt pharmacotherapy to the patient’s age, sex, weight, kidney and liver function as well as any comorbidity and other medication – Be able to assess the risks of interactions and side effects with pharmacotherapy – Be able to work with patients and their families to achieve compliance with medications – Be able to work with other parties in the patient care chain with regard to pharmacotherapy – Be able to critically review and evaluate scientific evidence surrounding pharmacotherapy – Demonstrate knowledge of the environmental impacts of pharmacotherapy – Demonstrate knowledge of the health economics aspects of pharmacotherapy 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained required competencies requirements issued by the course provider or the supervisor

Learning objective b4 Insurance medicine	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Be able to apply procedures in insurance medicine as part of the treatment of the individual patient – Be able to collaborate on insurance medicine matters relating to the individual patient with actors within and outside the healthcare system 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or supervisor
	General recommendations Attendance at large professional gatherings	

Learning objective b5 Palliative care in the final stages of life	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Be able to identify the need for and initiate palliative care in the final stages of life – Be able to hold conversations with patients and their families concerning transiting to palliative care – Be able to apply the fundamental principles of palliative symptom relief with regard to physical, psychological, social and existential needs 	<p>Clinical practice under supervision or alternatively clinical attachment</p>	<p>Certificate of completed programme activities and attained the required competences issued by the supervisor</p>
	<p>Participation in one or more courses</p>	<p>Certificate of completed programme activities and attained the required competences issued by the course provider or the supervisor</p>
	<p>General recommendations</p> <p>Participation in seminars</p> <p>Attendance at large professional gatherings</p> <p>Clinical attachment</p> <p>Training in simulated environment</p>	

Learning objectives c

The specialist doctor shall have medical knowledge and skills as well as knowledge of the individual within the entire Family Medicine skills area and also an awareness of ethical questions. This means among other things knowledge of:

- The diagnosis and treatment of health-related complaints in people of all ages,
- Substance abuse and addiction,
- Basic paediatric and antenatal healthcare, and
- Prevention and rehabilitation.

In addition, the specialist doctor shall be able to take a holistic approach, that is, to be able to consider the patient's overall situation in making medical assessments and prescribing treatment. The specialty resident is to have the ability to monitor and assess changes in an individual's state of health over a longer period.

The specialist doctor shall also have the ability to:

- Prioritise between those presenting for care based on the degree of medical urgency,
- Collaborate with other units within the health and medical care system and other government agencies, and
- Switch between short consultations for acute care, longer consultations and home visits.

The specialist doctor shall also be able to handle the tasks required by the authorities that arise in clinical practice and have the capacity to continuously assess, supplement and develop his/her own skills.

Learning objective c1	Programme activities	Assessment
The specialist doctor shall: – Be able to assess and handle the health problems that occur in Sweden using a professional and ethical approach	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Clinical practice under supervision at one or more healthcare units operating a general practice within primary care	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups Theoretical studies	

Learning objective c2	Programme activities	Assessment
The specialist doctor shall: – Be able to determine the medical urgency and prioritise between those presenting for care in an ethically satisfactory manner	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Clinical practice under supervision at one or more healthcare units operating a general practice within primary care	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups Theoretical studies	

Learning objective c3	Programme activities	Assessment
The specialist doctor shall: – Be able to follow and assess changes in a patient’s state of health over time, taking into account the patient’s entire life situation and in meeting the patient must have the ability to take into account the patient and his/her family’s ideas, expectations and concerns	Clinical practice under the supervision at one or more medical centres with reception activities within primary care	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups	

Learning objective c4	Programme activities	Assessment
The specialist doctor shall: – Be able to diagnose, treat and monitor patients of all ages with health problems and common widespread diseases including substance abuse and addiction	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Clinical practice under supervision at one or more healthcare units operating a general practice within primary care	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups Theoretical studies	

Learning objective c5	Programme activities	Assessment
The specialist doctor shall: – Be able to initially assess, refer and monitor persons with medical conditions that are in need of care beyond the specialist doctor’s unit’s own resources	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Clinical practice under supervision at one or more healthcare units operating a general practice within primary care	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups Theoretical studies	

Learning objective c6	Programme activities	Assessment
The specialist doctor shall: – Master health and medical care for children and young people – Be able to identify and handle children suspected of being abused	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Clinical practice under supervision at one or more healthcare units operating a general practice within primary care	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c7	Programme activities	Assessment
The specialist doctor shall: – Master the management of common gynaecological disorders and diseases in women of various ages, as well as reproductive health in normal pregnancies	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Theoretical studies	

Learning objective c8	Programme activities	Assessment
The specialist doctor shall: – Master the specific health issues of the elderly population – Master domiciliary care and palliative care in the final stages of life for people of all ages	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Clinical practice under supervision at one or more healthcare units operating a general practice within primary care	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups Theoretical studies	

Learning objective c9	Programme activities	Assessment
The specialist doctor shall: – Be proficient in home visits as tools for diagnosis and treatment	Clinical practice under supervision at one or more healthcare units operating a general practice within primary care	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups	

Learning objective c10	Programme activities	Assessment
The specialist doctor shall: – Master initiating and assisting in medical rehabilitation and vocational rehabilitation in cooperation with other community resources	Clinical practice under supervision at one or more healthcare units operating a general practice within primary care	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups Theoretical studies	

Learning objective c11	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master the government agency tasks that are part of the specialist’s job, including infectious disease control 	Clinical practice under supervision at one or more healthcare units operating a general practice within primary care	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups Theoretical studies	

Learning objective c12	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Have knowledge of how to detect, identify and prevent injury and other health problems in the local community – Have knowledge of the determinants of health and other aspects of public health as well as procedures for health promotion and disease prevention interventions 	Clinical practice under supervision at one or more healthcare units operating a general practice within primary care	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups Theoretical studies	

Learning objective c13	Programme activities	Assessment
The specialist doctor shall: – Master the management of common and major mental illnesses with an emphasis on the major widespread disorders	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Clinical practice under supervision at one or more healthcare units operating a general practice within primary care	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups Theoretical studies	

Learning objective c14	Programme activities	Assessment
The specialist doctor shall: – Be able to apply legislation and other regulations applicable to the specialty	Clinical practice under supervision in a clinical setting	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor

General recommendations

Programme structure

Specialist medical training during education ought to provide a competence common to all Family Medicine specialists, which can be supplemented later depending on the conditions under which the work will be carried out.

The majority of the necessary skills can be acquired and developed at a medical centre operating a general practice within primary care. It is therefore of the utmost importance that the programme begins with a longer continuous period of clinical practice at the medical centre where the programme is mainly provided. Training in Emergency Medicine should come early in the specialist training.

In order to gain experience of continuity in the patient relationship which is a prerequisite for family medicine competence, a long continuous period of clinical practice at the general practice medical centre providing the programme is required, as well as the possibility of regular contact with this centre during periods of clinical practice at other medical centres. At the same time, it is important that the specialty resident gains experience of different ways of working in general practice. This is best achieved by supplementing specialty training in a clinical setting with shorter periods of specialty training, clinical attachment or study visits in other medical centres operating a general practice within primary care. If the objectives cannot be achieved in this way, an ancillary training programme should be completed at a different medical centre.

In the majority of medical specialties, the specialty resident is able to receive feedback and skills training during their training, through participation in various forms of rounds for example. As a general rule, this possibility does not exist in general practice, since general practice by nature is practised in the private meeting with the patient. In order to achieve specialist competence in Family Medicine, intra-professional discussion and reflection is therefore essential, for example in what are termed FQ groups (a special form of regular collegial continuing education and quality improvement) or in special seminars for specialty residents. Balint groups are another example of a method used for skills development in this context.

In order to achieve sufficiently good communication skills, regular clinical attachment exchanges between colleagues is very important. Through this, the specialty resident gets the opportunity to see how an experienced colleague (preferably his/her supervisor) works in the patient meeting setting, and is seen in his/her own work with patients. It is appropriate for the specialty resident to carry out a quality improvement project at the medical centre where he/she is completing training.

Emergency Medicine

Description of skills

The specialty of Emergency Medicine is characterised by being able to handle all acute illnesses and accidents, in all ages, for a limited period of time and with the available resources. Emergency Medicine includes major incident alarm function, pre-hospital care and management of cases in the emergency unit.

This skills area covers:

- The evaluation of the risk-benefit of various patient management options from the medical, logistical and ethical perspectives as well as from a patient safety perspective, and
- Management and prioritisation of care interventions for the individual patient and for the emergency unit as a whole, including direction of work in situations where the need for emergency care exceed the available resources.

Collaboration with other specialties and professions within the health and medical care system's organisation is important for this skills area.

Skills requirements

For Emergency Medicine, learning objectives a1-a6, b1-b5 and c1-c13 apply.

Learning objectives a and b

Learning objective a1 Teamwork, leadership and pedagogy	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to take responsibility for his/her continuous learning in the workplace – Be able to exercise leadership in his/her daily work, including lead a healthcare team – Be able to take responsibility for the development of multi-professional teamwork – Be able to take responsibility for cooperation with patients and their families** – Be able to work in networks looking after the patient – Be able to collaborate with agencies outside the hospital healthcare system such as social welfare boards, agencies within the social services, schools and Försäkringskassan (the Swedish Social Insurance Agency) – Be able to present and explain medical information in a way that is understandable to the recipient, orally and in writing – Be able to plan and carry out teaching and training – Be able to supervise and instruct colleagues and students 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups Supervise under supervision Teach under supervision	

Learning objective a2 Ethics, diversity and equality	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate knowledge and understanding of the principles of medical ethics and be able to identify ethical problems and analyse these in a structured way – Be able to handle conflicts in values in his/her daily work – Be able to treat people as individuals and with respect regardless of gender, transgender identity or expression, ethnic origin, religion or other faith, disability, sexual orientation or age. 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups	

Learning objective a3 Infection Prevention and Control	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to take responsibility for the prevention and control of healthcare-associated infections 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor

Learning objective a4 Systematic quality and patient safety management	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Critically examine his/her own practice and be able to conduct a risk and outcome analysis – Be able to take responsibility for systematically implementing measures, processes and procedures to improve patient care – Be able to take responsibility for the integration of new technologies and procedures into his/her daily work as a doctor 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Quality and development work	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	

Learning objective a5 Medical science	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate a deeper knowledge and understanding of medical scientific methodology and ethical principles – Be able to critically examine and evaluate medical science information – Demonstrate a scientific evidence based approach to his/her daily way of working and routines 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Independent written work based on scientific methodology	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	
Learning objective a6	Programme activities	Assessment

<p>Legislation and other regulations and the health and medical care system's organisation</p>		
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Demonstrate knowledge of the legislation and regulations which govern the healthcare system and its staff – Demonstrate knowledge of the health and medical care system's organisation and administration – Demonstrate knowledge of the health and medical care system's various financial control systems and their importance for the balancing of priorities in his/her daily work 	<p>Participation in one or more courses</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor</p>

Learning objective b1 Communication with patients and families	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to adapt his/her way of communicating based on the patient’s and their relatives’ individual needs and communication capabilities – Be able to give patients and their families difficult news with respect, empathy and sensitivity – Be able to support the patient's ability to manage a change in life situation as a result of an illness or disability – Be able to consult with patients and their families concerning the patient's self-care 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups Clinical attachment	

Learning objective b2 Prevention of disease and ill-health	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to guide patients in matters of lifestyle choices in order to: – Prevent the development of diseases associated with one or more lifestyle habits – Improve the prognosis in patients with diseases associated with one or more lifestyle habits 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Attendance at large professional gatherings	

Learning objective b3 Medicines	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Be able to adapt pharmacotherapy to the patient’s age, sex, weight, kidney and liver function as well as any comorbidity and other medication – Be able to assess the risks of interactions and side effects with pharmacotherapy – Be able to work with patients and their families to achieve compliance with medications – Be able to work with other parties in the patient care chain with regard to pharmacotherapy – Be able to critically review and evaluate scientific evidence surrounding pharmacotherapy – Demonstrate knowledge of the environmental impacts of pharmacotherapy – Demonstrate knowledge of the health economics aspects of pharmacotherapy 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained required competencies requirements issued by the course provider or the supervisor

Learning objective b4 Insurance medicine	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to apply procedures in insurance medicine as part of the treatment of the individual patient – Be able to collaborate on insurance medicine matters relating to the individual patient with actors within and outside the healthcare system 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or supervisor
	General recommendations Attendance at large professional gatherings	

Learning objective b5 Palliative care in the final stages of life	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to identify the need for and initiate palliative care in the final stages of life – Be able to hold conversations with patients and their families concerning transiting to palliative care – Be able to apply the fundamental principles of palliative symptom relief with regard to physical, psychological, social and existential needs 	Clinical practice under supervision or alternatively clinical attachment	Certificate of completed programme activities and attained the required competences issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competences issued by the course provider or the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings Clinical attachment Training in simulated environment	

Learning objectives c

The specialist doctor shall:

- Master the identification, priority-setting, stabilisation and treatment of patients with unstable vital functions and life-threatening illness conditions, and
- Be able to independently prioritise, investigate and (based on a probability assessment) treat patients of all ages, and with all the reasons for presenting at an emergency unit that occur.

This requires an ability to apply epidemiological knowledge and work preventively.

In addition, the specialist doctor is to have the ability to assess the risks and benefits of various options from the perspectives of ethics, patient safety, and logistics.

The specialist doctor shall also be able to:

- Be responsible for safe medical transport and to plan follow-up within and outside their own healthcare unit, and
- Direct care interventions and resource allocation and continuously adapt these to both the individual patient and the varying needs of the entire unit.

Learning objective c1	Programme activities	Assessment
The specialist doctor shall: – Master the identification and management of life-threatening or potentially life-threatening, conditions in patients of all ages	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Clinical attachment Training in simulated environment	

Learning objective c2	Programme activities	Assessment
The specialist doctor shall: – Be able to assess the degree of medical urgency in patients of all ages and be able to prioritise between those presenting for care	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Clinical attachment Training in simulated environment	

Learning objective c3	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to evaluate symptoms on the basis of differential diagnosis skills for patients of all ages – Be able to make probability assessments for different conditions based on the information available 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Clinical attachment Theoretical studies Training in simulated environment	

Learning objective c4	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master acute pain treatment for patients of all ages and be able to adapt analgesia to the anticipated intensity and duration of pain 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Clinical attachment Theoretical studies Training in simulated environment	

Learning objective c5	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master emergency diagnostic and therapeutic skills for patients of all ages – Master the use of medical technology equipment 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Clinical attachment Training in simulated environment	

Learning objective c6	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Have a sound knowledge of the current guidelines for the initial treatment of commonly occurring acute diagnoses and condition in patients of all ages – Have knowledge of the activities of other specialties relevant for working with a multi-disciplinary approach 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Clinical attachment Training in simulated environment	

Learning objective c7	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to assess the risk-benefit for various management options from the medical, ethical and logistical perspectives as well as from a patient safety perspective for patients of all ages 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Independent written work based on scientific principles	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Clinical attachment Training in simulated environment	

Learning objective c8	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master the pre-hospital management of patients of all ages – Master pre-hospital care team work 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Training in simulated environment Work in a care team	

Learning objective c9	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to lead the work at an emergency department and use the available skills and resources – Be able to lead the pre-hospital medical work and in the event of disasters and mass casualty incidents 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Clinical attachment Theoretical studies Training in simulated environment	

Learning objective c10	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to be responsible for the patient's medical safety until this responsibility has been taken over by other healthcare providers, even during patient transport – Be able to manage a normal delivery – Have knowledge of common complications during pregnancy and delivery 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Clinical attachment Training in simulated environment Work in a care team	

Learning objective c11	Programme activities	Assessment
The specialist doctor shall: – Be the able to collaborate with the community resources outside the health and medical care system, in particular in the case of substance abuse and children being neglected or abused – Be able to take adequate steps where there is a suspicion that a child is being neglected or abused	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in seminars	

Learning objective c12	Programme activities	Assessment
The specialist doctor shall: – Be able to identify epidemiological changes and master preventive measures for emergency department patients	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in seminars Theoretical studies	

Learning objective c13	Programme activities	Assessment
The specialist doctor shall: – Be able to apply legislation and other regulations applicable to the specialty	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor

General recommendations

Programme structure

The main skills are obtained through specialty training in a clinical setting at an emergency department which includes the management of acutely ill patients of all ages and with all the reasons for presenting for care at the emergency department. The emergency department where the majority of the programme takes place should operate around the clock and be associated with intensive care and surgery activities. Clinical skills in emergency medicine that cannot be obtained within the emergency department should be acquired through ancillary training in clinical practice.

One such ancillary training should be in clinical practice at a paediatric clinic, to be able to meet the special custodial and communicative aspects of the medical needs of children and young people.

In addition to clinical practice, education should include continuous:

- Theoretical studies, for example through self-study, *journal clubs* and group discussions
- Practical training, for example through simulation and clinical attachment
- Feedback from supervisors and specialist doctor colleges.

It is important that the specialty resident is involved in the emergency department's teaching, research projects and quality assurance activities.

Early in his/her education, the specialty resident should be trained in identifying life-threatening conditions and in being able to function as part of the care team's structured care of the most seriously ill. Thereafter, his/her education should focus on the management of patients based on their presenting symptoms with the development of skills in differential diagnosis and probability assessment. Training in leadership should be gradual, from leadership of the individual patient case, to the capacity to direct resources and processes in the emergency department or pre-hospital care.

Dermato-venereology

Description of skills

The specialty of Dermato-venereology is characterised by detailed knowledge of the aetiology, pathomechanisms and epidemiology of skin and venereal diseases.

This skills area covers:

- The investigation, diagnosis, treatment, follow-up and rehabilitation of skin and venereal diseases in children and adults,
- Measures to prevent the emergence and spread of venereal diseases in children and adults, and
- The treatment of both acute and chronic diseases in patients of all ages.

Diagnostics are based largely on medical history and clinical examination, supplemented with histopathological, physiological, chemical, microbiological, allergological, immunological and genetic studies. Treatment methods include medications, light and surgery. Infectious disease surveillance, psycho-social measures and prevention have a central role.

Knowledge of how skin and venereal diseases impact the individual and the community is important for this skills area. Cooperation with the social services, various government agencies, occupational health services and primary healthcare as well as other professional groups within the healthcare sector is also important. Collaboration with other specialties is also essential.

Skills requirements

For Dermato-venereology, learning objectives a1-a6, b1-b5 and c1-c13 apply.

Learning objectives a and b

Learning objective a1 Teamwork, leadership and pedagogy	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to take responsibility for his/her continuous learning in the workplace – Be able to exercise leadership in his/her daily work, including lead a healthcare team – Be able to take responsibility for the development of multi-professional teamwork – Be able to take responsibility for cooperation with patients and their families** – Be able to work in networks looking after the patient – Be able to collaborate with agencies outside the hospital healthcare system such as social welfare boards, agencies within the social services, schools and Försäkringskassan (the Swedish Social Insurance Agency) – Be able to present and explain medical information in a way that is understandable to the recipient, orally and in writing – Be able to plan and carry out teaching and training – Be able to supervise and instruct colleagues and students 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups Supervise under supervision Teach under supervision	

Learning objective a2 Ethics, diversity and equality	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate knowledge and understanding of the principles of medical ethics and be able to identify ethical problems and analyse these in a structured way – Be able to handle conflicts in values in his/her daily work – Be able to treat people as individuals and with respect regardless of gender, transgender identity or expression, ethnic origin, religion or other faith, disability, sexual orientation or age. 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups	

Learning objective a3 Infection Prevention and Control	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to take responsibility for the prevention and control of healthcare-associated infections 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor

Learning objective a4 Systematic quality and patient safety management	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Critically examine his/her own practice and be able to conduct a risk and outcome analysis – Be able to take responsibility for systematically implementing measures, processes and procedures to improve patient care – Be able to take responsibility for the integration of new technologies and procedures into his/her daily work as a doctor 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Quality and development work	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	

Learning objective a5 Medical science	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate a deeper knowledge and understanding of medical scientific methodology and ethical principles – Be able to critically examine and evaluate medical science information – Demonstrate a scientific evidence based approach to his/her daily way of working and routines 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Independent written work based on scientific methodology	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	

Learning objective a6 Legislation and other regulations and the health and medical care system's organisation	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Demonstrate knowledge of the legislation and regulations which govern the healthcare system and its staff – Demonstrate knowledge of the health and medical care system's organisation and administration – Demonstrate knowledge of the health and medical care system's various financial control systems and their importance for the balancing of priorities in his/her daily work 	<p>Participation in one or more courses</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor</p>

Learning objective b1 Communication with patients and families	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to adapt his/her way of communicating based on the patient’s and their relatives’ individual needs and communication capabilities – Be able to give patients and their families difficult news with respect, empathy and sensitivity – Be able to support the patient's ability to manage a change in life situation as a result of an illness or disability – Be able to consult with patients and their families concerning the patient's self-care 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups Clinical attachment	

Learning objective b2 Prevention of disease and ill-health	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to guide patients in matters of lifestyle choices in order to: – Prevent the development of diseases associated with one or more lifestyle habits – Improve the prognosis in patients with diseases associated with one or more lifestyle habits 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Attendance at large professional gatherings	

Learning objective b3 Medicines	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to adapt pharmacotherapy to the patient’s age, sex, weight, kidney and liver function as well as any comorbidity and other medication – Be able to assess the risks of interactions and side effects with pharmacotherapy – Be able to work with patients and their families to achieve compliance with medications – Be able to work with other parties in the patient care chain with regard to pharmacotherapy – Be able to critically review and evaluate scientific evidence surrounding pharmacotherapy – Demonstrate knowledge of the environmental impacts of pharmacotherapy – Demonstrate knowledge of the health economics aspects of pharmacotherapy 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained required competencies requirements issued by the course provider or the supervisor

Learning objective b4 Insurance medicine	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to apply procedures in insurance medicine as part of the treatment of the individual patient – Be able to collaborate on insurance medicine matters relating to the individual patient with actors within and outside the healthcare system 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or supervisor
	General recommendations Attendance at large professional gatherings	

Learning objective b5 Palliative care in the final stages of life	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Be able to identify the need for and initiate palliative care in the final stages of life – Be able to hold conversations with patients and their families concerning transiting to palliative care – Be able to apply the fundamental principles of palliative symptom relief with regard to physical, psychological, social and existential needs 	<p>Clinical practice under supervision or alternatively clinical attachment</p>	<p>Certificate of completed programme activities and attained the required competences issued by the supervisor</p>
	<p>Participation in one or more courses</p>	<p>Certificate of completed programme activities and attained the required competences issued by the course provider or the supervisor</p>
	<p>General recommendations</p> <p>Participation in seminars</p> <p>Attendance at large professional gatherings</p> <p>Clinical attachment</p> <p>Training in simulated environment</p>	

Learning objectives c

The specialist doctor shall have:

- Comprehensive and broad knowledge in the biology, epidemiology and pathophysiology of the skin,
- Knowledge in the diagnosis and treatment of diseases of the skin, hair, nails and genital organs, and
- Good practical skills in the majority of the examination and treatment procedures used in the specialty.

In addition, the specialist doctor shall be able to independently manage:

- Psoriasis,
- Eczema,
- Skin tumours,
- Pemphigus,
- Other autoimmune diseases of the skin, and photodermatoses,
- Age-related skin conditions,
- Skin infections,
- Leg ulcers and vascular diseases,
- Drug allergies,
- Urticaria,
- Occupational skin problems,
- Paramalignant skin manifestations and skin manifestations in inflammatory systemic diseases, internal diseases and mental illnesses,
- The most common genodermatoses, and
- Sexually transmissible infections, including initial management of HIV infection.

The specialist doctor must also have a good knowledge of various diseases that border other specialties as well as experience in the management of these. This includes knowledge of consulting in hospitals and the legislation and other regulations applicable to infectious diseases control and public health insurance. The specialist doctor should also be grounded in rare skin diseases, advanced diagnostic methods, surgical and non-surgical methods of treatment and the socio-economic aspects of skin and venereal diseases. Finally, the specialist doctor is to have in-depth knowledge of the options for preventing disease and injury.

Learning objective c1	Programme activities	Assessment
The specialist doctor shall: – Have knowledge of skin's basic biology, pathophysiology and morphology	General recommendations Participation in seminars Theoretical studies	

Learning objective c2	Programme activities	Assessment
The specialist doctor shall: – Have knowledge of the existence and distribution of the various dermatological and venereal diseases in the population	General recommendations Participation in seminars Theoretical studies	

Learning objective c3	Programme activities	Assessment
The specialist doctor shall: – Master dermatological and venereal examination techniques and terminology	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Theoretical studies	

Learning objective c4	Programme activities	Assessment
The specialist doctor shall: – Master the common and major dermatological and venereal diseases	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Attendance at large professional gatherings Theoretical studies	

Learning objective c5	Programme activities	Assessment
The specialist doctor shall: – Be able to process histopathology opinions – Have knowledge of dermatopathology	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c6	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to manage immunological diagnostics – Have knowledge of the immunological and inflammatory processes involved in skin diseases 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c7	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master the various diagnostic methods, including dermatoscopy and dermatology, in common and major skin tumours and vascular deformities – Master the treatment, including dermatosurgery, of common and major skin tumours and vascular deformities 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c8	Programme activities	Assessment
The specialist doctor shall: – Master the pathophysiology, diagnosis and therapy for wound healing	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c9	Programme activities	Assessment
The specialist doctor shall: – Master dermatological local and systemic treatment including phototherapy	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c10	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master the treatment of sexually transmitted infections as well as common and major genital dermatoses – Master microbiological diagnosis 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c11	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to manage occupational skin diseases including job redesign, rehabilitation and insurance medicine working in tandem 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c12	Programme activities	Assessment
The specialist doctor shall: – Be able to initially manage common conditions within adjacent areas of knowledge	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor

Learning objective c13	Programme activities	Assessment
The specialist doctor shall: – Be able to apply legislation and other regulations applicable to the specialty	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor

General recommendations

Programme structure

Specialist medical training in a clinical setting should be planned so that the specialty resident initially has the opportunity to assess most patients in close consultation with a qualified specialist doctor. If residency is in outpatient care, there should be special emphasis on training in dermatosurgery. Specialist medical training should also include training at a dermatology inpatient ward. The aim is to give the specialty resident a familiarity with internal medical conditions and satisfy the educational need in respect of the investigation and treatment of rare and difficult conditions, as well as advanced treatment methods. The hospital residency is best completed during the first half of specialty training.

In the second half of specialty training, the specialty resident should be placed at a unit conducting a medical or dermatology practice.

During the programme, it is important that the specialty resident has regular opportunities to practice making independent assessments as a consultant at a hospital. The programme can be supplemented with ancillary training in adjacent areas of knowledge, for example:

- Internal medicine
- General surgery
- Infectious diseases
- Rheumatology
- Pathology.

The specialty resident should engage in theoretical studies and participate in supplementary training in the form of courses and conferences in parallel with specialty training in a clinical setting.

Infectious Diseases

Description of skills

The specialty of Infectious Diseases is characterised by advanced knowledge in the prevention, investigation, diagnosis, treatment and monitoring of infections from the national and international perspectives. The specialty covers both acute and chronic infections. The specialist doctor in Infectious Diseases acts as a support to other specialties in the case of complex inquiries related to infections.

This skills area also includes advanced knowledge of the care and isolation of patients with communicable diseases, the rational use of antimicrobial therapy, and knowledge of the epidemiology situation. This requires close cooperation with infectious disease prevention and control authorities as well as specialists in Infection Prevention and Control and Clinical Microbiology.

Skills requirements

For Infectious Diseases, learning objectives a1-a6, b1-b5 and c1-c13 apply.

Learning objectives a and b

Learning objective a1 Teamwork, leadership and pedagogy	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Be able to take responsibility for his/her continuous learning in the workplace – Be able to exercise leadership in his/her daily work, including lead a healthcare team – Be able to take responsibility for the development of multi-professional teamwork – Be able to take responsibility for cooperation with patients and their families** – Be able to work in networks looking after the patient – Be able to collaborate with agencies outside the hospital healthcare system such as social welfare boards, agencies within the social services, schools and Försäkringskassan (the Swedish Social Insurance Agency) – Be able to present and explain medical information in a way that is understandable to the recipient, orally and in writing – Be able to plan and carry out teaching and training – Be able to supervise and instruct colleagues and students 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	<p>General recommendations</p> <ul style="list-style-type: none"> Participation in intra- or inter-professional reflection in groups Supervise under supervision Teach under supervision 	

Learning objective a2 Ethics, diversity and equality	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate knowledge and understanding of the principles of medical ethics and be able to identify ethical problems and analyse these in a structured way – Be able to handle conflicts in values in his/her daily work – Be able to treat people as individuals and with respect regardless of gender, transgender identity or expression, ethnic origin, religion or other faith, disability, sexual orientation or age. 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups	

Learning objective a3 Infection Prevention and Control	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to take responsibility for the prevention and control of healthcare-associated infections 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor

Learning objective a4 Systematic quality and patient safety management	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Critically examine his/her own practice and be able to conduct a risk and outcome analysis – Be able to take responsibility for systematically implementing measures, processes and procedures to improve patient care – Be able to take responsibility for the integration of new technologies and procedures into his/her daily work as a doctor 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Quality and development work	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	

Learning objective a5 Medical science	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate a deeper knowledge and understanding of medical scientific methodology and ethical principles – Be able to critically examine and evaluate medical science information – Demonstrate a scientific evidence based approach to his/her daily way of working and routines 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Independent written work based on scientific methodology	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	



Learning objective a6 Legislation and other regulations and the health and medical care system's organisation	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none">– Demonstrate knowledge of the legislation and regulations which govern the healthcare system and its staff– Demonstrate knowledge of the health and medical care system's organisation and administration– Demonstrate knowledge of the health and medical care system's various financial control systems and their importance for the balancing of priorities in his/her daily work	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor

Learning objective b1 Communication with patients and families	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to adapt his/her way of communicating based on the patient's and their relatives' individual needs and communication capabilities – Be able to give patients and their families difficult news with respect, empathy and sensitivity – Be able to support the patient's ability to manage a change in life situation as a result of an illness or disability – Be able to consult with patients and their families concerning the patient's self-care 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups Clinical attachment	

Learning objective b2 Prevention of disease and ill-health	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to guide patients in matters of lifestyle choices in order to: – Prevent the development of diseases associated with one or more lifestyle habits – Improve the prognosis in patients with diseases associated with one or more lifestyle habits 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Attendance at large professional gatherings	

Learning objective b3 Medicines	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to adapt pharmacotherapy to the patient’s age, sex, weight, kidney and liver function as well as any comorbidity and other medication – Be able to assess the risks of interactions and side effects with pharmacotherapy – Be able to work with patients and their families to achieve compliance with medications – Be able to work with other parties in the patient care chain with regard to pharmacotherapy – Be able to critically review and evaluate scientific evidence surrounding pharmacotherapy – Demonstrate knowledge of the environmental impacts of pharmacotherapy – Demonstrate knowledge of the health economics aspects of pharmacotherapy 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained required competencies requirements issued by the course provider or the supervisor

Learning objective b4 Insurance medicine	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to apply procedures in insurance medicine as part of the treatment of the individual patient – Be able to collaborate on insurance medicine matters relating to the individual patient with actors within and outside the healthcare system 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or supervisor
	General recommendations Attendance at large professional gatherings	

Learning objective b5 Palliative care in the final stages of life	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Be able to identify the need for and initiate palliative care in the final stages of life – Be able to hold conversations with patients and their families concerning transiting to palliative care – Be able to apply the fundamental principles of palliative symptom relief with regard to physical, psychological, social and existential needs 	<p>Clinical practice under supervision or alternatively clinical attachment</p>	<p>Certificate of completed programme activities and attained the required competences issued by the supervisor</p>
	<p>Participation in one or more courses</p>	<p>Certificate of completed programme activities and attained the required competences issued by the course provider or the supervisor</p>
	<p>General recommendations</p> <p>Participation in seminars</p> <p>Attendance at large professional gatherings</p> <p>Clinical attachment</p> <p>Training in simulated environment</p>	

Learning objectives c

The specialist doctor is to have the medical expertise necessary to be able to work independently in the area and assist other specialties with expertise on questions related to infections. Medical skills include knowledge of the investigation, diagnosis, treatment, monitoring and prevention of infectious diseases acquired in Sweden as well as abroad. The specialist doctor shall have knowledge of how to manage and prevent infections in patients with increased risk of infection, and master the initial management of acute life-threatening infections.

The specialist doctor shall also have knowledge in microbiology, immunology, epidemiology, healthcare-associated infections, the prevention and control of infections, and the rational use of antimicrobial drugs in view of the problems of resistance.

In addition, the specialist doctor shall be able to manage other diseases that are relevant for the internal medical subject area and be able to initially manage even non-infectious acute life-threatening conditions.

Knowledge of how to individualise treatment with regard to age and other conditions is also required.

Learning objective c1	Programme activities	Assessment
The specialist doctor shall: – Master the investigation and treatment of endemic community acquired infections	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in seminars Theoretical studies	

Learning objective c2	Programme activities	Assessment
The specialist doctor shall: – Be able to manage infections that are acquired abroad – Be cognisant of the global infection panorama	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c3	Programme activities	Assessment
The specialist doctor shall: – Master the initial care of acute life-threatening infections	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Theoretical studies	

Learning objective c4	Programme activities	Assessment
The specialist doctor shall: – Master the prevention and control of infections	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Theoretical studies	

Learning objective c5	Programme activities	Assessment
The specialist doctor shall: – Master the treatment of infectious agents and have knowledge of resistance in these	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c6	Programme activities	Assessment
The specialist doctor shall: – Master the diagnostic methods for infectious agents and be able to assess the results based on the selected diagnostic method	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Theoretical studies	

Learning objective c7	Programme activities	Assessment
The specialist doctor shall: – Be able to manage patients with complex infection inquiries primarily being cared for within another specialty	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Clinical attachment Theoretical studies	

Learning objective c8	Programme activities	Assessment
The specialist doctor shall: – Be able to manage patients with an increased risk of infection – Be able to supervise preventive measures for patients with increased risk of infection	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Theoretical studies	

Learning objective c9	Programme activities	Assessment
The specialist doctor shall: – Be able to manage patients with healthcare-associated infections, and infections that are complications of interventions	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Theoretical studies	

Learning objective c10	Programme activities	Assessment
The specialist doctor shall: – Be able to initially manage acute life-threatening non-infectious conditions	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Theoretical studies	

Learning objective c11	Programme activities	Assessment
The specialist doctor shall: – Be able to manage diseases that are relevant for the internal medicine subject area	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Theoretical studies	

Learning objective c12	Programme activities	Assessment
The specialist doctor shall: – Be able to manage infections in an individualised way taking into account age and other conditions	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Theoretical studies	

Learning objective c13	Programme activities	Assessment
The specialist doctor shall: – Be able to apply legislation and other regulations applicable to the specialty	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor

General recommendations

Programme structure

The Programme in Infectious Diseases should be completed at a unit providing both outpatient and inpatient care for infectious diseases. The aim is for the specialty resident to acquire a comprehensive set of skills. To give the specialty resident the opportunity to acquire advanced knowledge within particular areas or a broader knowledge of general infectious diseases, specialty training may need to be supplemented by a residency at another infectious diseases clinic. During specialty training in a clinical setting, continuous periods at these different residencies should be the preferred option.

During the initial period of the programme, the emphasis should be on the management of common acute infectious diseases. This means the initial management of seriously ill patients as well as being on call. The programme should then continue with advanced ancillary training in other parts of or activities at the unit.

On completion of the programme, the specialty resident should be offered a position as a general infectious diseases consultant in the unit. It is also important that the specialty resident gains insight into specialised medical practice and consultancy activities. Supplementary specialty training abroad can provide valuable knowledge and perspective.

To give the specialty resident the opportunity to deepen his/her knowledge of diagnostic methods and microbiological agents, it is vital that he/she completes an ancillary programme through specialty training in the area of microbiology. Since internal medicine questions commonly arise in this specialty, ancillary training in internal medicine and other internal medicine specialties are greatly important. Specialist medical training in Paediatrics and Intensive Care Medicine would be appropriate, but even other ancillary training programmes could be relevant. Disease prevention and control, and Infection Prevention and Control are examples of other activities which the specialist doctor in Infectious Diseases often comes into contact with, where he/she will require advanced knowledge.

Theoretical studies should be completed in the form of self-study and the clinic's own internal course programmes, where the specialty resident is expected to participate and actively contribute. These courses should include topics such as antimicrobial therapy and tropical diseases. During his/her specialty training period, the specialty resident should have the opportunity to participate in major professional gatherings.

Clinical Pharmacology

Description of skills

The specialty of Clinical Pharmacology is characterised by evaluation of the efficacy and safety of pharmaceuticals at the individual, patient group and community level. It also includes the communication of independent information about pharmaceuticals generated from the latest research about the effects and side effects of pharmaceuticals. Clinical Pharmacology is the health and medical care system's pharmaceutical expertise, working to provide evidence-based and rational pharmacotherapy.

Skills requirements

For Clinical Pharmacology, learning objectives a1-a6, b3 and c1-c13 apply.

Learning objectives a and b

Learning objective a1 Teamwork, leadership and pedagogy	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Be able to take responsibility for his/her continuous learning in the workplace – Be able to exercise leadership in his/her daily work, including lead a healthcare team – Be able to take responsibility for the development of multi-professional teamwork – Be able to take responsibility for cooperation with patients and their families** – Be able to work in networks looking after the patient – Be able to collaborate with agencies outside the hospital healthcare system such as social welfare boards, agencies within the social services, schools and Försäkringskassan (the Swedish Social Insurance Agency) – Be able to present and explain medical information in a way that is understandable to the recipient, orally and in writing – Be able to plan and carry out teaching and training – Be able to supervise and instruct colleagues and students 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	<p>General recommendations</p> <p>Participation in intra- or inter-professional reflection in groups</p> <p>Supervise under supervision</p> <p>Teach under supervision</p>	

Learning objective a2 Ethics, diversity and equality	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate knowledge and understanding of the principles of medical ethics and be able to identify ethical problems and analyse these in a structured way – Be able to handle conflicts in values in his/her daily work – Be able to treat people as individuals and with respect regardless of gender, transgender identity or expression, ethnic origin, religion or other faith, disability, sexual orientation or age. 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups	

Learning objective a3 Infection Prevention and Control	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to take responsibility for the prevention and control of healthcare-associated infections 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor

Learning objective a4 Systematic quality and patient safety management	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Critically examine his/her own practice and be able to conduct a risk and outcome analysis – Be able to take responsibility for systematically implementing measures, processes and procedures to improve patient care – Be able to take responsibility for the integration of new technologies and procedures into his/her daily work as a doctor 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Quality and development work	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	

Learning objective a5 Medical science	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate a deeper knowledge and understanding of medical scientific methodology and ethical principles – Be able to critically examine and evaluate medical science information – Demonstrate a scientific evidence based approach to his/her daily way of working and routines 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Independent written work based on scientific methodology	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	

Learning objective a6 Legislation and other regulations and the health and medical care system's organisation	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Demonstrate knowledge of the legislation and regulations which govern the healthcare system and its staff – Demonstrate knowledge of the health and medical care system's organisation and administration – Demonstrate knowledge of the health and medical care system's various financial control systems and their importance for the balancing of priorities in his/her daily work 	<p>Participation in one or more courses</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor</p>

Learning objective b3 Medicines	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Be able to adapt pharmacotherapy to the patient’s age, sex, weight, kidney and liver function as well as any comorbidity and other medication – Be able to assess the risks of interactions and side effects with pharmacotherapy – Be able to work with patients and their families to achieve compliance with medications – Be able to work with other parties in the patient care chain with regard to pharmacotherapy – Be able to critically review and evaluate scientific evidence surrounding pharmacotherapy – Demonstrate knowledge of the environmental impacts of pharmacotherapy – Demonstrate knowledge of the health economics aspects of pharmacotherapy 	<p>Clinical practice under supervision</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the supervisor</p>
	<p>Participation in one or more courses</p>	<p>Certificate of completed programme activities and attained required competencies requirements issued by the course provider or the supervisor</p>

Learning objectives c

The specialist doctor is to have a basic knowledge of pharmacology, medicine, statistics and epidemiology, and be able to use this competence in pharmaceutical selection for individual patients as well as patient or diagnostic groups. The selection and monitoring of pharmaceuticals is to be based on scientific documentation, and pharmacodynamic and pharmacokinetic principles, as well as the results of pharmaceutical and substance abuse analyses.

The specialist doctor should additionally:

- Be able to critically evaluate pharmaceuticals in terms of their efficacy and safety,
- Be able to work towards a rational use of pharmaceuticals beneficial to the community, through communicating independent pharmaceutical information orally and in writing,
- Have knowledge of drug development and about national and international organisations for medicinal products,
- Have knowledge about where the responsibilities lie when pharmaceuticals are used in the entire care chain, and
- To be able to provide advice on pharmacotherapy to individual patients and to patient or diagnostic groups.

Learning objective c1	Programme activities	Assessment
The specialist doctor shall: – Be able to evaluate the efficacy of medicines	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c2	Programme activities	Assessment
The specialist doctor shall: – Be able to evaluate the safety of medicines	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Theoretical studies	

Learning objective c3	Programme activities	Assessment
The specialist doctor shall: – Master basic statistical and epidemiological methods in the field of pharmacotherapy	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Theoretical studies	

Learning objective c4	Programme activities	Assessment
The specialist doctor shall: – Be able to provide advice on pharmacotherapy to individual patients	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Theoretical studies	

Learning objective c5	Programme activities	Assessment
The specialist doctor shall: – Be able to provide advice on pharmacotherapy to patient or diagnosis groups	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Theoretical studies	

Learning objective c6	Programme activities	Assessment
The specialist doctor shall: – Have knowledge of pharmacodynamics, pharmacokinetics, therapeutic drug monitoring and drugs of abuse analyses	Clinical practice under supervision, or alternatively clinical attachment at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Theoretical studies	

Learning objective c7	Programme activities	Assessment
The specialist doctor shall: – Be able to work towards a rational use of medicines of benefit to the community	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Theoretical studies	

Learning objective c8	Programme activities	Assessment
The specialist doctor shall: – Be able to communicate independent drug information, orally and in writing	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Theoretical studies Teach under supervision	

Learning objective c9	Programme activities	Assessment
The specialist doctor shall: – Have knowledge of all the phases of drug development, including the approval process for medicinal products	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Theoretical studies	

Learning objective c10	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Have knowledge of national and international organisations for medicines – Have knowledge about where the responsibilities lie when medicines are used in the entire care chain, including transitions from one care provider to the next 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Theoretical studies	

Learning objective c11	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Have advanced knowledge in at least one area of therapy 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Theoretical studies Teach under supervision	

Learning objective c12	Programme activities	Assessment
The specialist doctor shall: – Have knowledge of investigation, diagnosis and treatment within a specialty area	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Theoretical studies	

Learning objective c13	Programme activities	Assessment
The specialist doctor shall: – Be able to apply the legislation and other regulations applicable to the specialty, including having knowledge of prescribing outside the approved indication	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor

General recommendations

Programme structure

It is important that the specialty resident acquires the majority of the necessary skills at a clinical pharmacological unit. Specialist training should begin with an introduction to the various activities involved in clinical pharmacology, after which the specialty resident should actively take part in these various activities.

The practical training itself may vary based on the circumstances, but it is crucial that the specialty resident is gradually given more and more responsibility and becomes more and more independent in their specialist training.

To obtain clinical experience of the pharmacotherapy of patients, it is important that the specialty resident complements specialist training at a clinical pharmacology unit with ancillary training in specialties with a heavy focus on patient care and pharmacotherapy over a longer period.

To maximise the benefit of ancillary training involving patient care, after completion the specialty resident should return to practice in Clinical Pharmacology, in order to be able to utilise his/her clinical skills in clinical pharmacology work. Serving at a medicinal products agency, pharmaceuticals unit or in the pharmaceutical industry could also be part of the training.

It is appropriate for the specialty resident to present his/her scientific, or quality and development project at a scientific gathering or publish it in a scientific journal. The timing for this can be determined by what is appropriate within the activity where he/she is working.

Clinical Genetics

Description of skills

The specialty of Clinical Genetics is characterised by the diagnosis and management of diseases with a genetic basis and genetic counselling in relation to these diseases. This skills area covers all age groups and addresses all medical specialties where genetic inquiries arise.

Skills requirements

For Clinical Genetics, learning objectives a1-a6 and c1-c13 apply.

Learning objectives a

Learning objective a1 Teamwork, leadership and pedagogy	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to take responsibility for his/her continuous learning in the workplace – Be able to exercise leadership in his/her daily work, including lead a healthcare team – Be able to take responsibility for the development of multi-professional teamwork – Be able to take responsibility for cooperation with patients and their families** – Be able to work in networks looking after the patient – Be able to collaborate with agencies outside the hospital healthcare system such as social welfare boards, agencies within the social services, schools and Försäkringskassan (the Swedish Social Insurance Agency) – Be able to present and explain medical information in a way that is understandable to the recipient, orally and in writing – Be able to plan and carry out teaching and training – Be able to supervise and instruct colleagues and students 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups Supervise under supervision Teach under supervision	

Learning objective a2 Ethics, diversity and equality	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate knowledge and understanding of the principles of medical ethics and be able to identify ethical problems and analyse these in a structured way – Be able to handle conflicts in values in his/her daily work – Be able to treat people as individuals and with respect regardless of gender, transgender identity or expression, ethnic origin, religion or other faith, disability, sexual orientation or age. 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups	

Learning objective a3 Infection Prevention and Control	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to take responsibility for the prevention and control of healthcare-associated infections 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor

Learning objective a4 Systematic quality and patient safety management	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Critically examine his/her own practice and be able to conduct a risk and outcome analysis – Be able to take responsibility for systematically implementing measures, processes and procedures to improve patient care – Be able to take responsibility for the integration of new technologies and procedures into his/her daily work as a doctor 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Quality and development work	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	

Learning objective a5 Medical science	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate a deeper knowledge and understanding of medical scientific methodology and ethical principles – Be able to critically examine and evaluate medical science information – Demonstrate a scientific evidence based approach to his/her daily way of working and routines 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Independent written work based on scientific methodology	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	

Learning objective a6 Legislation and other regulations and the health and medical care system's organisation	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Demonstrate knowledge of the legislation and regulations which govern the healthcare system and its staff – Demonstrate knowledge of the health and medical care system's organisation and administration – Demonstrate knowledge of the health and medical care system's various financial control systems and their importance for the balancing of priorities in his/her daily work 	<p>Participation in one or more courses</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor</p>

Learning objectives c

The specialist doctor shall have knowledge in medical genetics.

In addition, the specialty resident shall have skills in:

- Interpretation of laboratory analyses
- Initial consultation, consulting and training activities, and
- Development projects.

The specialist doctor shall also:

- Be well versed in the principles of genetic diagnostics in order to be able to utilise different diagnostic methods and interpret the results,
- Be able to manage genetics investigations, for both congenital and acquired disorders, and in prenatal diagnostics,
- Have knowledge of complex genetics,
- Master family tree analysis and database management,
- Have the ability to provide genetic counselling and work as a consultant in genetics inquiries across the entire field of medicine,
- Be able to converse with patients on vital issues while taking into account ethical principles and values,
- Have the ability to monitor developments in knowledge and be oriented in current research in the area, and
- Be able to change ways of working and the content of his/her work guided by new knowledge and new methods.

Learning objective c1	Programme activities	Assessment
The specialist doctor shall: – Have knowledge of medical genetics, cytogenetics and molecular biology	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	<i>General recommendations</i> Theoretical studies	

Learning objective c2	Programme activities	Assessment
The specialist doctor shall: – Master genetic diagnostics and investigations, and have knowledge about the treatment and prevention of congenital genetic disorders	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	<i>General recommendations</i> Participation in diagnostic and treatment conferences Attendance at large professional gatherings Theoretical studies	

Learning objective c3	Programme activities	Assessment
The specialist doctor shall: – Master genetic diagnostics and investigations and have knowledge about the treatment and prevention of acquired genetic disorders	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in diagnostic and treatment conferences Attendance at large professional gatherings Theoretical studies	

Learning objective c4	Programme activities	Assessment
The specialist doctor shall: – Master genetic laboratory diagnostics	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c5	Programme activities	Assessment
The specialist doctor shall: – Be able to initially manage syndrome investigations	Clinical practice under supervision, or alternatively clinical attachment at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c6	Programme activities	Assessment
The specialist doctor shall: – Master prenatal diagnostics – Have knowledge of pre-implant genetic diagnostics	Clinical practice under supervision, or alternatively clinical attachment at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Theoretical studies	

Learning objective c7	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to provide genetic counselling at the individual and family level – Be able to converse with patients on vital issues while taking into account ethical principles and values, 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Clinical attachment Theoretical studies	

Learning objective c8	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master family tree analysis and risk assessment 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor

Learning objective c9	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master database management as a diagnostic aid 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor

Learning objective c10	Programme activities	Assessment
The specialist doctor shall: – Be able to manage genetic consultations in the health and medical care system	Clinical practice under supervision, or alternatively clinical attachment at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in diagnostic and treatment conferences Attendance at large professional gatherings	

Learning objective c11	Programme activities	Assessment
The specialist doctor shall: – Have knowledge of complex genetic correlations	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Theoretical studies	

Learning objective c12	Programme activities	Assessment
The specialist doctor shall: – Have knowledge of how research results can be applied clinically	Clinical practice under supervision, or alternatively clinical attachment at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Attendance at large professional gatherings Theoretical studies	

Learning objective c13	Programme activities	Assessment
The specialist doctor shall: – Be able to apply legislation and other regulations applicable to the specialty	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor

General recommendations

Programme structure

The specialty resident should complete his/her specialty training primarily at a healthcare unit specialising in clinical genetics. In order to achieve broad knowledge in genetic diagnostics, the specialty resident should acquire competence in laboratory diagnostics within both cytogenetics and molecular genetics. The management of genetic investigations related to both congenital and acquired genetic disorders is also an important part of the programme. This should be done with increasing autonomy during the programme. It is also important that the specialty resident is permitted to provide genetic counselling of increasing complexity during the programme.

The order in which the individual specialty resident studies the areas specified in the various learning objectives may be adjusted according to previous experience and current focus.

Some elements of the specialty resident's specialty training may need to take place at a different unit for clinical genetics so that specialty resident is given the opportunity to fulfil specific learning objectives. It is also important that the specialty resident gets ancillary training alternatively clinical attachment in other speciality areas to deepen his/her skills in clinical genetics. This is important within patient care activities such as paediatrics, gynaecology and obstetrics, neurology, oncology and haematology, but also within laboratory activities such as clinical pathology and clinical chemistry.

Internal medicine specialties

Endocrinology and Diabetology

Description of skills

The specialty of Endocrinology and Diabetology is characterised by skills in the normal functioning of the endocrine system and its disease conditions.

This skills area includes the investigation, diagnosis, treatment and monitoring of disease conditions in the endocrine system. This means everything from diseases such as Type 1 and Type 2 diabetes, thyroid disease, obesity, lipid disorders and osteoporosis to unusual endocrine disorders. It also includes knowledge of hormonal mechanisms of importance to normal fertility, pregnancy, physical development, height growth, puberty and menopause.

This skills area is characterised by close collaborations with surgical expertise and work in multifocal professional teams.

Endocrinology and diabetology share a common knowledge base with other internal medicine specialties.

Skills requirements

For Endocrinology and Diabetology, learning objectives a1-a6, b1-b5 and c1-c14 apply.

Learning objectives a and b

Learning objective a1 Teamwork, leadership and pedagogy	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to take responsibility for his/her continuous learning in the workplace – Be able to exercise leadership in his/her daily work, including lead a healthcare team – Be able to take responsibility for the development of multi-professional teamwork – Be able to take responsibility for cooperation with patients and their families** – Be able to work in networks looking after the patient – Be able to collaborate with agencies outside the hospital healthcare system such as social welfare boards, agencies within the social services, schools and Försäkringskassan (the Swedish Social Insurance Agency) – Be able to present and explain medical information in a way that is understandable to the recipient, orally and in writing – Be able to plan and carry out teaching and training – Be able to supervise and instruct colleagues and students 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups Supervise under supervision Teach under supervision	

Learning objective a2 Ethics, diversity and equality	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate knowledge and understanding of the principles of medical ethics and be able to identify ethical problems and analyse these in a structured way – Be able to handle conflicts in values in his/her daily work – Be able to treat people as individuals and with respect regardless of gender, transgender identity or expression, ethnic origin, religion or other faith, disability, sexual orientation or age. 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups	

Learning objective a3 Infection Prevention and Control	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to take responsibility for the prevention and control of healthcare-associated infections 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor

Learning objective a4 Systematic quality and patient safety management	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Critically examine his/her own practice and be able to conduct a risk and outcome analysis – Be able to take responsibility for systematically implementing measures, processes and procedures to improve patient care – Be able to take responsibility for the integration of new technologies and procedures into his/her daily work as a doctor 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Quality and development work	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	

Learning objective a5 Medical science	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate a deeper knowledge and understanding of medical scientific methodology and ethical principles – Be able to critically examine and evaluate medical science information – Demonstrate a scientific evidence based approach to his/her daily way of working and routines 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Independent written work based on scientific methodology	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	



Learning objective a6 Legislation and other regulations and the health and medical care system's organisation	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none">– Demonstrate knowledge of the legislation and regulations which govern the healthcare system and its staff– Demonstrate knowledge of the health and medical care system's organisation and administration– Demonstrate knowledge of the health and medical care system's various financial control systems and their importance for the balancing of priorities in his/her daily work	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor

Learning objective b1 Communication with patients and families	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to adapt his/her way of communicating based on the patient’s and their relatives’ individual needs and communication capabilities – Be able to give patients and their families difficult news with respect, empathy and sensitivity – Be able to support the patient's ability to manage a change in life situation as a result of an illness or disability – Be able to consult with patients and their families concerning the patient's self-care 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups Clinical attachment	

Learning objective b2 Prevention of disease and ill-health	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to guide patients in matters of lifestyle choices in order to: – Prevent the development of diseases associated with one or more lifestyle habits – Improve the prognosis in patients with diseases associated with one or more lifestyle habits 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Attendance at large professional gatherings	

Learning objective b3 Medicines	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to adapt pharmacotherapy to the patient’s age, sex, weight, kidney and liver function as well as any comorbidity and other medication – Be able to assess the risks of interactions and side effects with pharmacotherapy – Be able to work with patients and their families to achieve compliance with medications – Be able to work with other parties in the patient care chain with regard to pharmacotherapy – Be able to critically review and evaluate scientific evidence surrounding pharmacotherapy – Demonstrate knowledge of the environmental impacts of pharmacotherapy – Demonstrate knowledge of the health economics aspects of pharmacotherapy 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained required competencies requirements issued by the course provider or the supervisor

Learning objective b4 Insurance medicine	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to apply procedures in insurance medicine as part of the treatment of the individual patient – Be able to collaborate on insurance medicine matters relating to the individual patient with actors within and outside the healthcare system 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or supervisor
	General recommendations Attendance at large professional gatherings	

Learning objective b5 Palliative care in the final stages of life	Programme activities	Assessment
The specialist doctor shall: – Be able to identify the need for and initiate palliative care in the final stages of life – Be able to hold conversations with patients and their families concerning transiting to palliative care – Be able to apply the fundamental principles of palliative symptom relief with regard to physical, psychological, social and existential needs	Clinical practice under supervision or alternatively clinical attachment	Certificate of completed programme activities and attained the required competences issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competences issued by the course provider or the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings Clinical attachment Training in simulated environment	

Learning objectives c

The specialist doctor is to master the knowledge base shared with the internal medicine specialties. This shared knowledge base includes the specialist doctor being able to independently assess and manage symptoms and investigation findings for acute disease or conditions in internal medicine and adjacent core specialties.

The specialist doctor should additionally:

- Have knowledge of common and serious internal medicine conditions and common and serious medical conditions in adjacent core specialties,
- Master the use of pharmaceuticals for the purpose of being able to individualise pharmacotherapy on the basis of age, sex, renal function and comorbidity,
- Have knowledge of pharmaceutical-related problems,
- Have knowledge of and be able to manage common and serious medical conditions in older patients with multimorbidity,
- Take a comprehensive approach to individualised treatment, and
- Be able to independently decide on and initiate palliative care.

In addition, the specialist doctor in Endocrinology and Diabetology is to have skills in:

- Anamnesis charting and analysis in combination with medical imaging examinations,
- Chemical analyses of hormone levels under basic conditions and dynamic analyses during loading, and
- The management of patients undergoing hormone substitution therapy and therapy with analogue hormones.

The specialist doctor shall also have knowledge of:

- Acute endocrinology,
- Treatment and follow-up of the chronic endocrine diseases,
- Reactions of a psychological nature in the acute and chronic stages of endocrine diseases,
- The management and prevention of endocrine diseases, and
- The management of endocrine tumour diseases with subsequent disorders.

The specialist doctor shall also have skills in the differential diagnosis of rare medical conditions. These conditions often present with multiple symptoms, which is why diagnostics for the exclusion or confirmation of hormonal disturbances is a very important step.

Finally, the specialist doctor is to be able to collaborate with surgical expertise in multi-professional teams, particularly in the case of patients with diabetes or thyroid, pituitary or adrenal gland diseases.

Learning objectives c1-c5 are common to the internal medicine specialties Endocrinology and Diabetology, Geriatrics, Haematology, Internal Medicine, Cardiology, Respiratory Medicine, Gastroenterology and Hepatology as well as Renal Medicine (Nephrology) (shared knowledge base).

Learning objective c1	Programme activities	Assessment
The specialist doctor shall: – Be able to independently identify, diagnose and manage acute diseases or medical conditions in internal medicine and adjacent core specialties, as well as be able to Institute acute measures in respect of these	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c2	Programme activities	Assessment
The specialist doctor shall: – Be able to independently manage common and serious internal medicine conditions as well as common and serious conditions in internal medicine and other adjacent core specialties	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies Training in simulated environment	

Learning objective c3	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master the use of pharmaceuticals for the purpose of being able to individualise treatment on the basis of age, sex, renal function and comorbidity, – Have knowledge of pharmaceutical-related problems including polypharmacy 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c4	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to independently manage common and serious medical conditions in the case of multimorbidity in patients in general and in older patients in particular – Have knowledge of how to apply a comprehensive approach to individualised treatment 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in seminars Theoretical studies	

Learning objective c5	Programme activities	Assessment
The specialist doctor shall: – Be able to independently decide on and initiate palliative care.	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in seminars Theoretical studies	

Learning objective c6	Programme activities	Assessment
The specialist doctor shall: – Master the management of common endocrine disorders including investigation, diagnosis, therapy and monitoring – Be able to assess the need for referral of individual patients to other specialties	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Work in a care team	

Learning objective c7	Programme activities	Assessment
The specialist doctor shall: – Master the investigation, diagnosis, therapy and monitoring of rare endocrine disease in patients and be able to assess the need for referral of these patients	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in diagnostic and treatment conferences Participation in seminars Theoretical studies	

Learning objective c8	Programme activities	Assessment
The specialist doctor shall: – Be able to manage endocrine diseases with complications	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Clinical attachment Participation in diagnostic and treatment conferences	

Learning objective c9	Programme activities	Assessment
The specialist doctor shall: – Be able to manage individual patients in accordance with the legislation and regulations applicable to the exercise of public authority in the skills area	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c10	Programme activities	Assessment
The specialist doctor shall: – Be able to manage endocrine medical conditions in connection with intensive care and parenteral nutrition as well as pre-operatively and post-operatively	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in diagnostic and treatment conferences Theoretical studies	

Learning objective c11	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to initially manage the endocrinology of puberty and of pregnancy, and the endocrinology of male and female infertility, sexual function and transsexualism – Be able to assess the need for referral of individual patients to other specialties 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in diagnostic and treatment conferences Participation in seminars Theoretical studies	

Learning objective c12	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be cognisant of hereditary, congenital and genetic endocrine disorders – Have knowledge of the prevention of endocrine diseases 	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c13	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be cognisant of the impact of environmental factors on the emergence of endocrine disorders 	General recommendations Theoretical studies	



Learning objective c14	Programme activities	Assessment
The specialist doctor shall: – Be able to apply legislation and other regulations applicable to the specialty	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor

General recommendations

Programme structure

Concerning knowledge progression, the specialty resident should complete specialty training in a clinical setting designed to satisfy the requirements of the shared knowledge base distributed across the entire period of training.

Certain parts of the shared knowledge base should be acquired during the initial part of the specialty training. Theoretical studies should be scheduled to coincide with the specialty training in a clinical setting designed to satisfy the requirements of the shared knowledge base. Continuous periods within a limited number of specialties should be given priority over short residencies within several core specialties. This applies to specialty training in core specialties other than the core specialty in which the specialty resident intends to achieve specialist competence.

During the initial period, specialty training in Endocrinology and Diabetology should be orientated towards providing a good foundation for the consultative role of the specialty. During this period, the specialty resident should take courses with a focus on initial investigation and treatment.

Specialist medical training in a clinical setting should be at hospital wards and medical practices where diabetes and endocrinology care are provided. During the first part of the programme, the specialty resident should undergo training within activities that manage the most prevalent diseases within the specialty. During the latter part of specialty training, the specialty resident should acquire advanced knowledge in unusual endocrinological and diabetes medical conditions. It is important that, where possible, the specialty resident has the opportunity to develop his/her skills in Endocrinology and Diabetology at a university hospital or equivalent.

It is desirable for specialty training is completed in continuous periods. Courses should be planned to accord with specialty training in a clinical setting. The specialty resident should participate actively in seminars and present case descriptions during the programme. The specialty resident should also have the opportunity to engage in self-study of medical journals and medical literature. In addition, the specialty resident should have the opportunity to participate in the clinic's regular continuing education and to be involved in monitoring local and national care programmes.

Haematology

Description of skills

The specialty of Haematology is characterised by knowledge and skills in the investigation, diagnosis, treatment, prevention and monitoring of blood conditions and conditions of the hematopoietic, lymphatic and haemostatic systems.

Diagnoses are based largely on an analysis of the patient's medical history and a physical examination with the aid of medical imaging and histopathological and clinical chemistry findings. Patient groups include all ages from the upper teens to the very oldest members of the community.

This skills area encompasses treatment with curative intent, treatment and monitoring of long-standing and sometimes life-long incurable medical conditions of both malignant and benign nature, and palliation and care in the final stages of life.

Haematology shares a knowledge base with the other Internal Medicine specialties.

Skills requirements

For Haematology, learning objectives a1-a6, b1-b5 and c1-c14 apply.

Learning objectives a and b

Learning objective a1 Teamwork, leadership and pedagogy	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to take responsibility for his/her continuous learning in the workplace – Be able to exercise leadership in his/her daily work, including lead a healthcare team – Be able to take responsibility for the development of multi-professional teamwork – Be able to take responsibility for cooperation with patients and their families** – Be able to work in networks looking after the patient – Be able to collaborate with agencies outside the hospital healthcare system such as social welfare boards, agencies within the social services, schools and Försäkringskassan (the Swedish Social Insurance Agency) – Be able to present and explain medical information in a way that is understandable to the recipient, orally and in writing – Be able to plan and carry out teaching and training – Be able to supervise and instruct colleagues and students 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups Supervise under supervision Teach under supervision	

Learning objective a2 Ethics, diversity and equality	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate knowledge and understanding of the principles of medical ethics and be able to identify ethical problems and analyse these in a structured way – Be able to handle conflicts in values in his/her daily work – Be able to treat people as individuals and with respect regardless of gender, transgender identity or expression, ethnic origin, religion or other faith, disability, sexual orientation or age. 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups	

Learning objective a3 Infection Prevention and Control	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to take responsibility for the prevention and control of healthcare-associated infections 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor

Learning objective a4 Systematic quality and patient safety management	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Critically examine his/her own practice and be able to conduct a risk and outcome analysis – Be able to take responsibility for systematically implementing measures, processes and procedures to improve patient care – Be able to take responsibility for the integration of new technologies and procedures into his/her daily work as a doctor 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Quality and development work	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	

Learning objective a5 Medical science	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate a deeper knowledge and understanding of medical scientific methodology and ethical principles – Be able to critically examine and evaluate medical science information – Demonstrate a scientific evidence based approach to his/her daily way of working and routines 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Independent written work based on scientific methodology	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	

Learning objective a6 Legislation and other regulations and the health and medical care system's organisation	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Demonstrate knowledge of the legislation and regulations which govern the healthcare system and its staff – Demonstrate knowledge of the health and medical care system's organisation and administration – Demonstrate knowledge of the health and medical care system's various financial control systems and their importance for the balancing of priorities in his/her daily work 	<p>Participation in one or more courses</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor</p>

Learning objective b1 Communication with patients and families	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to adapt his/her way of communicating based on the patient's and their relatives' individual needs and communication capabilities – Be able to give patients and their families difficult news with respect, empathy and sensitivity – Be able to support the patient's ability to manage a change in life situation as a result of an illness or disability – Be able to consult with patients and their families concerning the patient's self-care 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups Clinical attachment	

Learning objective b2 Prevention of disease and ill-health	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to guide patients in matters of lifestyle choices in order to: – Prevent the development of diseases associated with one or more lifestyle habits – Improve the prognosis in patients with diseases associated with one or more lifestyle habits 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Attendance at large professional gatherings	

Learning objective b3 Medicines	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Be able to adapt pharmacotherapy to the patient’s age, sex, weight, kidney and liver function as well as any comorbidity and other medication – Be able to assess the risks of interactions and side effects with pharmacotherapy – Be able to work with patients and their families to achieve compliance with medications – Be able to work with other parties in the patient care chain with regard to pharmacotherapy – Be able to critically review and evaluate scientific evidence surrounding pharmacotherapy – Demonstrate knowledge of the environmental impacts of pharmacotherapy – Demonstrate knowledge of the health economics aspects of pharmacotherapy 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained required competencies requirements issued by the course provider or the supervisor

Learning objective b4 Insurance medicine	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to apply procedures in insurance medicine as part of the treatment of the individual patient – Be able to collaborate on insurance medicine matters relating to the individual patient with actors within and outside the healthcare system 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or supervisor
	General recommendations Attendance at large professional gatherings	

Learning objective b5 Palliative care in the final stages of life	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to identify the need for and initiate palliative care in the final stages of life – Be able to hold conversations with patients and their families concerning transiting to palliative care – Be able to apply the fundamental principles of palliative symptom relief with regard to physical, psychological, social and existential needs 	Clinical practice under supervision or alternatively clinical attachment	Certificate of completed programme activities and attained the required competences issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competences issued by the course provider or the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings Clinical attachment Training in simulated environment	

Learning objectives c

The specialist doctor is to master the knowledge base shared with the internal medicine specialties. This shared knowledge base includes the specialist doctor being able to independently assess and manage symptoms and investigation findings of acute illness or medical conditions in internal medicine and adjacent core specialties.

The specialist doctor should additionally:

- Have knowledge of common and serious internal medicine conditions and common and serious conditions in adjacent core specialties,
- Master the use of drugs for the purpose of being able to individualise pharmaceutical treatment on the basis of age, sex, renal function and comorbidity,
- Have knowledge of drug-related problems,
- Have knowledge of and be able to manage common and serious conditions in older patients with multimorbidity,
- Take a comprehensive approach to individualised treatment, and
- Be able to independently decide on and initiate palliative care.

In addition, the specialty trainee in haematology shall have detailed knowledge and skills in the investigation, diagnosis, treatment, prevention and follow-up of blood conditions and conditions of the haematopoietic, lymphatic and haemostatic systems. This includes having a good command of methods of diagnosis and treatment, including antitumour agents and radiotherapy.

In addition, the specialist doctor is to master:

- The investigation, diagnosis, therapy and follow-up of both benign and malignant haematology, including supportive care,
- The management of acute complications,
- Pain therapy
- Care in the final stages of life, and
- The fundamentals of haemostasis disorders.

Learning objectives c1-c5 are common to the internal medicine specialties Endocrinology and Diabetology, Geriatrics, Haematology, Internal Medicine, Cardiology, Respiratory Medicine, Gastroenterology and Hepatology as well as Renal Medicine (Nephrology) (shared knowledge base).

Learning objective c1	Programme activities	Assessment
The specialist doctor shall: – Be able to independently identify, diagnose and manage acute illnesses or conditions in internal medicine and adjacent core specialties, and be able to institute emergency measures in response	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c2	Programme activities	Assessment
The specialist doctor shall: – Be able to independently manage common and serious internal medical conditions as well as common and serious conditions in internal medicine and other adjacent core specialties	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies Training in simulated environment	

Learning objective c3	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master the use of pharmaceuticals for the purpose of being able to individualise treatment on the basis of age, sex, renal function and comorbidity, – Have knowledge of pharmaceutical-related problems including polypharmacy 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c4	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to independently manage common and serious conditions in the case of multimorbidity in patients in general and in older patients in particular – Have knowledge of how to apply a comprehensive approach to individualised treatment 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in seminars Theoretical studies	

Learning objective c5	Programme activities	Assessment
The specialist doctor shall: – Be able to independently decide on and initiate palliative care.	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in seminars Theoretical studies	

Learning objective c6	Programme activities	Assessment
The specialist doctor shall: – Master the investigation, diagnosis, therapy and follow-up of haematological malignancies including lymphoma – Be cognisant of radiation therapy	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in diagnostic and treatment conferences	

Learning objective c7	Programme activities	Assessment
The specialist doctor shall: – Master acute complications of haematological diseases and conditions	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor

Learning objective c8	Programme activities	Assessment
The specialist doctor shall: – Master supportive care in connection with haematological diseases and conditions	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor

Learning objective c9	Programme activities	Assessment
The specialist doctor shall: – Master benign haematology	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor

Learning objective c10	Programme activities	Assessment
The specialist doctor shall: – Be able to manage haemostasis disorders	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor

Learning objective c11	Programme activities	Assessment
The specialist doctor shall: – Be able to manage allogeneic stem cell transplantation and high-dose therapy	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor

Learning objective c12	Programme activities	Assessment
The specialist doctor shall: – Master the mechanisms of action, complications and the administration of antitumour agents	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor

Learning objective c13	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master haematological investigation procedures – Have knowledge of haematological laboratory diagnostics 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor

Learning objective c14	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to apply legislation and other regulations applicable to the specialty 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor

General recommendations

Programme structure

Concerning knowledge progression, the specialty trainee should complete specialty training in a clinical setting designed to satisfy the requirements of the shared knowledge base distributed across the entire period of training.

Certain parts of the shared knowledge base should be acquired during the initial part of the specialty training. Theoretical studies should be scheduled to coincide with the specialty training in a clinical setting designed to satisfy the requirements of the shared knowledge base. Continuous periods within a limited number of specialties should be given priority over short placements within several core specialties. This applies to specialty training in core specialties other than the specialty in which the specialty trainee intends to achieve specialist competence.

Specialist medical training in haematology should begin with a continuous period of training in haematology inpatient and outpatient care. There, the specialty trainee is expected to acquire a comprehensive picture of malignant and benign haematology as well as the complications of haematological diseases and their treatment. Early in the programme, the specialty resident should be allowed to start an independent haematological practice. There, continuity for the individual patient should be the goal while at the same time it is important to provide varied content for the specialty trainee as far as this is possible. Continuous periods of specialty training should also be the goal.

Specialist medical training at a unit that conducts allogeneic stem cell transplantation should form part of the programme and if possible should be planned for the latter part of the programme. A period of specialty training is strongly recommended in one or more of the following areas:

- Haematopathology
- Coagulation
- Transfusion medicine
- Clinical genetics
- Infectious diseases.

Courses and other theory-based educational activities should be integrated into specialty training in the clinical setting and evenly distributed throughout the period of training. The specialty trainee should also be given opportunities for self-study, and for keeping up-to-date with the relevant literature in the skills area.

One way of planning the structure of the programme in order to achieve the various learning objectives is to use the haematology curriculum developed by the *European Haematology Association*.

Cardiology

Description of skills

The specialty of Cardiology is characterised by knowledge and skills in the prevention, investigation, diagnosis, treatment and follow-up of diseases of the heart, central blood vessels and pulmonary circulation.

This area of expertise covers both acute and chronic medical conditions. Patients come from all ages from upper adolescence and older, but the majority are middle-aged and elderly individuals.

Diagnostics is based on:

- Analysis of medical history
- Physical examination,
- Clinical biochemistry findings, and
- Various non-invasive and invasive diagnostic imaging procedures and instrumental diagnostic procedures.

Treatment alternatives are pharmacological as well as non-invasive and invasive procedures.

Cardiology is practised in outpatient clinics, medical wards and intensive care units at hospitals, and at intervention laboratories and collaborates closely with the knowledge areas Medical Imaging, Thoracic Surgery, Paediatric Cardiology, Anaesthesiology, Internal Medicine, Infectious Diseases, Family Medicine and Geriatrics.

Cardiology shares a common knowledge base with other internal medicine specialties.

Skills requirements

For Cardiology, learning objectives a1-a6, b1-b5 and c1-c13 apply.

Learning objectives a and b

Learning objective a1 Teamwork, leadership and pedagogy	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Be able to take responsibility for his/her continuous learning in the workplace – Be able to exercise leadership in his/her daily work, including lead a healthcare team – Be able to take responsibility for the development of multi-professional teamwork – Be able to take responsibility for cooperation with patients and their families** – Be able to work in networks looking after the patient – Be able to collaborate with agencies outside the hospital healthcare system such as social welfare boards, agencies within the social services, schools and Försäkringskassan (the Swedish Social Insurance Agency) – Be able to present and explain medical information in a way that is understandable to the recipient, orally and in writing – Be able to plan and carry out teaching and training – Be able to supervise and instruct colleagues and students 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	<p>General recommendations</p> <ul style="list-style-type: none"> Participation in intra- or inter-professional reflection in groups Supervise under supervision Teach under supervision 	

Learning objective a2 Ethics, diversity and equality	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate knowledge and understanding of the principles of medical ethics and be able to identify ethical problems and analyse these in a structured way – Be able to handle conflicts in values in his/her daily work – Be able to treat people as individuals and with respect regardless of gender, transgender identity or expression, ethnic origin, religion or other faith, disability, sexual orientation or age. 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups	

Learning objective a3 Infection Prevention and Control	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to take responsibility for the prevention and control of healthcare-associated infections 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor

Learning objective a4 Systematic quality and patient safety management	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Critically examine his/her own practice and be able to conduct a risk and outcome analysis – Be able to take responsibility for systematically implementing measures, processes and procedures to improve patient care – Be able to take responsibility for the integration of new technologies and procedures into his/her daily work as a doctor 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Quality and development work	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	

Learning objective a5 Medical science	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate a deeper knowledge and understanding of medical scientific methodology and ethical principles – Be able to critically examine and evaluate medical science information – Demonstrate a scientific evidence based approach to his/her daily way of working and routines 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Independent written work based on scientific methodology	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	

Learning objective a6 Legislation and other regulations and the health and medical care system's organisation	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Demonstrate knowledge of the legislation and regulations which govern the healthcare system and its staff – Demonstrate knowledge of the health and medical care system's organisation and administration – Demonstrate knowledge of the health and medical care system's various financial control systems and their importance for the balancing of priorities in his/her daily work 	<p>Participation in one or more courses</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor</p>

Learning objective b1 Communication with patients and families	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to adapt his/her way of communicating based on the patient's and their relatives' individual needs and communication capabilities – Be able to give patients and their families difficult news with respect, empathy and sensitivity – Be able to support the patient's ability to manage a change in life situation as a result of an illness or disability – Be able to consult with patients and their families concerning the patient's self-care 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups Clinical attachment	

Learning objective b2 Prevention of disease and ill-health	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to guide patients in matters of lifestyle choices in order to: – Prevent the development of diseases associated with one or more lifestyle habits – Improve the prognosis in patients with diseases associated with one or more lifestyle habits 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Attendance at large professional gatherings	

Learning objective b3 Medicines	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Be able to adapt pharmacotherapy to the patient’s age, sex, weight, kidney and liver function as well as any comorbidity and other medication – Be able to assess the risks of interactions and side effects with pharmacotherapy – Be able to work with patients and their families to achieve compliance with medications – Be able to work with other parties in the patient care chain with regard to pharmacotherapy – Be able to critically review and evaluate scientific evidence surrounding pharmacotherapy – Demonstrate knowledge of the environmental impacts of pharmacotherapy – Demonstrate knowledge of the health economics aspects of pharmacotherapy 	<p>Clinical practice under supervision</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the supervisor</p>
	<p>Participation in one or more courses</p>	<p>Certificate of completed programme activities and attained required competencies requirements issued by the course provider or the supervisor</p>

Learning objective b4 Insurance medicine	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to apply procedures in insurance medicine as part of the treatment of the individual patient – Be able to collaborate on insurance medicine matters relating to the individual patient with actors within and outside the healthcare system 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or supervisor
	General recommendations Attendance at large professional gatherings	

Learning objective b5 Palliative care in the final stages of life	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to identify the need for and initiate palliative care in the final stages of life – Be able to hold conversations with patients and their families concerning transiting to palliative care – Be able to apply the fundamental principles of palliative symptom relief with regard to physical, psychological, social and existential needs 	Clinical practice under supervision or alternatively clinical attachment	Certificate of completed programme activities and attained the required competences issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competences issued by the course provider or the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings Clinical attachment Training in simulated environment	

Learning objectives c

The specialist doctor is to master the knowledge base shared with the internal medicine specialties. This shared knowledge base includes the specialist doctor being able to independently assess and manage symptoms and investigation findings for acute disease or medical conditions in internal medicine and adjacent core specialties.

The specialist doctor should additionally:

- Have knowledge of common and serious internal medicine conditions and common and serious medical conditions in adjacent core specialties,
- Master the use of pharmaceuticals in order to individualise drug treatment based on age, sex, renal function and comorbidity,
- Have knowledge of pharmaceutical-related problems,
- Have knowledge of and be able to manage common and serious medical conditions in older patients with multimorbidity,
- Take a comprehensive approach to individualised treatment, and
- Be able to independently decide on and initiate palliative care.

In addition, the specialist doctor in cardiology is to have knowledge of:

- The anatomy and physiology of the heart and the central blood vessels,
- The epidemiology, aetiology and pathology of cardiovascular diseases and their interactions with the disease panoramas of the other organ systems, and
- The investigation, diagnostics, treatment and follow-up of cardiac diseases and the primary and secondary prevention of cardiovascular diseases.

Cardiovascular diseases include coronary artery disease, heart failure, arrhythmias, valvular heart disease, pulmonary hypertension, thoracic aorta disease, heart disease in pregnancy and inflammatory, infectious and congenital heart disease.

In addition, the specialist doctor is to have knowledge and skills in the diagnostic and treatment methods that occur within the specialty, including indications, procedures, risks of complications and the interpretation of examination results, as well as knowledge and skills in radiation biology, radiation physics and radiation protection. The specialist doctor shall also be able to independently lead on-call duties in the cardiology setting.

Learning objectives c1-c5 are common to the internal medicine specialties Endocrinology and Diabetology, Geriatrics, Haematology, Internal Medicine, Cardiology, Respiratory Medicine, Gastroenterology and Hepatology as well as Renal Medicine (Nephrology) (shared knowledge base).

Learning objective c1	Programme activities	Assessment
The specialist doctor shall: – Be able to independently identify, diagnose and manage acute illnesses or medical conditions in internal medicine and adjacent core specialties, and be able to manage emergency measures in respect of these	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c2	Programme activities	Assessment
The specialist doctor shall: – Be able to independently manage common and serious internal medical conditions as well as common and serious conditions in internal medicine and other adjacent core specialties	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies Training in simulated environment	

Learning objective c3	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master the use of pharmaceuticals in order to individualise drug treatment based on age, sex, renal function and comorbidity, – Have knowledge of pharmaceutical-related problems including polypharmacy 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c4	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to independently manage common and serious medical conditions in the case of multimorbidity in patients in general and in older patients in particular – Have knowledge of how to apply a comprehensive approach to individualised treatment 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in seminars Theoretical studies	

Learning objective c5	Programme activities	Assessment
The specialist doctor shall: – Be able to independently decide on and initiate palliative care.	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in seminars Theoretical studies	

Learning objective c6	Programme activities	Assessment
The specialist doctor shall: – Master acute management of life-threatening cardiovascular emergencies	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c7	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master the diagnosis and management of acute coronary syndrome and chronic ischaemic heart disease – Have knowledge of the medical imaging diagnostic procedures that are relevant to cardiology as an area of knowledge – Have knowledge of radiation biology, radiation physics and radiation protection 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c8	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master the diagnosis and management of acute and chronic heart failure and valvular heart diseases – Be able to manage pulmonary hypertension 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Theoretical studies	

Learning objective c9	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master the management of acute cardiac arrhythmias – Be able to manage other arrhythmias and syncope – Have knowledge of electrophysiological investigation and treatment methods 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c10	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Have knowledge of adults with congenital heart defects – Be able to initially manage medical emergencies due to congenital heart defects in adults – Be able to initially manage congenital heart diseases – Be able to manage the cardiovascular diseases associated with pregnancy – Be able to manage the inflammatory and infectious cardiac disorders and tumour diseases of the heart 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor

Learning objective c11	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to manage aortic diseases and trauma-related heart disease up to the point of possible surgical intervention 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c12	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master primary and secondary preventive cardiovascular risk factors – Master the methods used for cardiac rehabilitation – Have knowledge of the atherosclerosis process 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c13	Programme activities	Assessment
The specialist doctor shall: – Be able to apply legislation and other regulations applicable to the specialty	Clinical practice under supervision in a clinical setting at one or more units that operate such activities or handle such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor

General recommendations

Programme structure

Concerning knowledge progression, the specialty resident should complete specialty training in a clinical setting designed to satisfy the requirements of the shared knowledge base distributed across the entire period of training.

Certain parts of the shared knowledge base should be acquired during the initial part of the specialty training. Theoretical studies should be scheduled to coincide with the specialty training in a clinical setting designed to satisfy the requirements of the shared knowledge base. Continuous periods within a limited number of specialties should be given priority over short placements within several core specialties. This applies to specialty training in core specialties other than the specialty in which the specialty resident intends to achieve specialist competence.

The cardiology programme should begin with rotating residencies at a cardiology hospital ward, cardiac intensive care unit and cardiology outpatient practice so that the specialty resident will receive a broad clinical foundation within the skills area. Continuity in periods of residency should be the goal throughout specialty training in cardiology.

It is important that early in the programme the specialty resident obtains a residency at a medical imaging diagnostic unit or clinical physiology unit for an adequate period of time. Thereby the specialty resident will develop independent competency in performing echocardiography examinations and start practising how to interpret the examination findings from the diagnostic procedures that are otherwise common within cardiology.

After the initial phase, specialty training should include practice at the following units:

- Coronary care unit or equivalent unit that carries out the primary percutaneous coronary interventions (PCI)
- Unit for heart failure
- Arrhythmia and pacemaker unit, including residency at a unit providing invasive electrophysiology.

In order to achieve this, part of the specialty training should be located at hospital that offers highly specialised cardiology.

Throughout the entire period of the programme, the specialty resident should have the opportunity to practise invasive diagnostic procedures and monitoring, and to participate actively in invasive therapeutic interventions. Work at a cardiology outpatient clinic should be included to the extent that the specialist doctor is able to independently manage patients with cardiovascular disease. The specialty resident should also receive individualised

ancillary training that could include specialist training in paediatric cardiology, thoracic radiology, thoracic surgery, a cardiovascular interventional laboratory or intensive care unit.

At an early stage in the cardiology programme, the specialty resident should be involved in regular on-call commitment for cardiology where he/she is the primary on-call doctor for the cardiac intensive care unit.

Throughout the entire programme, the specialty resident should have the opportunity to pursue his/her own studies of the relevant scientific literature in the skills area. The specialty resident should also be given the opportunity to participate in relevant courses and educational programmes, specifically those on the topics of ischaemic heart disease, heart failure, arrhythmias, valvular heart disease, haemodynamics and monitoring, echocardiography lab, and congenital heart defects.

Gastroenterology and Hepatology

Description of skills

The specialty of Gastroenterology and Hepatology is characterised by knowledge and skills in investigating, diagnosing, treating and monitoring patients with diseases of the gastrointestinal tract, liver and pancreas.

The commonest and most important conditions are inflammatory bowel disease, hepatic diseases, ulcer and reflux disease, malabsorption, functional and motility disorders as well as tumour diseases of the gastrointestinal tract, liver and pancreas.

An important part of this skills area is endoscopy which includes advanced skills in both diagnostic and therapeutic interventions. Another important aspect is the investigation and treatment of secondary nutritional disorders in parallel with providing medical treatment for a gastrointestinal or hepatic diseases.

An internal medicine approach is fundamental to Gastroenterology and Hepatology, but activities within this specialty are carried out in close cooperation with several other areas of expertise: gastroenterological surgery, medical imaging, infectious diseases, oncology, transplantation surgery and psychiatry.

Gastroenterology and Hepatology share a common knowledge base with the other internal medicine specialties.

Skills requirements

For Gastroenterology and Hepatology, learning objectives a1-a6, b1-b5 and c1-c14 apply.

Learning objectives a and b

Learning objective a1 Teamwork, leadership and pedagogy	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Be able to take responsibility for his/her continuous learning in the workplace – Be able to exercise leadership in his/her daily work, including lead a healthcare team – Be able to take responsibility for the development of multi-professional teamwork – Be able to take responsibility for cooperation with patients and their families** – Be able to work in networks looking after the patient – Be able to collaborate with agencies outside the hospital healthcare system such as social welfare boards, agencies within the social services, schools and Försäkringskassan (the Swedish Social Insurance Agency) – Be able to present and explain medical information in a way that is understandable to the recipient, orally and in writing – Be able to plan and carry out teaching and training – Be able to supervise and instruct colleagues and students 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	<p>General recommendations</p> <ul style="list-style-type: none"> Participation in intra- or inter-professional reflection in groups Supervise under supervision Teach under supervision 	

Learning objective a2 Ethics, diversity and equality	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate knowledge and understanding of the principles of medical ethics and be able to identify ethical problems and analyse these in a structured way – Be able to handle conflicts in values in his/her daily work – Be able to treat people as individuals and with respect regardless of gender, transgender identity or expression, ethnic origin, religion or other faith, disability, sexual orientation or age. 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups	

Learning objective a3 Infection Prevention and Control	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to take responsibility for the prevention and control of healthcare-associated infections 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor

Learning objective a4 Systematic quality and patient safety management	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Critically examine his/her own practice and be able to conduct a risk and outcome analysis – Be able to take responsibility for systematically implementing measures, processes and procedures to improve patient care – Be able to take responsibility for the integration of new technologies and procedures into his/her daily work as a doctor 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Quality and development work	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	

Learning objective a5 Medical science	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate a deeper knowledge and understanding of medical scientific methodology and ethical principles – Be able to critically examine and evaluate medical science information – Demonstrate a scientific evidence based approach to his/her daily way of working and routines 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Independent written work based on scientific methodology	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	

Learning objective a6 Legislation and other regulations and the health and medical care system's organisation	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Demonstrate knowledge of the legislation and regulations which govern the healthcare system and its staff – Demonstrate knowledge of the health and medical care system's organisation and administration – Demonstrate knowledge of the health and medical care system's various financial control systems and their importance for the balancing of priorities in his/her daily work 	<p>Participation in one or more courses</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor</p>

Learning objective b1 Communication with patients and families	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to adapt his/her way of communicating based on the patient's and their relatives' individual needs and communication capabilities – Be able to give patients and their families difficult news with respect, empathy and sensitivity – Be able to support the patient's ability to manage a change in life situation as a result of an illness or disability – Be able to consult with patients and their families concerning the patient's self-care 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups Clinical attachment	

Learning objective b2 Prevention of disease and ill-health	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to guide patients in matters of lifestyle choices in order to: – Prevent the development of diseases associated with one or more lifestyle habits – Improve the prognosis in patients with diseases associated with one or more lifestyle habits 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Attendance at large professional gatherings	

Learning objective b3 Medicines	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Be able to adapt pharmacotherapy to the patient’s age, sex, weight, kidney and liver function as well as any comorbidity and other medication – Be able to assess the risks of interactions and side effects with pharmacotherapy – Be able to work with patients and their families to achieve compliance with medications – Be able to work with other parties in the patient care chain with regard to pharmacotherapy – Be able to critically review and evaluate scientific evidence surrounding pharmacotherapy – Demonstrate knowledge of the environmental impacts of pharmacotherapy – Demonstrate knowledge of the health economics aspects of pharmacotherapy 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained required competencies requirements issued by the course provider or the supervisor

Learning objective b4 Insurance medicine	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to apply procedures in insurance medicine as part of the treatment of the individual patient – Be able to collaborate on insurance medicine matters relating to the individual patient with actors within and outside the healthcare system 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or supervisor
	General recommendations Attendance at large professional gatherings	

Learning objective b5 Palliative care in the final stages of life	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to identify the need for and initiate palliative care in the final stages of life – Be able to hold conversations with patients and their families concerning transiting to palliative care – Be able to apply the fundamental principles of palliative symptom relief with regard to physical, psychological, social and existential needs 	Clinical practice under supervision or alternatively clinical attachment	Certificate of completed programme activities and attained the required competences issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competences issued by the course provider or the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings Clinical attachment Training in simulated environment	

Learning objectives c

The specialist doctor should master the knowledge base shared with the internal medicine specialties. This shared knowledge base allows the specialist doctor to be independent in assessing and managing symptoms and investigation findings for acute disease or medical conditions in internal medicine and related core specialties.

The specialist doctor should additionally:

- Have knowledge of common and serious internal medicine conditions and common and serious medical conditions in related core specialties,
- Master the adjustment of pharmacological treatment according to the patient's age, sex, renal function and comorbidity,
- Have knowledge of pharmacotherapy-related problems,
- Have knowledge of and be able to manage common and serious medical conditions in older patients with multiple morbidity,
- Take a holistic approach to individualised treatment, and
- Be independent in taking decisions to initiate and implement palliative care.

In addition, the specialist doctor Gastroenterology and Hepatology should be independent in diagnosing and treating diseases within Gastroenterology and Hepatology.

The specialist doctor should:

- Master the diagnosis, treatment and follow-up of functional gastrointestinal diseases and motility disorders, acute and chronic inflammatory bowel disease, acute liver failure and cirrhosis as well as autoimmune, metabolic, infectious, toxic and hereditary gastrointestinal diseases and hepatic diseases,
- Master the management of peptic ulcer disease and gastroesophageal reflux disease, digestion and malabsorption disorders, and the investigation and treatment of disease-related nutritional disorders,
- Master diagnostic endoscopy and basic therapeutic endoscopic interventions,
- Have knowledge of medical imaging, nuclear medicine, pathology and laboratory medicine, and
- Have knowledge of radiation biology, radiation physics and radiation protection.

The specialist doctor shall also have knowledge of the surgical treatment of gastrointestinal and hepatic diseases. This is required for the specialty resident to be able to participate in joint management and referral of patients for surgical treatment, which also includes liver transplantation.

Multi-disciplinary cases are to be managed through regular collaboration with the related specialties of oncology, infectious diseases and psychiatry. This requires knowledge of the various treatment options in these specialties.

Learning objectives c1-c5 are common to the internal medicine specialties Endocrinology and Diabetology, Geriatrics, Haematology, Internal Medicine, Cardiology, Respiratory Medicine, Gastroenterology and Hepatology as well as Renal Medicine (Nephrology) (shared knowledge base).

Learning objective c1	Programme activities	Assessment
The specialist doctor should: – Be independent in identifying, diagnosing and managing acute illnesses or medical conditions in internal medicine and related core specialties, and be able to institute emergency measures when indicated	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c2	Programme activities	Assessment
The specialist doctor should: – Be independent in managing common and serious internal medicine conditions as well as common and serious conditions in internal medicine and other related core specialties	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies Training in simulated environment	

Learning objective c3	Programme activities	Assessment
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<p>The specialist doctor should:</p> <ul style="list-style-type: none"> – Master the adjustment of pharmacological treatment according to the patient’s age, sex, renal function and comorbidity, – Have knowledge of problems related to pharmacologic treatment including polypharmacy 	<p>Clinical practice under supervision at one or more units conducting such activities or managing such cases</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the supervisor</p>
	<p>Participation in one or more courses</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor</p>
	<p>General recommendations</p> <p>Theoretical studies</p>	

Learning objective c4	Programme activities	Assessment
<p>The specialist doctor should:</p> <ul style="list-style-type: none"> – Be independent in managing common and serious medical conditions in the case of multiple morbidity in patients in general and in older patients in particular – Have knowledge of how to apply a holistic approach to individualised treatment 	<p>Clinical practice under supervision at one or more units conducting such activities or managing such cases</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the supervisor</p>
	<p>Participation in one or more courses</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor</p>
	<p>General recommendations</p> <p>Participation in seminars</p> <p>Theoretical studies</p>	

Learning objective c5	Programme activities	Assessment
The specialist doctor should: – Be independent in initiating and implementing palliative care.	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in seminars Theoretical studies	

Learning objective c6	Programme activities	Assessment
The specialist doctor should: – Master the diagnosis, treatment and monitoring of acute and chronic inflammatory bowel disease	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in diagnostic and treatment conferences Participation in seminars Theoretical studies	

Learning objective c7	Programme activities	Assessment
<p>The specialist doctor should:</p> <ul style="list-style-type: none"> – Master the investigation of abnormal liver tests and where applicable, the treatment of the underlying disease – Master the diagnosis, treatment and monitoring of cirrhosis of the liver – Be able to diagnose and manage acute liver failure 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	<p>General recommendations</p> <p>Participation in diagnostic and treatment conferences</p> <p>Participation in seminars</p> <p>Theoretical studies</p>	

Learning objective c8	Programme activities	Assessment
<p>The specialist doctor should:</p> <ul style="list-style-type: none"> – Master relevant endoscopic examination techniques as well as the assessment and treatment of findings – Master basic endoscopic intervention treatments – Have knowledge of advanced therapeutic interventions – Have knowledge of radiation biology, radiation physics and radiation protection. 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	<p>General recommendations</p> <p>Theoretical studies</p> <p>Training in simulated environment</p>	

Learning objective c9	Programme activities	Assessment
The specialist doctor should: <ul style="list-style-type: none"> – Master the diagnosis and treatment of peptic ulcer disease, gastritis and gastroesophageal reflux disease – Master the diagnosis and treatment of disorders of digestion and absorption – Master the diagnosis and treatment of nutritional disorders caused by gastrointestinal or hepatic diseases 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Theoretical studies	

Learning objective c10	Programme activities	Assessment
The specialist doctor should: <ul style="list-style-type: none"> – Master the diagnosis and treatment of functional gastrointestinal disorders and motility disorders 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c11	Programme activities	Assessment
The specialist doctor should: <ul style="list-style-type: none"> – Have knowledge of other diagnostic tools used for investigation in gastroenterology and hepatology 	General recommendations Participation in diagnostic and treatment conferences Theoretical studies	

Learning objective c12	Programme activities	Assessment
The specialist doctor should: <ul style="list-style-type: none"> – Master the diagnosis of tumour diseases of the gastrointestinal tract, liver and pancreas and be aware of the different treatment options for these diseases 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in diagnostic and treatment conferences Theoretical studies	

Learning objective c13	Programme activities	Assessment
The specialist doctor should: <ul style="list-style-type: none"> – Have knowledge of the treatment of diseases of the gastrointestinal tract from a surgical perspective – Be aware of the different treatment options of related specialties such as oncology, infectious diseases and psychiatry 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Theoretical studies Work in a care team	

Learning objective c14	Programme activities	Assessment
The specialist doctor should: <ul style="list-style-type: none"> – Be able to apply legislation and other regulations applicable to the specialty 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor

General recommendations

Programme structure

In order to ensure adequate training, the specialty resident should complete specialty training in a clinical setting designed to satisfy the requirements of the shared knowledge base distributed across the entire period of training.

Certain parts of the shared knowledge base should be acquired during the initial part of the specialty training. Theoretical studies should be scheduled to coincide with the relevant specialty training in a clinical setting designed to satisfy the requirements of the shared knowledge base. Continuous periods within a limited number of specialties should be given priority over short placements within several core specialties. This applies to specialty training in core specialties other than the main specialty in which the specialty resident intends to achieve specialist competence.

In the initial phase of the specialty training, it is important that the specialty resident acquires basic knowledge in gastroenterology, with the emphasis on care of the sickest patients and the acquisition of theoretical knowledge. At the end of the initial phase of training, the specialty resident should receive practical training in gastroscopy and training in performing less complex procedures.

The initial phase is followed by:

- Advanced teaching in gastroscopy and colonoscopy
- Advanced literature studies
- Conducting his/her own outpatient care practice under supervision
- Increased responsibility and increased autonomy in the management of patients.

During this period, more advanced interventions such as liver biopsy and basic endoscopic interventions are trained.

The specialty resident should progressively take on more and more responsibility in teaching, administration and collaboration with other specialties, the latter through clinical practice, multi-disciplinary treatment conferences or clinical attachment.

If the specialty training occurs at a smaller hospital, part of the training should be in residency at regional and university hospitals, preferably towards the end of the specialty training.

In order to broaden the specialty resident's experience and outlook, ancillary training should be completed in different areas of medical practice, preferably at a hospital that performs

liver transplants. Other valuable ancillary training is clinical practice at a gastrointestinal surgery unit, or a unit practising in oncology, infectious diseases or psychiatry.

Participation in courses should be distributed evenly throughout the duration of the programme. Participation in seminars and in diagnosis and treatment conferences should be introduced early in the programme and be a continuous part of it, since communication with related specialties is important within this specialty. The specialty resident should also be given opportunities for self-study, and for keeping up-to-date with the relevant literature in the skills area.

Surgical specialties

Anaesthesia and Intensive Care Medicine

Description of skills

The specialty of Anaesthesia and Intensive Care is characterised by a cross-disciplinary professional approach and covers:

- Perioperative medicine,
- Anaesthesia and pain management in diagnostic and therapeutic procedures,
- Intensive care,
- Emergency treatment of patients with serious illness or injury,
- Prehospital care and transport and catastrophe medicine, and
- Pain management.

Skills requirements

For Anaesthesia and Intensive Care, learning objectives a1-a6, b1-b3, b5 and c1-c13 apply.

Learning objectives a and b

Learning objective a1 Teamwork, leadership and pedagogy	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to take responsibility for his/her continuous learning in the workplace – Be able to exercise leadership in his/her daily work, including lead a healthcare team – Be able to take responsibility for the development of multi-professional teamwork – Be able to take responsibility for cooperation with patients and their families** – Be able to work in networks looking after the patient – Be able to collaborate with agencies outside the hospital healthcare system such as social welfare boards, agencies within the social services, schools and Försäkringskassan (the Swedish Social Insurance Agency) – Be able to present and explain medical information in a way that is understandable to the recipient, orally and in writing – Be able to plan and carry out teaching and training – Be able to supervise and instruct colleagues and students 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups Supervise under supervision Teach under supervision	

Learning objective a2 Ethics, diversity and equality	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate knowledge and understanding of the principles of medical ethics and be able to identify ethical problems and analyse these in a structured way – Be able to handle conflicts in values in his/her daily work – Be able to treat people as individuals and with respect regardless of gender, transgender identity or expression, ethnic origin, religion or other faith, disability, sexual orientation or age. 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups	

Learning objective a3 Infection Prevention and Control	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to take responsibility for the prevention and control of healthcare-associated infections 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor

Learning objective a4 Systematic quality and patient safety management	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Critically examine his/her own practice and be able to conduct a risk and outcome analysis – Be able to take responsibility for systematically implementing measures, processes and procedures to improve patient care – Be able to take responsibility for the integration of new technologies and procedures into his/her daily work as a doctor 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Quality and development work	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	

Learning objective a5 Medical science	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate a deeper knowledge and understanding of medical scientific methodology and ethical principles – Be able to critically examine and evaluate scientific papers – Demonstrate a scientific evidence based approach to his/her daily way of working and routines 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Independent written work based on scientific methodology	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	

Learning objective a6 Legislation and other regulations and the health and medical care system's organisation	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Demonstrate knowledge of the legislation and regulations which govern the healthcare system and its staff – Demonstrate knowledge of the health and medical care system's organisation and administration – Demonstrate knowledge of the health and medical care system's various financial control systems and their importance for the balancing of priorities in his/her daily work 	<p>Participation in one or more courses</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor</p>

Learning objective b1 Communication with patients and families	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to adapt his/her way of communicating based on the patient's and their relatives' individual needs and communication capabilities – Be able to give patients and their families difficult news with respect, empathy and sensitivity – Be able to support the patient's ability to manage a change in life situation as a result of an illness or disability – Be able to consult with patients and their families concerning the patient's self-care 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups Clinical attachment	

Learning objective b2 Prevention of disease and ill-health	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to guide patients in matters of lifestyle choices in order to: – Prevent the development of diseases associated with one or more lifestyle habits – Improve the prognosis in patients with diseases associated with one or more lifestyle habits 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Attendance at large professional gatherings	

Learning objective b3 Medicines	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Be able to adapt pharmacotherapy to the patient’s age, sex, weight, kidney and liver function as well as any comorbidity and other medication – Be able to assess the risks of interactions and side effects with pharmacotherapy – Be able to work with patients and their families to achieve compliance with medications – Be able to work with other parties in the patient care chain with regard to pharmacotherapy – Be able to critically review and evaluate scientific evidence surrounding pharmacotherapy – Demonstrate knowledge of the environmental impacts of pharmacotherapy – Demonstrate knowledge of the health economics aspects of pharmacotherapy 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained required competencies requirements issued by the course provider or the supervisor

Learning objective b5 Palliative care in the final stages of life	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Be able to identify the need for and initiate palliative care in the final stages of life – Be able to hold conversations with patients and their families concerning transiting to palliative care – Be able to apply the fundamental principles of palliative symptom relief with regard to physical, psychological, social and existential needs 	Clinical practice under supervision or alternatively clinical attachment	Certificate of completed programme activities and attained the required competences issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competences issued by the course provider or the supervisor
	<p>General recommendations</p> <p>Participation in seminars</p> <p>Attendance at large professional gatherings</p> <p>Clinical attachment</p> <p>Training in simulated environment</p>	

Learning objectives c

The specialist doctor shall have the skills required to be able to work independently at hospitals with a broad spectrum of emergency specialties, and with round-the-clock activities.

The specialist doctor shall have:

- Knowledge and skills in monitoring, supporting and restoring the body's vital functions in patients of all age groups having surgical interventions, major injuries or serious illnesses,
- Knowledge of anaesthesiology and medical technology,
- Knowledge of nosology, diagnostic techniques and therapeutic procedures, and
- The ability to make cost-benefit assessments.

In addition, the specialist doctor has to take the lead in managing critically ill patients within and outside the hospital. This includes the prioritisation of patients with different illnesses or injuries and stabilising the patient during transport.

An additional important skill is to be able to manage complex acute situations adequately, and to have the ability to make ethical decisions in the case of life-threatening conditions.

Learning objective c1	Programme activities	Assessment
The specialist doctor shall: – Master relevant basic scientific knowledge	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c2	Programme activities	Assessment
The specialist doctor shall: – Master the medical technology used in the specialty	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c3	Programme activities	Assessment
The specialist doctor shall: – Master risk assessment and perioperative care of patients undergoing surgical interventions as well as diagnostic and therapeutic procedures	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Clinical attachment Theoretical studies	

Learning objective c4	Programme activities	Assessment
The specialist doctor shall: – Master diagnostic and therapeutic procedures as well as risk scoring tools	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Clinical attachment Theoretical studies	

Learning objective c5	Programme activities	Assessment
The specialist doctor shall: – Master anaesthesia for surgical interventions and in diagnostic and therapeutic procedures	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Clinical attachment Theoretical studies	

Learning objective c6	Programme activities	Assessment
The specialist doctor shall: – Be able to manage intensive care for medical and surgical patients – Be able to identify and care for potential organ donors	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Clinical attachment Theoretical studies	

Learning objective c7	Programme activities	Assessment
The specialist doctor shall: – Have a professional approach to patients and their relatives when dealing with ethical decisions in life-threatening conditions and when stopping treatment	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in diagnostic and treatment conferences Clinical attachment	

Learning objective c8	Programme activities	Assessment
The specialist doctor shall: – Master the assessment and treatment of acute pain and labour pain – Be able to initiate the management of cancer pain	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Clinical attachment Theoretical studies	

Learning objective c9	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master the care of the critically ill and injured patients, including children – Be able to manage complex emergency situations under stress – Be able to take adequate steps when there is a suspicion of child neglect or abuse 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies Training in simulated environment	

Learning objective c10	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to manage patients injuries at sites outside hospital – Be able to manage the transport of patients with failing vital functions between and within hospitals – Have a good knowledge of catastrophe medicine 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies Training in simulated environment	

Learning objective c11	Programme activities	Assessment
The specialist doctor shall: – Be able to manage patients within at least one specialised area of anaesthesia with associated intensive care	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Clinical attachment Theoretical studies	

Learning objective c12	Programme activities	Assessment
The specialist doctor shall: – Have knowledge of the activities and approaches of other specialties relevant to a multi-disciplinary approach	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor

Learning objective c13	Programme activities	Assessment
The specialist doctor shall: – Be able to apply legislation and other regulations applicable to the specialty	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor

General recommendations

Programme structure

It is of the utmost importance that specialty training is through clinical attachments at the care units required for the specialty resident to fulfil the educational goals of the education programme. Depending on the structure of the current healthcare provider, this can entail specialty training at on one or more units. The units where the main part of the specialty training takes place should provide both anaesthesia and intensive care work with rostered on-call duty at the hospital, where the specialty trainee should be a member of the on-call group.

An introductory period should be spent on clinical practice in anaesthesia and intensive care. The goal is for the specialty trainee to be able to manage routine anaesthesia with associated perioperative care, so that he/she can then be rostered to be on-call for the hospital. The specialty trainee should devote the period after the introductory period to further their knowledge and skills in anaesthesia and intensive care.

Part of his/her intensive care clinical placement should be at a multi-disciplinary Intensive Care Unit. The programme should include long continuous periods at an intensive care unit as well as in specialised anaesthesia, that is, specialty anaesthesia training at a tertiary referral hospital providing anaesthesia with associated intensive care which, based on the pathophysiology of the illness and the complexity of the intervention and specific needs, constitute a specialised area.

The goal is for the specialty trainee to gain insight into illnesses which entail an increased perioperative risk and in illnesses relevant for intensive care. Through this, the specialty trainee should gain a better understanding of the activities and approaches of both his/her own specialty and other specialties, enabling excellent collaborations.

Throughout the entire programme, theoretical studies should be alternated with clinical practice. The periods of specialty training in clinical practice should be continuous. The theoretical training should take the form of self-study, learning activities at the clinic and participation in scientific gatherings.

Hand Surgery

Description of skills

The specialty of Hand Surgery is characterised by the investigation, assessment, diagnosis, surgical and non-surgical treatment and follow-up, and rehabilitation of all types of injuries and medical conditions of the hand and forearm. This skills area also includes conditions affecting the function of the hand and arm, for example deformities of the hand and arm, damage to the nerve stems of the upper limb and within the plexus brachialis, spasticity due to cerebral palsy or stroke and tetraplegia.

Practices in the specialty of Hand Surgery are in general highly specialised. Common and uncomplicated conditions and injuries should be able to be dealt with in basic surgical or orthopaedic care. In the Hand Surgery specialty, patients of all ages are treated - from new-borns and young people to the elderly.

Occupational injuries and conditions constitute an important part of a Hand Surgery practice, but a Hand Surgery specialist must also be prepared to treat patients with multiple ailments and patients with mental health problems. The Hand Surgery specialty also includes disability assessments and preventive measures.

The goal of Hand Surgery is reconstructive and to restore function, since the hand is also a sensory organ with a unique and integrated function in its ability to grip and for the sense of touch. Surgical procedures are key treatment options, sometimes in combination with medical procedures.

It is important that work in this area is integrated with habilitation and rehabilitation units. Collaboration with other specialties is essential, particularly with anaesthesia and intensive care, orthopaedics, plastic surgery, vascular surgery, radiology, clinical neurophysiology, rheumatology, paediatrics, and occupational and environmental medicine.

Skills requirements

For Hand Surgery, learning objectives a1-a6, b1-b5 and c1-c13 apply.

Learning objectives a and b

Learning objective a1 Teamwork, leadership and pedagogy	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Be able to take responsibility for his/her continuous learning in the workplace – Be able to exercise leadership in his/her daily work, including lead a healthcare team – Be able to take responsibility for the development of multi-professional teamwork – Be able to take responsibility for cooperation with patients and their families** – Be able to work in networks looking after the patient – Be able to collaborate with agencies outside the hospital healthcare system such as social welfare boards, agencies within the social services, schools and Försäkringskassan (the Swedish Social Insurance Agency) – Be able to present and explain medical information in a way that is understandable to the recipient, orally and in writing – Be able to plan and carry out teaching and training – Be able to supervise and instruct colleagues and students 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	<p>General recommendations</p> <p>Participation in intra- or inter-professional reflection in groups</p> <p>Supervise under supervision</p> <p>Teach under supervision</p>	

Learning objective a2 Ethics, diversity and equality	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate knowledge and understanding of the principles of medical ethics and be able to identify ethical problems and analyse these in a structured way – Be able to handle conflicts in values in his/her daily work – Be able to treat people as individuals and with respect regardless of gender, transgender identity or expression, ethnic origin, religion or other faith, disability, sexual orientation or age. 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups	

Learning objective a3 Infection Prevention and Control	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to take responsibility for the prevention and control of healthcare-associated infections 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor

Learning objective a4 Systematic quality and patient safety management	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Critically examine his/her own practice and be able to conduct a risk and outcome analysis – Be able to take responsibility for systematically implementing measures, processes and procedures to improve patient care – Be able to take responsibility for the integration of new technologies and procedures into his/her daily work as a doctor 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Quality and development work	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	

Learning objective a5 Medical science	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate a deeper knowledge and understanding of medical scientific methodology and ethical principles – Be able to critically examine and evaluate medical science information – Demonstrate a scientific evidence based approach to his/her daily way of working and routines 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Independent written work based on scientific methodology	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	

Learning objective a6 Legislation and other regulations and the health and medical care system's organisation	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Demonstrate knowledge of the legislation and regulations which govern the healthcare system and its staff – Demonstrate knowledge of the health and medical care system's organisation and administration – Demonstrate knowledge of the health and medical care system's various financial control systems and their importance for the balancing of priorities in his/her daily work 	<p>Participation in one or more courses</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor</p>

Learning objective b1 Communication with patients and families	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to adapt his/her way of communicating based on the patient's and their relatives' individual needs and communication capabilities – Be able to give patients and their families difficult news with respect, empathy and sensitivity – Be able to support the patient's ability to manage a change in life situation as a result of an illness or disability – Be able to consult with patients and their families concerning the patient's self-care 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups Clinical attachment	

Learning objective b2 Prevention of disease and ill-health	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to guide patients in matters of lifestyle choices in order to: – Prevent the development of diseases associated with one or more lifestyle habits – Improve the prognosis in patients with diseases associated with one or more lifestyle habits 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Attendance at large professional gatherings	

Learning objective b3 Medicines	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Be able to adapt pharmacotherapy to the patient’s age, sex, weight, kidney and liver function as well as any comorbidity and other medication – Be able to assess the risks of interactions and side effects with pharmacotherapy – Be able to work with patients and their families to achieve compliance with medications – Be able to work with other parties in the patient care chain with regard to pharmacotherapy – Be able to critically review and evaluate scientific evidence surrounding pharmacotherapy – Demonstrate knowledge of the environmental impacts of pharmacotherapy – Demonstrate knowledge of the health economics aspects of pharmacotherapy 	<p>Clinical practice under supervision</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the supervisor</p>
	<p>Participation in one or more courses</p>	<p>Certificate of completed programme activities and attained required competencies requirements issued by the course provider or the supervisor</p>

Learning objective b4 Insurance medicine	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to apply procedures in insurance medicine as part of the treatment of the individual patient – Be able to collaborate on insurance medicine matters relating to the individual patient with actors within and outside the healthcare system 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or supervisor
	General recommendations Attendance at large professional gatherings	

Learning objective b5 Palliative care in the final stages of life	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to identify the need for and initiate palliative care in the final stages of life – Be able to hold conversations with patients and their families concerning transiting to palliative care – Be able to apply the fundamental principles of palliative symptom relief with regard to physical, psychological, social and existential needs 	Clinical practice under supervision or alternatively clinical attachment	Certificate of completed programme activities and attained the required competences issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competences issued by the course provider or the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings Clinical attachment Training in simulated environment	

Learning objectives c

The specialist doctor shall master:

- Clinical examination procedures for the upper limb and its functional and topographical anatomy, which includes an understanding of the interaction between the central and the peripheral nervous systems.
- Basic clinical and surgical techniques.

In addition, the specialist doctor is to have knowledge of:

- Basic pathophysiology of the acute and chronic conditions affecting the musculoskeletal system throughout life.
- Investigation techniques, habilitation, rehabilitation, insurance medicine and issuing medical certificates.

To be able to diagnose and treat injuries and disorders, the specialist doctor shall also master clinical examination procedures for the upper limb and be able to assess diseases and injuries of the rest of the musculoskeletal system.

The specialist doctor is to have the knowledge required to manage:

- Acute and post-trauma conditions including burns,
- Degenerative and inflammatory diseases and conditions,
- Non-trauma nerve-related conditions,
- Other medical conditions of the upper limb.

In addition, the specialist doctor shall be able to manage other dysfunctions of the limb, for example related to cerebral palsy, stroke, tetraplegia and deformities.

The specialist doctor shall also master the initial management of general trauma situations and have knowledge of basic pain management as well as anaesthesia and intensive care related to musculoskeletal conditions.

In order to rebuild the function of the upper limb, the specialist doctor must have specific surgical skills and techniques for interventions in all the tissues such as skeleton, joints, muscles or tendons, blood vessels, nerves and skin. The specialist doctor shall be able to:

- Repair and rebuild skin and subcutaneous tissues, large and small blood vessels and peripheral nerves in both the upper and lower limb,
- Perform advanced tendon and muscle reconstruction, including tissue relocation using microsurgery techniques,
- Use hand surgery techniques in skeletal and tendon surgery.

Learning objective c1	Programme activities	Assessment
The specialist doctor shall: – Master basic clinical and surgical techniques	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies Training in simulated environment	

Learning objective c2	Programme activities	Assessment
The specialist doctor shall: – Have knowledge of basic pathophysiology and a good command of basic pain management and anaesthesia and Intensive care for conditions of the musculoskeletal system	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c3	Programme activities	Assessment
The specialist doctor shall: – Be able to initially manage trauma	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in group reflection, within and between professions Theoretical studies	

Learning objective c4	Programme activities	Assessment
The specialist doctor shall: – Master the clinical examination of the upper limb and its functional and topographical anatomy	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c5	Programme activities	Assessment
The specialist doctor shall: – Be able to assess the conditions and injuries of the musculoskeletal system	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c6	Programme activities	Assessment
The specialist doctor shall: – Be able to manage conditions and trauma related conditions within the skills area which require specific measures for plastic surgery, tissue relocation and microsurgery techniques	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in group reflection, within and between professions Theoretical studies	

Learning objective c7	Programme activities	Assessment
The specialist doctor shall: – Be able to manage acute injuries and their residual conditions, including rehabilitation	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in group reflection, within and between professions Theoretical studies	

Learning objective c8	Programme activities	Assessment
The specialist doctor shall: – Be able to manage the degenerative, post traumatic and inflammatory conditions within the skills area	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in group reflection, within and between professions Theoretical studies	

Learning objective c9	Programme activities	Assessment
The specialist doctor shall: – Be able to manage non traumatic diseases and conditions of the nervous system and other nerve related conditions within the skills area	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in group reflection, within and between professions Theoretical studies	

Learning objective c10	Programme activities	Assessment
The specialist doctor shall: – Be able to manage other diseases and conditions in the upper limb	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in group reflection, within and between professions Theoretical studies	

Learning objective c11	Programme activities	Assessment
The specialist doctor shall: – Be able to initially manage other dysfunctions of the upper limb, for example conditions related to cerebral palsy, stroke, tetraplegia and congenital deformities	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in group reflection, within and between professions Theoretical studies	

Learning objective c12	Programme activities	Assessment
The specialist doctor shall: – Be able to manage insurance medical questions and medical certificate matters within the skills area	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	



Learning objective c13	Programme activities	Assessment
The specialist doctor shall: – Be able to apply legislation and other regulations applicable to the specialty	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor

General recommendations

Programme structure

Specialist medical training in hand surgery should entail the logical, distinct and continuous acquisition of the skills required. The courses and periods of clinical practice should be carefully considered and conducted in accordance with an individual education programme. The aim is for the specialty resident to acquire the basic knowledge and skills required for independent on-call work and continued training in a hand surgery practice.

Specialist medical training can be divided into five steps, all of which include both theory and practice:

1. A brief initial period of specialty training at a hand surgery clinic for an introduction and general overview of the subject area,
2. Rotation training in orthopaedics, anaesthesia and intensive care, and plastic surgery. These are areas that should be included primarily in ancillary training. Other areas suitable for ancillary training could be vascular surgery, clinical neurophysiology, paediatric surgery or paediatric orthopaedics and medical imaging. Other ancillary training for brief periods of time might be considered in surgery and neurosurgery.
3. A longer continuous period of specialty training at a hand surgery clinic so that the specialty resident can acquire the basic skills within the area of hand surgery specified in the learning objectives.
4. Advanced studies in the different areas of the skills area which can be started during the latter part of the specialty training.
5. Continuous acquisition and development of skills in leadership, supervision and teaching, as well as science. This should be done throughout the entire programme.

General Surgery

Description of skills

The specialty of General Surgery is characterised by:

- Skills in injuries and diseases that require surgical interventions,
- Skills in surgical techniques and assessment of symptoms,
- Knowledge in pathophysiology, diagnosis and evaluation prior to surgical treatment and after treatment, and
- Expertise in emergency treatment in the case of multiple traumas.

The skills area covers patients of all ages who may need treatment that involves surgical instrument procedures.

Skills requirements

For General Surgery, learning objectives a1-a6, b1-b5 and c1-c13 apply.

Learning objectives a and b

Learning objective a1 Teamwork, leadership and pedagogy	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to take responsibility for his/her continuous learning in the workplace – Be able to exercise leadership in his/her daily work, including lead a healthcare team – Be able to take responsibility for the development of multi-professional teamwork – Be able to take responsibility for cooperation with patients and their families** – Be able to work in networks looking after the patient – Be able to collaborate with agencies outside the hospital healthcare system such as social welfare boards, agencies within the social services, schools and Försäkringskassan (the Swedish Social Insurance Agency) – Be able to present and explain medical information in a way that is understandable to the recipient, orally and in writing – Be able to plan and carry out teaching and training – Be able to supervise and instruct colleagues and students 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups Supervise under supervision Teach under supervision	

Learning objective a2 Ethics, diversity and equality	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate knowledge and understanding of the principles of medical ethics and be able to identify ethical problems and analyse these in a structured way – Be able to handle conflicts in values in his/her daily work – Be able to treat people as individuals and with respect regardless of gender, transgender identity or expression, ethnic origin, religion or other faith, disability, sexual orientation or age. 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups	

Learning objective a3 Infection Prevention and Control	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to take responsibility for the prevention and control of healthcare-associated infections 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor

Learning objective a4 Systematic quality and patient safety management	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Critically examine his/her own practice and be able to conduct a risk and outcome analysis – Be able to take responsibility for systematically implementing measures, processes and procedures to improve patient care – Be able to take responsibility for the integration of new technologies and procedures into his/her daily work as a doctor 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Quality and development work	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	

Learning objective a5 Medical science	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate a deeper knowledge and understanding of medical scientific methodology and ethical principles – Be able to critically examine and evaluate medical science information – Demonstrate a scientific evidence based approach to his/her daily way of working and routines 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Independent written work based on scientific methodology	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	

Learning objective a6 Legislation and other regulations and the health and medical care system's organisation	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Demonstrate knowledge of the legislation and regulations which govern the healthcare system and its staff – Demonstrate knowledge of the health and medical care system's organisation and administration – Demonstrate knowledge of the health and medical care system's various financial control systems and their importance for the balancing of priorities in his/her daily work 	<p>Participation in one or more courses</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor</p>

Learning objective b1 Communication with patients and families	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to adapt his/her way of communicating based on the patient's and their relatives' individual needs and communication capabilities – Be able to give patients and their families difficult news with respect, empathy and sensitivity – Be able to support the patient's ability to manage a change in life situation as a result of an illness or disability – Be able to consult with patients and their families concerning the patient's self-care 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups Clinical attachment	

Learning objective b2 Prevention of disease and ill-health	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to guide patients in matters of lifestyle choices in order to: – Prevent the development of diseases associated with one or more lifestyle habits – Improve the prognosis in patients with diseases associated with one or more lifestyle habits 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Attendance at large professional gatherings	

Learning objective b3 Medicines	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Be able to adapt pharmacotherapy to the patient’s age, sex, weight, kidney and liver function as well as any comorbidity and other medication – Be able to assess the risks of interactions and side effects with pharmacotherapy – Be able to work with patients and their families to achieve compliance with medications – Be able to work with other parties in the patient care chain with regard to pharmacotherapy – Be able to critically review and evaluate scientific evidence surrounding pharmacotherapy – Demonstrate knowledge of the environmental impacts of pharmacotherapy – Demonstrate knowledge of the health economics aspects of pharmacotherapy 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained required competencies requirements issued by the course provider or the supervisor

Learning objective b4 Insurance medicine	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to apply procedures in insurance medicine as part of the treatment of the individual patient – Be able to collaborate on insurance medicine matters relating to the individual patient with actors within and outside the healthcare system 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or supervisor
	General recommendations Attendance at large professional gatherings	

Learning objective b5 Palliative care in the final stages of life	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to identify the need for and initiate palliative care in the final stages of life – Be able to hold conversations with patients and their families concerning transiting to palliative care – Be able to apply the fundamental principles of palliative symptom relief with regard to physical, psychological, social and existential needs 	Clinical practice under supervision or alternatively clinical attachment	Certificate of completed programme activities and attained the required competences issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competences issued by the course provider or the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings Clinical attachment Training in simulated environment	

Learning objectives c

Specialist competence in General Surgery requires the specialty resident to fulfil the requirements in the knowledge base shared between General Surgery, Urology, Plastic Surgery, and Vascular Surgery.

This shared knowledge base entails having a good command of:

- Surgical pathophysiology,
- Basic surgical techniques,
- Initial trauma management,
- Acute diseases and urological diseases in adults and children requiring surgery,
- Basic nutrition treatment,
- Basic pain management,
- Basic surgical intensive care,
- The effects of anaesthesia, and
- The treatment of diseases of the dermis and hypodermis that may require surgical treatment.

In addition, the specialist in general surgery shall:

- Master the management of patients with hernias,
- Master the management of patients with diseases and conditions of and injuries to the upper and lower gastrointestinal tract,
- Master the management of conditions of the endocrine glands and mammary glands, and
- Master the initial management of injuries inside blood vessels and the urinary tract.

In addition, the specialist doctor shall adopt a holistic approach to the patient, in particular in the elderly with multimorbidity.

Learning objectives c1-C4 are common for all the surgical specialties General Surgery, Vascular Surgery, Plastic Surgery and Urology (shared knowledge base).

Learning objective c1	Programme activities	Assessment
The specialist doctor shall: – Master surgical pathophysiology, basic surgical techniques and the treatment of diseases of the dermis and hypodermis which may require surgical treatment	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies Training in simulated environment	

Learning objective c2	Programme activities	Assessment
The specialist doctor shall: – Master the assessment, diagnosis and initial treatment of acute surgical and urology diseases and conditions in children and adults	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c3	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master the initial management of major and minor trauma in children and adults – Be able to take adequate steps where there is a suspicion that a child is being neglected or abused 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c4	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master basic pain management, basic post-surgery intensive care, nutrition therapy, and anaesthesia effects 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Theoretical studies	

Learning objective c5	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master the diagnostics and operative management of uncomplicated inguinal hernia and abdominal hernia – Have knowledge of how to manage other hernias 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c6	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master the diagnosis and operative management of uncomplicated gallstone disease and surgical relief of ventricles – Master basic endoscopic diagnostics and therapy – Have knowledge of the management of patients with other diseases and conditions and injuries of the upper gastrointestinal tract requiring surgical intervention 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in diagnostic and treatment conferences Theoretical studies	

Learning objective c7	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master appendectomy, bowel resection, anastomosis, installation of stoma and basic proctology – Master diagnostic laparoscopy – Have knowledge of the management of patients with other diseases and conditions and injuries of the lower gastrointestinal tract requiring surgical intervention 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in diagnostic and treatment conferences Theoretical studies	

Learning objective c8	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master the investigation of breast changes – Master mastectomy, partial mastectomy and sentinel node biopsy – Master the investigation of mastitis and breast abscesses 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in diagnostic and treatment conferences Theoretical studies	

Learning objective c9	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master the surgical treatment of acute complications of neck surgery – Be able to manage the investigation of lumps on the neck – Have knowledge of the investigation and diagnosis of other endocrine conditions requiring surgical intervention 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c10	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master the initial management of acute vascular conditions requiring surgical intervention – Have knowledge of investigation, diagnosis and treatment of arterial and venous diseases and conditions – Be able to expose the arteria femoralis in the groin – Have knowledge of arterial anastomosis 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c11	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to manage the exploration of acute scrotal pain – Master managing acute urinary retention – Have knowledge of the initial management of diseases of the urinary tract 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Theoretical studies	

Learning objective c12	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Have knowledge of working in catastrophe medicine and a catastrophe medicine organisation 	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c13	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to apply legislation and other regulations applicable to the specialty 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor

General recommendations

Programme structure

Specialist medical training in General Surgery should begin with education and training in the shared knowledge base for General Surgery, Urology, Plastic Surgery and Vascular Surgery.

After completing education and training within the shared knowledge base, the specialty resident should begin the specific general surgery programme.

This programme should include:

- Clinical management with operation training
Participation in rostered surgical operation on-call duty
- Structured training in a simulated environment.

The aim should be as far as possible for the specialty resident to have a continuous residency and the courses that the specialty resident completes are relevant to his/her current residency. It may be relevant for the specialty resident to practice at a different unit in order to achieve the learning objectives of the programme.

The specialty resident should begin his/her skills development within communication, leadership and medical science during the first part of the programme in order to be able to utilise this acquired knowledge in parallel and integrated with the rest of the programme.

Vascular Surgery

Description of skills

The specialty of Vascular Surgery is characterised by:

Knowledge and skills in the management of diseases and injuries which involve all of the body's blood vessels outside the heart and brain and which are treated with surgical procedures, and

Skills in open and endovascular operation techniques.

The skills area covers both adults and children.

Skills requirements

For Vascular Surgery, learning objectives a1-a6, b1-b5 and c1-c13 apply.

Learning objectives a and b

Learning objective a1 Teamwork, leadership and pedagogy	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to take responsibility for his/her continuous learning in the workplace – Be able to exercise leadership in his/her daily work, including lead a healthcare team – Be able to take responsibility for the development of multi-professional teamwork – Be able to take responsibility for cooperation with patients and their families** – Be able to work in networks looking after the patient – Be able to collaborate with agencies outside the hospital healthcare system such as social welfare boards, agencies within the social services, schools and Försäkringskassan (the Swedish Social Insurance Agency) – Be able to present and explain medical information in a way that is understandable to the recipient, orally and in writing – Be able to plan and carry out teaching and training – Be able to supervise and instruct colleagues and students 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups Supervise under supervision Teach under supervision	

Learning objective a2 Ethics, diversity and equality	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate knowledge and understanding of the principles of medical ethics and be able to identify ethical problems and analyse these in a structured way – Be able to handle conflicts in values in his/her daily work – Be able to treat people as individuals and with respect regardless of gender, transgender identity or expression, ethnic origin, religion or other faith, disability, sexual orientation or age. 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups	

Learning objective a3 Infection Prevention and Control	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to take responsibility for the prevention and control of healthcare-associated infections 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor

Learning objective a4 Systematic quality and patient safety management	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Critically examine his/her own practice and be able to conduct a risk and outcome analysis – Be able to take responsibility for systematically implementing measures, processes and procedures to improve patient care – Be able to take responsibility for the integration of new technologies and procedures into his/her daily work as a doctor 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Quality and development work	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	

Learning objective a5 Medical science	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate a deeper knowledge and understanding of medical scientific methodology and ethical principles – Be able to critically examine and evaluate medical science information – Demonstrate a scientific evidence based approach to his/her daily way of working and routines 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Independent written work based on scientific methodology	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	

Learning objective a6 Legislation and other regulations and the health and medical care system's organisation	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Demonstrate knowledge of the legislation and regulations which govern the healthcare system and its staff – Demonstrate knowledge of the health and medical care system's organisation and administration – Demonstrate knowledge of the health and medical care system's various financial control systems and their importance for the balancing of priorities in his/her daily work 	<p>Participation in one or more courses</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor</p>

Learning objective b1 Communication with patients and families	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to adapt his/her way of communicating based on the patient’s and their relatives’ individual needs and communication capabilities – Be able to give patients and their families difficult news with respect, empathy and sensitivity – Be able to support the patient's ability to manage a change in life situation as a result of an illness or disability – Be able to consult with patients and their families concerning the patient's self-care 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups Clinical attachment	

Learning objective b2 Prevention of disease and ill-health	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to guide patients in matters of lifestyle choices in order to: – Prevent the development of diseases associated with one or more lifestyle habits – Improve the prognosis in patients with diseases associated with one or more lifestyle habits 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Attendance at large professional gatherings	

Learning objective b3 Medicines	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Be able to adapt pharmacotherapy to the patient’s age, sex, weight, kidney and liver function as well as any comorbidity and other medication – Be able to assess the risks of interactions and side effects with pharmacotherapy – Be able to work with patients and their families to achieve compliance with medications – Be able to work with other parties in the patient care chain with regard to pharmacotherapy – Be able to critically review and evaluate scientific evidence surrounding pharmacotherapy – Demonstrate knowledge of the environmental impacts of pharmacotherapy – Demonstrate knowledge of the health economics aspects of pharmacotherapy 	<p>Clinical practice under supervision</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the supervisor</p>
	<p>Participation in one or more courses</p>	<p>Certificate of completed programme activities and attained required competencies requirements issued by the course provider or the supervisor</p>

Learning objective b4 Insurance medicine	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to apply procedures in insurance medicine as part of the treatment of the individual patient – Be able to collaborate on insurance medicine matters relating to the individual patient with actors within and outside the healthcare system 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or supervisor
	General recommendations Attendance at large professional gatherings	

Learning objective b5 Palliative care in the final stages of life	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to identify the need for and initiate palliative care in the final stages of life – Be able to hold conversations with patients and their families concerning transiting to palliative care – Be able to apply the fundamental principles of palliative symptom relief with regard to physical, psychological, social and existential needs 	Clinical practice under supervision or alternatively clinical attachment	Certificate of completed programme activities and attained the required competences issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competences issued by the course provider or the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings Clinical attachment Training in simulated environment	

Learning objectives c

Specialist competence in Vascular Surgery requires the specialty resident to fulfil the requirements in the knowledge base shared between General Surgery, Urology, Plastic Surgery, and Vascular Surgery.

This shared knowledge base entails having a good command of:

- Surgical pathophysiology,
- Basic surgical techniques,
- Initial trauma management,
- Acute diseases and urological diseases in adults and children requiring surgery,
- Basic nutrition therapy,
- Basic pain management,
- Basic surgical intensive care,
- The effects of anaesthesia, and
- The treatment of diseases of the dermis and hypodermis that may require surgical treatment.

In addition, the specialist doctor in vascular surgery is to master:

- The pathophysiology and vessel anatomy related to vascular surgery, and
- The assessment, diagnosis, prevention, basic treatment and care of patients with peripheral vascular disease.

Of particular importance are the most common vascular surgery interventions, that is, open and endovascular operation techniques and their indications. Relevant knowledge in vascular medicine as well as radiation biology, radiation physics and radiation protection are also required for vascular surgery practice.

In addition, the specialist doctor shall adopt a holistic approach to the patient, in particular in the elderly with multimorbidity.

Learning objectives c1-c4 are common for all the surgical specialties General Surgery, Vascular Surgery, Plastic Surgery and Urology (shared knowledge base).

Learning objective c1	Programme activities	Assessment
The specialist doctor shall: – Master surgical pathophysiology, basic surgical techniques and the treatment of diseases of the dermis and hypodermis which may require surgical treatment	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies Training in simulated environment	

Learning objective c2	Programme activities	Assessment
The specialist doctor shall: – Master the assessment, diagnosis and initial treatment of acute surgical and urology diseases and conditions in children and adults	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c3	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master the initial management of major and minor trauma in children and adults – Be able to take adequate steps where there is a suspicion that a child is being neglected or abused 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c4	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master basic pain management, basic post-surgery intensive care, nutrition therapy and anaesthesia effects 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Theoretical studies	

Learning objective c5	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master the initial management of vascular trauma – Have knowledge of open and endovascular surgical control of major haemorrhages 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c6	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master the initial management of acute and chronic occlusive diseases in the arteries of the extremities – Have knowledge of the treatment of acute and chronic occlusive diseases in the arteries of the extremities – Have knowledge of the initial management of occlusive diseases of the aorta, visceral arteries and renal arteries – Be cognisant of the treatment of occlusive diseases of the aorta, visceral arteries and renal arteries 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c7	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master the initial management of abdominal aortic aneurysm – Have knowledge of the treatment of abdominal aortic aneurysm – Be cognisant of the management of visceral artery aneurysms – Have knowledge of the initial management of thoracic aneurysm and aortic dissection – Be cognisant of the treatment of thoracic aneurysms and aortic dissection 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c8	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Have knowledge of the management and treatment of diseases of the carotid arteries – Be cognisant of diseases in the thoracic apertures 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c9	Programme activities	Assessment
The specialist doctor shall: – Have knowledge of the management and treatment of superficial venous insufficiency – Be cognisant of the management and treatment of deep venous insufficiency	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c10	Programme activities	Assessment
The specialist doctor shall: – Have knowledge of temporary and permanent venous catheters and accesses for haemodialysis	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c11	Programme activities	Assessment
The specialist doctor shall: – Have knowledge of vascular medicine that is relevant to the specialty	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c12	Programme activities	Assessment
The specialist doctor shall: – Have knowledge of X-ray diagnostic methods for vascular diseases – Have knowledge of radiation biology and radiation physics – Master the radiation protection that is relevant for practice in this specialty	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	



Learning objective c13	Programme activities	Assessment
The specialist doctor shall: – Be able to apply legislation and other regulations applicable to the specialty	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor

General recommendations

Programme structure

Specialist medical training in Vascular Surgery should begin with education and training in the shared knowledge base for General Surgery, Urology, Plastic Surgery and Vascular Surgery.

After this, the specialty resident should begin his/her training in vascular surgery. This training should include:

- The management and treatment of occlusive artery disease, aneurysm disease, diseases of the carotid arteries, and venous diseases
- Progressive training in increasingly advanced open and endovascular surgical interventions
- Experience of abdominal surgery, clinical physiology, haemorrhage control, diagnostic imaging, radiation protection and vascular medicine.

The training should also cover:

- Clinical management with operation training
- Participation in the vascular surgery on-call duty roster

The training should provide the specialty resident with a logical, clear and continuous skills development.

The learning objectives and learning steps (including courses) should guide the structure of each individual's programme. It may be relevant for the specialty resident to practice at a different unit in order to achieve the learning objectives of the programme.

The specialty resident should begin his/her skills development within communication, leadership and medical science during the first part of the programme and this should then continue in parallel and integrated with the rest of the programme.

Orthopaedics

Description of skills

The specialty of Orthopaedics is characterised by advanced knowledge and skills in congenital and acquired diseases of and injuries to the musculoskeletal system. This skills area includes both acute and non-acute diseases and injuries: fractures, degenerative and inflammatory conditions of the joints, tendons, muscles and nerves, back disorders and metabolic bone disorders. Interventions include surgical, pharmacological and rehabilitation measures. In addition to investigation, diagnosis, treatment and follow-up, this skills area includes individual and general preventive measures.

Diagnoses are based on analysis of the patient's history and extensive clinical investigation and supplemented by radiological and endoscopic investigations and scintigraphy and laboratory investigations. Treatment methods include surgery, pharmacotherapy, physiotherapy, occupational therapy, orthopaedic aids, social support measures, habilitation, rehabilitation and health education. The treatments have a distinctive patient perspective: it is important that the doctor and patient jointly put together a treatment plan. It is also important to have continuity in the patient-doctor relationship.

Collaboration with other specialties is important to the skills area. These include anaesthesia and intensive care, radiology, rheumatology, physical and rehabilitation medicine, paediatrics, child and adolescent neurology with habilitation, geriatrics, family medicine, neurology, oncology, infectious diseases, internal medicine and occupational and environmental medicine as well as insurance medicine as an area of knowledge.

Skills requirements

For Orthopaedics, learning objectives a1-a6, b1-b5 and c1-c13 apply:

Learning objectives a and b

Learning objective a1 Teamwork, leadership and pedagogy	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Be able to take responsibility for his/her continuous learning in the workplace – Be able to exercise leadership in his/her daily work, including lead a healthcare team – Be able to take responsibility for the development of multi-professional teamwork – Be able to take responsibility for cooperation with patients and their families** – Be able to work in networks looking after the patient – Be able to collaborate with agencies outside the hospital healthcare system such as social welfare boards, agencies within the social services, schools and Försäkringskassan (the Swedish Social Insurance Agency) – Be able to present and explain medical information in a way that is understandable to the recipient, orally and in writing – Be able to plan and carry out teaching and training – Be able to supervise and instruct colleagues and students 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	<p>General recommendations</p> <ul style="list-style-type: none"> Participation in intra- or inter-professional reflection in groups Supervise under supervision Teach under supervision 	

Learning objective a2 Ethics, diversity and equality	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate knowledge and understanding of the principles of medical ethics and be able to identify ethical problems and analyse these in a structured way – Be able to handle conflicts in values in his/her daily work – Be able to treat people as individuals and with respect regardless of gender, transgender identity or expression, ethnic origin, religion or other faith, disability, sexual orientation or age. 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups	

Learning objective a3 Infection Prevention and Control	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to take responsibility for the prevention and control of healthcare-associated infections 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor

Learning objective a4 Systematic quality and patient safety management	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Critically examine his/her own practice and be able to conduct a risk and outcome analysis – Be able to take responsibility for systematically implementing measures, processes and procedures to improve patient care – Be able to take responsibility for the integration of new technologies and procedures into his/her daily work as a doctor 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Quality and development work	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	

Learning objective a5 Medical science	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate a deeper knowledge and understanding of medical scientific methodology and ethical principles – Be able to critically examine and evaluate medical science information – Demonstrate a scientific evidence based approach to his/her daily way of working and routines 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Independent written work based on scientific methodology	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	

Learning objective a6 Legislation and other regulations and the health and medical care system's organisation	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Demonstrate knowledge of the legislation and regulations which govern the healthcare system and its staff – Demonstrate knowledge of the health and medical care system's organisation and administration – Demonstrate knowledge of the health and medical care system's various financial control systems and their importance for the balancing of priorities in his/her daily work 	<p>Participation in one or more courses</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor</p>

Learning objective b1 Communication with patients and families	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to adapt his/her way of communicating based on the patient's and their relatives' individual needs and communication capabilities – Be able to give patients and their families difficult news with respect, empathy and sensitivity – Be able to support the patient's ability to manage a change in life situation as a result of an illness or disability – Be able to consult with patients and their families concerning the patient's self-care 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups Clinical attachment	

Learning objective b2 Prevention of disease and ill-health	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to guide patients in matters of lifestyle choices in order to: – Prevent the development of diseases associated with one or more lifestyle habits – Improve the prognosis in patients with diseases associated with one or more lifestyle habits 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Attendance at large professional gatherings	

Learning objective b3 Medicines	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Be able to adapt pharmacotherapy to the patient’s age, sex, weight, kidney and liver function as well as any comorbidity and other medication – Be able to assess the risks of interactions and side effects with pharmacotherapy – Be able to work with patients and their families to achieve compliance with medications – Be able to work with other parties in the patient care chain with regard to pharmacotherapy – Be able to critically review and evaluate scientific evidence surrounding pharmacotherapy – Demonstrate knowledge of the environmental impacts of pharmacotherapy – Demonstrate knowledge of the health economics aspects of pharmacotherapy 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained required competencies requirements issued by the course provider or the supervisor

Learning objective b4 Insurance medicine	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to apply procedures in insurance medicine as part of the treatment of the individual patient – Be able to collaborate on insurance medicine matters relating to the individual patient with actors within and outside the healthcare system 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or supervisor
	General recommendations Attendance at large professional gatherings	

Learning objective b5 Palliative care in the final stages of life	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to identify the need for and initiate palliative care in the final stages of life – Be able to hold conversations with patients and their families concerning transiting to palliative care – Be able to apply the fundamental principles of palliative symptom relief with regard to physical, psychological, social and existential needs 	Clinical practice under supervision or alternatively clinical attachment	Certificate of completed programme activities and attained the required competences issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competences issued by the course provider or the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings Clinical attachment Training in simulated environment	

Learning objectives c

The specialist doctor shall:

- Master the basic clinical and surgical techniques as well as basic pathophysiology of the acute and chronic conditions of the musculoskeletal system in all ages throughout life,
- Have knowledge of radiation physics, radiation biology and radiation protection,
- Master the basic pain management, intensive care and anaesthesia in disorders of the musculoskeletal system,
- Be able to initially manage general trauma situations,
- Have knowledge of habilitation and rehabilitation measures, as well as prevention,
- Be able to assess and initially manage common orthopaedic trauma in children and adults,
- Be able to surgically manage the most frequently occurring fractures,
- Be able to draw up a management plan for serious injuries in consultation with experienced colleagues,
- Have the necessary knowledge and skills to be able to assess, diagnose and manage the common pain conditions in the spine and joints,
- Be able to identify and initiate the management of potentially disabling conditions,
- Be able to manage orthopaedic consequences of metabolic and circulatory disorders as well as infections, and
- Be able to cooperate in teams.

Learning objective c1	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master basic clinical and surgical techniques – Have knowledge of radiation physics, radiation biology and radiation protection, 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies Training in simulated environment	

Learning objective c2	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Have knowledge of basic pathophysiology and a good command of basic pain management, Intensive care and anaesthesia for conditions of the musculoskeletal system 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Theoretical studies	

Learning objective c3	Programme activities	Assessment
The specialist doctor shall: – Be able to initially manage trauma	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in diagnostic and treatment conferences Theoretical studies	

Learning objective c4	Programme activities	Assessment
The specialist doctor shall: – Be able to manage orthopaedic trauma, fractures and other emergencies in the musculoskeletal system	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in diagnostic and treatment conferences Theoretical studies	

Learning objective c5	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to manage injuries, diseases and pain conditions of the musculoskeletal system in children – Be able to take adequate steps where there is a suspicion that a child is being neglected or abused 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in diagnostic and treatment conferences Theoretical studies	

Learning objective c6	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to manage injuries, diseases and pain conditions in the back 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in diagnostic and treatment conferences Theoretical studies	

Learning objective c7	Programme activities	Assessment
The specialist doctor shall: – Be able to manage injuries, diseases and pain conditions in the upper limb	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in diagnostic and treatment conferences Theoretical studies	

Learning objective c8	Programme activities	Assessment
The specialist doctor shall: – Be able to manage injuries, diseases and pain conditions in the hip and knee joints	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in diagnostic and treatment conferences Theoretical studies	

Learning objective c9	Programme activities	Assessment
The specialist doctor shall: – Be able to manage injuries, diseases and pain conditions in feet and ankle joints	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in diagnostic and treatment conferences Theoretical studies	

Learning objective c10	Programme activities	Assessment
The specialist doctor shall: – Be able to initially manage tumours in the musculoskeletal system	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c11	Programme activities	Assessment
The specialist doctor shall: – Be able to manage metabolic and circulatory diseases with orthopaedic consequences and musculoskeletal infections	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in diagnostic and treatment conferences Theoretical studies	

Learning objective c12	Programme activities	Assessment
The specialist doctor shall: – Be able to manage repetitive strain injuries, habilitation and rehabilitation	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	



Learning objective c13	Programme activities	Assessment
The specialist doctor shall: – Be able to apply legislation and other regulations applicable to the specialty	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor

General recommendations

Programme structure

Specialist medical training should entail the logical, distinct and continuous acquisition of the skills required. It is very important that the objectives and all parts of the programme, including courses, are well thought through so that the specialty resident can fulfil the requirements in the learning objectives.

The specialty training can be divided into four steps. All steps contain both theory and practice.

Step 1 should focus on acute orthopaedics and traumatology.

Step 2 should include basic orthopaedics, primarily hip replacements, arthroscopic interventions in the knee joint, amputations, uncomplicated hand and foot surgery, and continued advanced study in the area of fracture surgery.

Step 3 should include relevant ancillary training, primarily through specialty training in anaesthesia and intensive care. The specialty resident should also be given the opportunity to complete supplementary ancillary training and advanced training within one or more of the following specialties: hand surgery, neurosurgery, surgery, vascular surgery, plastic surgery, radiology, infectious diseases and rheumatology.

Step 4 should contain continuing education within the specialty and its specific areas such as musculoskeletal tumour diseases, arthroplasty, paediatric orthopaedics and spine orthopaedics, as well as in the disorders and conditions of the upper and lower limbs and their management. In some cases, there may be good reason to continue the trainee's education through specialty training at another unit.

The development of competence in leadership, supervision and teaching as well as basic science education should be seen as an integral parts of the program and this is to occur continuously throughout the programme.

Plastic Surgery

Description of skills

The specialty of Plastic Surgery is characterised by:

- The investigation, diagnosis, non-surgical and surgical treatment and follow-up of external congenital deformities,
- The investigation, diagnosis, non-surgical and surgical treatment and follow-up of acquired external deformities and functional impairments caused by tumours, injuries or other changes in the skin, mucous membranes and connective tissue,
- Assessments based on a broad understanding of the epidemiology and diagnosis of the groups of diseases/conditions and injuries above, and
- Skills in the assessment of acute injuries and diseases as well as planned plastic surgery procedures for congenital defects and deformities or those which have arisen from previous trauma or disease.

Knowledge of the fundamental principles and concepts are central to this skills area as are well-developed practical skills in several forms of examination and surgical procedures which allow for planning and performing specific operations.

Plastic surgery technology assumes multi-disciplinary collaboration, in particular with head and neck surgery, orthopaedics, neurosurgery and general surgery.

Skills requirements

For Plastic Surgery, learning objectives a1-a6, b1-b5 and c1-c13 apply.

Learning objectives a and b

Learning objective a1 Teamwork, leadership and pedagogy	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Be able to take responsibility for his/her continuous learning in the workplace – Be able to exercise leadership in his/her daily work, including lead a healthcare team – Be able to take responsibility for the development of multi-professional teamwork – Be able to take responsibility for cooperation with patients and their families** – Be able to work in networks looking after the patient – Be able to collaborate with agencies outside the hospital healthcare system such as social welfare boards, agencies within the social services, schools and Försäkringskassan (the Swedish Social Insurance Agency) – Be able to present and explain medical information in a way that is understandable to the recipient, orally and in writing – Be able to plan and carry out teaching and training – Be able to supervise and instruct colleagues and students 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	<p>General recommendations</p> <ul style="list-style-type: none"> Participation in intra- or inter-professional reflection in groups Supervise under supervision Teach under supervision 	

Learning objective a2 Ethics, diversity and equality	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate knowledge and understanding of the principles of medical ethics and be able to identify ethical problems and analyse these in a structured way – Be able to handle conflicts in values in his/her daily work – Be able to treat people as individuals and with respect regardless of gender, transgender identity or expression, ethnic origin, religion or other faith, disability, sexual orientation or age. 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups	

Learning objective a3 Infection Prevention and Control	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to take responsibility for the prevention and control of healthcare-associated infections 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor

Learning objective a4 Systematic quality and patient safety management	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Critically examine his/her own practice and be able to conduct a risk and outcome analysis – Be able to take responsibility for systematically implementing measures, processes and procedures to improve patient care – Be able to take responsibility for the integration of new technologies and procedures into his/her daily work as a doctor 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Quality and development work	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	

Learning objective a5 Medical science	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate a deeper knowledge and understanding of medical scientific methodology and ethical principles – Be able to critically examine and evaluate medical science information – Demonstrate a scientific evidence based approach to his/her daily way of working and routines 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Independent written work based on scientific methodology	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	

Learning objective a6 Legislation and other regulations and the health and medical care system's organisation	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Demonstrate knowledge of the legislation and regulations which govern the healthcare system and its staff – Demonstrate knowledge of the health and medical care system's organisation and administration – Demonstrate knowledge of the health and medical care system's various financial control systems and their importance for the balancing of priorities in his/her daily work 	<p>Participation in one or more courses</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor</p>

Learning objective b1 Communication with patients and families	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to adapt his/her way of communicating based on the patient’s and their relatives’ individual needs and communication capabilities – Be able to give patients and their families difficult news with respect, empathy and sensitivity – Be able to support the patient's ability to manage a change in life situation as a result of an illness or disability – Be able to consult with patients and their families concerning the patient's self-care 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups Clinical attachment	

Learning objective b2 Prevention of disease and ill-health	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to guide patients in matters of lifestyle choices in order to: – Prevent the development of diseases associated with one or more lifestyle habits – Improve the prognosis in patients with diseases associated with one or more lifestyle habits 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Attendance at large professional gatherings	

Learning objective b3 Medicines	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Be able to adapt pharmacotherapy to the patient’s age, sex, weight, kidney and liver function as well as any comorbidity and other medication – Be able to assess the risks of interactions and side effects with pharmacotherapy – Be able to work with patients and their families to achieve compliance with medications – Be able to work with other parties in the patient care chain with regard to pharmacotherapy – Be able to critically review and evaluate scientific evidence surrounding pharmacotherapy – Demonstrate knowledge of the environmental impacts of pharmacotherapy – Demonstrate knowledge of the health economics aspects of pharmacotherapy 	<p>Clinical practice under supervision</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the supervisor</p>
	<p>Participation in one or more courses</p>	<p>Certificate of completed programme activities and attained required competencies requirements issued by the course provider or the supervisor</p>

Learning objective b4 Insurance medicine	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to apply procedures in insurance medicine as part of the treatment of the individual patient – Be able to collaborate on insurance medicine matters relating to the individual patient with actors within and outside the healthcare system 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or supervisor
	General recommendations Attendance at large professional gatherings	

Learning objective b5 Palliative care in the final stages of life	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to identify the need for and initiate palliative care in the final stages of life – Be able to hold conversations with patients and their families concerning transiting to palliative care – Be able to apply the fundamental principles of palliative symptom relief with regard to physical, psychological, social and existential needs 	Clinical practice under supervision or alternatively clinical attachment	Certificate of completed programme activities and attained the required competences issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competences issued by the course provider or the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings Clinical attachment Training in simulated environment	

Learning objectives c

Specialist competence in Plastic Surgery requires the specialty resident to fulfil the requirements in the knowledge base shared between General Surgery, Urology, Plastic Surgery, and Vascular Surgery.

This shared knowledge base entails having a good command of:

- Surgical pathophysiology,
- Basic surgical techniques,
- Initial trauma management,
- Acute diseases and urological diseases in adults and children requiring surgery,
- Basic nutrition treatment,
- Basic pain management,
- Basic surgical intensive care,
- The effects of anaesthesia, and
- The treatment of diseases of the dermis and hypodermis that may require surgical treatment.

In addition, the specialist doctor in plastic surgery is to:

- Master the basic plastic surgery techniques,
- Have knowledge of advanced plastic surgery technology,
- Master the management and treatment of tumours and wounds in the skin and soft tissue,
- Master the diagnosis and initial management of burns and of trauma resulting in skin and soft-tissue damage,
- Master the diagnosis and initial management of bone and nerve damage in the facial region,
- Master the assessment, diagnosis and treatment of functional disorders in the groups of diseases and injuries presented for treatment in plastic surgery,
- Have knowledge of the diagnosis and treatment of conditions that require breast reconstruction, and
- Have knowledge of the investigation, diagnosis and treatment of craniofacial deformities and other deformities that require the use of plastic surgery technology.

In addition, the specialist doctor shall adopt a holistic approach to the patient, in particular in the elderly with multimorbidity.

Learning objectives c1-c4 are common for all the surgical specialties General Surgery, Vascular Surgery, Plastic Surgery and Urology (shared knowledge base).

Learning objective c1	Programme activities	Assessment
The specialist doctor shall: – Master surgical pathophysiology, basic surgical techniques and the treatment of diseases of the dermis and hypodermis which may require surgical treatment	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies Training in simulated environment	

Learning objective c2	Programme activities	Assessment
The specialist doctor shall: – Master the assessment, diagnosis and initial treatment of acute surgical and urology diseases and conditions in children and adults	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c3	Programme activities	Assessment
The specialist doctor shall: – Master the initial management of major and minor trauma in children and adults – Be able to take adequate steps where there is a suspicion that a child is being neglected or abused	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c4	Programme activities	Assessment
The specialist doctor shall: – Master basic pain management, basic post-surgery intensive care, nutrition therapy and anaesthesia effects	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Theoretical studies	

Learning objective c5	Programme activities	Assessment
The specialist doctor shall: – Master the basic plastic surgery technology and have knowledge of advanced plastic surgery technology for the reconstruction of the tissue deformaties	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in diagnostic and treatment conferences	

Learning objective c6	Programme activities	Assessment
The specialist doctor shall: – Master the management and treatment of patients with skin and soft tissue tumours	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in diagnostic and treatment conferences	

Learning objective c7	Programme activities	Assessment
The specialist doctor shall: – Master the diagnosis and initial management of burns and have knowledge of the treatment of major burns	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c8	Programme activities	Assessment
The specialist doctor shall: – Master the diagnosis and initial processing of trauma involving skin and soft-tissue damage, and in the craniofacial region also bone and nerve damage	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c9	Programme activities	Assessment
The specialist doctor shall: – Master the assessment, diagnosis and treatment of wounds that require plastic surgery technology	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c10	Programme activities	Assessment
The specialist doctor shall: – Master the assessment, diagnosis and treatment of cosmetic and functional conditions in the groups of diseases and injuries presented for treatment in plastic surgery	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c11	Programme activities	Assessment
The specialist doctor shall: – Master the diagnosis and treatment of conditions that require breast reconstruction	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in diagnostic and treatment conferences Theoretical studies	

Learning objective c12	Programme activities	Assessment
The specialist doctor shall: – Have knowledge of the investigation, diagnosis and treatment of craniofacial deformities and other deformities that require the use of plastic surgery technology.	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in diagnostic and treatment conferences Theoretical studies	



Learning objective c13	Programme activities	Assessment
The specialist doctor shall: – Be able to apply legislation and other regulations applicable to the specialty	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor

General recommendations

Programme structure

Specialist medical training in Plastic Surgery should begin with education and training in the shared knowledge base for General Surgery, Urology, Plastic Surgery and Vascular Surgery.

At an early stage in the programme, the specialty resident should receive a block of education and training in basic plastic surgery technology. It is important that this is done at a plastic surgery clinic.

During the latter part of the programme, more specific plastic surgery training should be carried out.

It is crucial that the specialty resident receives extensive training in both plastic surgery techniques and in patient selection and assessment, as this is fundamental to the specialty.

Courses, clinical attachments and theoretical studies should be integrated with the specialty resident's current residency. The specialty resident should begin educating him/herself in the general skills required for the specialty at an early stage, and this should then continue as a natural and integral part of the entire programme.

Urology

Description of skills

The specialty of Urology is characterised by knowledge of congenital and acquired diseases and conditions of the urinary tract and the male genitals, as well as damage/injury to these.

Surgical skills, but also knowledge of other methods of treatment, is central to this skills area. Important areas include pharmacological, minimally invasive and paramedical treatment principles for the treatment of urological tumour diseases, symptoms from the lower urinary tract, obstructions in the flow in the upper urinary tract, calculus diseases, sexual dysfunction and pain palliation.

Skills requirements

For Urology, learning objectives a1-a6, b1-b5 and c1-c13 apply.

Learning objectives a and b

Learning objective a1 Teamwork, leadership and pedagogy	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Be able to take responsibility for his/her continuous learning in the workplace – Be able to exercise leadership in his/her daily work, including lead a healthcare team – Be able to take responsibility for the development of multi-professional teamwork – Be able to take responsibility for cooperation with patients and their families** – Be able to work in networks looking after the patient – Be able to collaborate with agencies outside the hospital healthcare system such as social welfare boards, agencies within the social services, schools and Försäkringskassan (the Swedish Social Insurance Agency) – Be able to present and explain medical information in a way that is understandable to the recipient, orally and in writing – Be able to plan and carry out teaching and training – Be able to supervise and instruct colleagues and students 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	<p>General recommendations</p> <ul style="list-style-type: none"> Participation in intra- or inter-professional reflection in groups Supervise under supervision Teach under supervision 	

Learning objective a2 Ethics, diversity and equality	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate knowledge and understanding of the principles of medical ethics and be able to identify ethical problems and analyse these in a structured way – Be able to handle conflicts in values in his/her daily work – Be able to treat people as individuals and with respect regardless of gender, transgender identity or expression, ethnic origin, religion or other faith, disability, sexual orientation or age. 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups	

Learning objective a3 Infection Prevention and Control	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to take responsibility for the prevention and control of healthcare-associated infections 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor

Learning objective a4 Systematic quality and patient safety management	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Critically examine his/her own practice and be able to conduct a risk and outcome analysis – Be able to take responsibility for systematically implementing measures, processes and procedures to improve patient care – Be able to take responsibility for the integration of new technologies and procedures into his/her daily work as a doctor 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Quality and development work	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	

Learning objective a5 Medical science	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate a deeper knowledge and understanding of medical scientific methodology and ethical principles – Be able to critically examine and evaluate medical science information – Demonstrate a scientific evidence based approach to his/her daily way of working and routines 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Independent written work based on scientific methodology	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	

Learning objective a6 Legislation and other regulations and the health and medical care system's organisation	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Demonstrate knowledge of the legislation and regulations which govern the healthcare system and its staff – Demonstrate knowledge of the health and medical care system's organisation and administration – Demonstrate knowledge of the health and medical care system's various financial control systems and their importance for the balancing of priorities in his/her daily work 	<p>Participation in one or more courses</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor</p>

Learning objective b1 Communication with patients and families	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to adapt his/her way of communicating based on the patient's and their relatives' individual needs and communication capabilities – Be able to give patients and their families difficult news with respect, empathy and sensitivity – Be able to support the patient's ability to manage a change in life situation as a result of an illness or disability – Be able to consult with patients and their families concerning the patient's self-care 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups Clinical attachment	

Learning objective b2 Prevention of disease and ill-health	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to guide patients in matters of lifestyle choices in order to: – Prevent the development of diseases associated with one or more lifestyle habits – Improve the prognosis in patients with diseases associated with one or more lifestyle habits 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Attendance at large professional gatherings	

Learning objective b3 Medicines	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Be able to adapt pharmacotherapy to the patient’s age, sex, weight, kidney and liver function as well as any comorbidity and other medication – Be able to assess the risks of interactions and side effects with pharmacotherapy – Be able to work with patients and their families to achieve compliance with medications – Be able to work with other parties in the patient care chain with regard to pharmacotherapy – Be able to critically review and evaluate scientific evidence surrounding pharmacotherapy – Demonstrate knowledge of the environmental impacts of pharmacotherapy – Demonstrate knowledge of the health economics aspects of pharmacotherapy 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained required competencies requirements issued by the course provider or the supervisor

Learning objective b4 Insurance medicine	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to apply procedures in insurance medicine as part of the treatment of the individual patient – Be able to collaborate on insurance medicine matters relating to the individual patient with actors within and outside the healthcare system 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or supervisor
	General recommendations Attendance at large professional gatherings	

Learning objective b5 Palliative care in the final stages of life	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to identify the need for and initiate palliative care in the final stages of life – Be able to hold conversations with patients and their families concerning transiting to palliative care – Be able to apply the fundamental principles of palliative symptom relief with regard to physical, psychological, social and existential needs 	Clinical practice under supervision or alternatively clinical attachment	Certificate of completed programme activities and attained the required competences issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competences issued by the course provider or the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings Clinical attachment Training in simulated environment	

Learning objectives c

Specialist competence in Urology requires the specialty resident to fulfil the requirements in the knowledge base shared between General Surgery, Urology, Plastic Surgery, and Vascular Surgery.

This shared knowledge base entails having a good command of:

- Surgical pathophysiology,
- Basic surgical techniques,
- Initial trauma management,
- Acute diseases and urological diseases in adults and children requiring surgery,
- Basic nutrition treatment,
- Basic pain management,
- Basic surgical intensive care,
- The effects of anaesthesia, and
- The treatment of diseases of the dermis and hypodermis that may require surgical treatment.

In addition, the specialty resident in urology is to:

- Be able to manage acute injuries and diseases of the kidneys, urinary tract and external genitalia,
- Have knowledge of inflammations and infections of the urinary tract and the male genital organs,
- Be able to assess and manage calculus diseases of the urinary tract as well as functional disorders and flow obstructions in the lower urinary tract,
- Have knowledge of endourology investigations and the treatment of other diseases of the upper urinary tract,
- Be able to assess and manage urological tumour diseases,
- Have knowledge of radiation physics, radiation biology and radiation protection,
- Be able to assess and manage symptoms and diseases of the male genital organs,
- Have knowledge of the diseases associated with male sexuality, and
- Be able to manage symptoms and diseases of the urinary tract and the male genital organs in children.

In addition, the specialist doctor shall adopt a holistic approach to the patient, in particular in the elderly with multimorbidity.

Learning objectives c1-c4 are common for all the surgical specialties General Surgery, Vascular Surgery, Plastic Surgery and Urology (shared knowledge base).

Learning objective c1	Programme activities	Assessment
The specialist doctor shall: – Master surgical pathophysiology, basic surgical techniques and the treatment of diseases of the dermis and hypodermis which may require surgical treatment	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies Training in simulated environment	

Learning objective c2	Programme activities	Assessment
The specialist doctor shall: – Master the assessment, diagnosis and initial treatment of acute surgical and urology diseases and conditions in children and adults	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c3	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master the initial management of major and minor trauma in children and adults – Be able to take adequate steps where there is a suspicion that a child is being neglected or abused 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c4	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master basic pain management, basic post-surgery intensive care, nutrition therapy and anaesthesia effects 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Theoretical studies	

Learning objective c5	Programme activities	Assessment
The specialist doctor shall: – Be able to initially manage acute injuries and diseases of the urinary tract and genital organs	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Theoretical studies	

Learning objective c6	Programme activities	Assessment
The specialist doctor shall: – Be able to assess and manage suspected urological cancer	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in diagnostic and treatment conferences Theoretical studies	

Learning objective c7	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to assess and manage calculi in the urinary tract and have knowledge of the radiological and endoscopic investigation and treatment of other diseases in the upper urinary tract – Have knowledge of radiation physics, radiation biology and radiation protection, 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c8	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to assess and manage infections and inflammatory conditions of the urinary tract and male genitalia 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c9	Programme activities	Assessment
The specialist doctor shall: – Be able to assess and manage functional disorders and flow obstructions in the lower urinary tract	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c10	Programme activities	Assessment
The specialist doctor shall: – Be able to assess and manage symptoms and diseases of the male genital organs	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c11	Programme activities	Assessment
The specialist doctor shall: – Be able to assess and manage symptoms and diseases associated with male sexuality	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c12	Programme activities	Assessment
The specialist doctor shall: – Be able to initially assess and manage symptoms and diseases of the urinary tract and the male genital organs in children.	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	



Learning objective c13	Programme activities	Assessment
The specialist doctor shall: – Be able to apply legislation and other regulations applicable to the specialty	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor

General recommendations

Programme structure

Specialist medical training in Urology should begin with education and training in the shared knowledge base for General Surgery, Urology, Plastic Surgery and Vascular Surgery.

The specialty resident should begin more specific training in urology early in the programme, which typically begins with a continuous period of education and training where the specialty resident can obtain comprehensive operative training. It is crucial that the specialty resident receives comprehensive training in transurethral surgery. The specialty resident's principal residency should be in the middle of the programme. A shorter residency to obtain basic training in managing acute conditions can be situated early in the programme.

Courses, clinical attachments and theoretical studies should be integrated with the specialty resident's current residency when possible. The specialty resident should begin educating him/herself in communication, leadership, medical science and quality assurance work required for the specialty at an early stage, and this should then continue as a natural and integral part of the entire specialty training programme.

Neurological specialties

Physical and Rehabilitation Medicine

Description of skills

The specialty of Physical and Rehabilitation Medicine is characterised by advanced knowledge and skills in investigating patients with significant disabilities and physical impairments. This skills area comprises advanced knowledge and skills in leading, coordinating and implementing qualified physical medicine and rehabilitation efforts based on a biopsychosocial approach.

The starting point for investigative as well as rehabilitation measures is holistic thinking, with analysis of function, capacity and empowerment, and taking into account both personal factors and environmental factors.

The general term of rehabilitation stands for complex, timely, coordinated efforts of a medical, psychological, educational and social nature. The aim is to eliminate, reduce or compensate for serious functional and activity impairments caused by diseases and injuries.

Skills requirements

For Physical and Rehabilitation Medicine, learning objectives a1-a6, b1-b5 and c1-c13 apply.

Learning objectives a and b

Learning objective a1 Teamwork, leadership and pedagogy	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Be able to take responsibility for his/her continuous learning in the workplace – Be able to exercise leadership in his/her daily work, including lead a healthcare team – Be able to take responsibility for the development of multi-professional teamwork – Be able to take responsibility for cooperation with patients and their families** – Be able to work in networks looking after the patient – Be able to collaborate with agencies outside the hospital healthcare system such as social welfare boards, agencies within the social services, schools and Försäkringskassan (the Swedish Social Insurance Agency) – Be able to present and explain medical information in a way that is understandable to the recipient, orally and in writing – Be able to plan and carry out teaching and training – Be able to supervise and instruct colleagues and students 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations	
	Participation in intra- or inter-professional reflection in groups Supervise under supervision Teach under supervision	

Learning objective a2 Ethics, diversity and equality	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate knowledge and understanding of the principles of medical ethics and be able to identify ethical problems and analyse these in a structured way – Be able to handle conflicts in values in his/her daily work – Be able to treat people as individuals and with respect regardless of gender, transgender identity or expression, ethnic origin, religion or other faith, disability, sexual orientation or age. 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups	

Learning objective a3 Infection Prevention and Control	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to take responsibility for the prevention and control of healthcare-associated infections 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor

Learning objective a4 Systematic quality and patient safety management	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Critically examine his/her own practice and be able to conduct a risk and outcome analysis – Be able to take responsibility for systematically implementing measures, processes and procedures to improve patient care – Be able to take responsibility for the integration of new technologies and procedures into his/her daily work as a doctor 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Quality and development work	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	

Learning objective a5 Medical science	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate a deeper knowledge and understanding of medical scientific methodology and ethical principles – Be able to critically examine and evaluate medical science information – Demonstrate a scientific evidence based approach to his/her daily way of working and routines 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Independent written work based on scientific methodology	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	

Learning objective a6 Legislation and other regulations and the health and medical care system's organisation	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Demonstrate knowledge of the legislation and regulations which govern the healthcare system and its staff – Demonstrate knowledge of the health and medical care system's organisation and administration – Demonstrate knowledge of the health and medical care system's various financial control systems and their importance for the balancing of priorities in his/her daily work 	<p>Participation in one or more courses</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor</p>

Learning objective b1 Communication with patients and families	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to adapt his/her way of communicating based on the patient’s and their relatives’ individual needs and communication capabilities – Be able to give patients and their families difficult news with respect, empathy and sensitivity – Be able to support the patient's ability to manage a change in life situation as a result of an illness or disability – Be able to consult with patients and their families concerning the patient's self-care 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups Clinical attachment	

Learning objective b2 Prevention of disease and ill-health	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to guide patients in matters of lifestyle choices in order to: – Prevent the development of diseases associated with one or more lifestyle habits – Improve the prognosis in patients with diseases associated with one or more lifestyle habits 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Attendance at large professional gatherings	

Learning objective b3 Medicines	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Be able to adapt pharmacotherapy to the patient’s age, sex, weight, kidney and liver function as well as any comorbidity and other medication – Be able to assess the risks of interactions and side effects with pharmacotherapy – Be able to work with patients and their families to achieve compliance with medications – Be able to work with other parties in the patient care chain with regard to pharmacotherapy – Be able to critically review and evaluate scientific evidence surrounding pharmacotherapy – Demonstrate knowledge of the environmental impacts of pharmacotherapy – Demonstrate knowledge of the health economics aspects of pharmacotherapy 	<p>Clinical practice under supervision</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the supervisor</p>
	<p>Participation in one or more courses</p>	<p>Certificate of completed programme activities and attained required competencies requirements issued by the course provider or the supervisor</p>

Learning objective b4 Insurance medicine	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to apply procedures in insurance medicine as part of the treatment of the individual patient – Be able to collaborate on insurance medicine matters relating to the individual patient with actors within and outside the healthcare system 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or supervisor
	General recommendations Attendance at large professional gatherings	

Learning objective b5 Palliative care in the final stages of life	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to identify the need for and initiate palliative care in the final stages of life – Be able to hold conversations with patients and their families concerning transiting to palliative care – Be able to apply the fundamental principles of palliative symptom relief with regard to physical, psychological, social and existential needs 	Clinical practice under supervision or alternatively clinical attachment	Certificate of completed programme activities and attained the required competences issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competences issued by the course provider or the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings Clinical attachment Training in simulated environment	

Learning objectives c

Based on knowledge of anatomy, neurobiology and physiology, the specialist doctor is to master:

- The rehabilitation of traumatic and vascular injuries and diseases,
- The rehabilitation of other injuries and diseases of the central and peripheral nervous systems that have caused extensive disabilities, and
- Rehabilitation for prolonged pain conditions.

In addition, the specialist doctor is to:

- Have knowledge of rehabilitation in cases of functional impairments of the musculoskeletal system, and in the case of chronic neurological disease,
- Have knowledge of the management of internal medicine complications and conditions that can arise during rehabilitation,
- Have knowledge of the management of adult habilitation,
- Master the psychological consequences of illnesses in patients and their families, and
- Master the impact of mental illnesses on rehabilitation.

Particular attention should be paid to developing an interdisciplinary approach which is characteristic of physical and rehabilitation medicine. It is therefore important to have knowledge of other professional groups and actors in the area and their methods.

Learning objective c1	Programme activities	Assessment
The specialist doctor shall: – Master anatomy, neurobiology and neurophysiology as the theoretical basis for clinical assessment and management	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Attendance at large professional gatherings Theoretical studies	

Learning objective c2	Programme activities	Assessment
The specialist doctor shall: – Master the investigation of function, capacity and empowerment, and on the basis of this evaluate the rehabilitation potential, prioritise efforts and formulate a rehabilitation plan	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies Work in a care team	

Learning objective c3	Programme activities	Assessment
The specialist doctor shall: – Have knowledge of the methods of investigation and rehabilitation used by all professional groups in the interdisciplinary rehabilitation team	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Clinical attachment Theoretical studies Work in a care team	

Learning objective c4	Programme activities	Assessment
The specialist doctor shall: – Have knowledge of how psychological factors and mental illnesses impact the rehabilitation process – Master the treatment of these conditions.	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in seminars Theoretical studies	

Learning objective c5	Programme activities	Assessment
The specialist doctor shall: – Have knowledge of other rehabilitation actors within and outside the health and medical care system, and be able to collaborate with these	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in diagnostic and treatment conferences Theoretical studies	

Learning objective c6	Programme activities	Assessment
The specialist doctor shall: – Master rehabilitation after brain damage/injury	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies Work in a care team	

Learning objective c7	Programme activities	Assessment
The specialist doctor shall: – Master rehabilitation after spinal cord injury	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies Work in a care team	

Learning objective c8	Programme activities	Assessment
The specialist doctor shall: – Be able to manage rehabilitation in the case of peripheral nerve damage – Be able to manage rehabilitation in the case of chronic neurological disease	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies Work in a care team	

Learning objective c9	Programme activities	Assessment
The specialist doctor shall: – Master rehabilitation in the case of longterm pain in the patient	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	<p>General recommendations</p> Participation in diagnostic and treatment conferences Theoretical studies Work in a care team	

Learning objective c10	Programme activities	Assessment
The specialist doctor shall: – Be able to manage rehabilitation in the case of injuries and diseases in the musculoskeletal and nervous systems	Clinical practice under supervision, or alternatively clinical attachment at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c11	Programme activities	Assessment
The specialist doctor shall: – Be able to manage habilitation in adults	Clinical practice under supervision, or alternatively clinical attachment at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Clinical attachment Theoretical studies	

Learning objective c12	Programme activities	Assessment
The specialist doctor shall: – Be able to manage internal medicine conditions in connection with rehabilitation	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Theoretical studies	

Learning objective c13	Programme activities	Assessment
The specialist doctor shall: – Be able to apply legislation and other regulations applicable to the specialty	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor

General recommendations

Programme structure

The specialty resident in Physical and Rehabilitation Medicine should begin his/her education in interdisciplinary team work at a specialised rehabilitation unit. The aim is that the specialty resident can eventually lead the team in the assessment, prioritisation and planning of rehabilitation efforts. Documentation should be part of this work as well as various forms of contact with other rehabilitation actors within and outside the health and medical care system.

After having acquired basic knowledge in the main areas of the specialty which are neuro rehabilitation and pain rehabilitation, it is appropriate for the specialty resident to begin his/her ancillary programme. This should be completed through clinical practice primarily within internal medicine, psychiatry and neurology practices. Suitable areas for other specialty training or clinical attachment are habilitation for adults, orthopaedics, rheumatology, neurophysiology, neurosurgery or occupational and environmental medicine.

Specialist medical training should conclude with a period where the specialty resident gets the opportunity to independently lead a rehabilitation team.

It is important that the courses taken by the specialty resident cover the main areas of the specialty and that the specialty resident's participation in these courses is integrated into the rest of the programme. Throughout his/her specialty training, the specialty resident should participate in the internally and externally provided continuing education at the clinic, and be given time for knowledge acquisition and self-study of the literature. The specialty resident should also be given the opportunity teach patients and their families as well as co-workers under supervision.

Psychiatric specialties

Psychiatry

Description of skills

The specialty of Psychiatry is characterised by investigation, assessment, diagnosis, treatment and monitoring, as well as care and rehabilitation in the case of mental illnesses in adults, where the severity is such that it requires the collective resources of the psychiatry specialty.

The term mental illness also includes here personality disorders and addictive disorders. This means a psychological dysfunction entailing suffering or functional impairment, or both.

Psychiatry is a core specialty of the branch specialty Forensic Psychiatry.

Skills requirements

For Psychiatry, learning objectives a1-a6, b1-b5 and c1-c13 apply.

Learning objectives a and b

Learning objective a1 Teamwork, leadership and pedagogy	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Be able to take responsibility for his/her continuous learning in the workplace – Be able to exercise leadership in his/her daily work, including lead a healthcare team – Be able to take responsibility for the development of multi-professional teamwork – Be able to take responsibility for cooperation with patients and their families** – Be able to work in networks looking after the patient – Be able to collaborate with agencies outside the hospital healthcare system such as social welfare boards, agencies within the social services, schools and Försäkringskassan (the Swedish Social Insurance Agency) – Be able to present and explain medical information in a way that is understandable to the recipient, orally and in writing – Be able to plan and carry out teaching and training – Be able to supervise and instruct colleagues and students 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	<p>General recommendations</p> <ul style="list-style-type: none"> Participation in intra- or inter-professional reflection in groups Supervise under supervision Teach under supervision 	

Learning objective a2 Ethics, diversity and equality	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate knowledge and understanding of the principles of medical ethics and be able to identify ethical problems and analyse these in a structured way – Be able to handle conflicts in values in his/her daily work – Be able to treat people as individuals and with respect regardless of gender, transgender identity or expression, ethnic origin, religion or other faith, disability, sexual orientation or age. 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups	

Learning objective a3 Infection Prevention and Control	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to take responsibility for the prevention and control of healthcare-associated infections 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor

Learning objective a4 Systematic quality and patient safety management	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Critically examine his/her own practice and be able to conduct a risk and outcome analysis – Be able to take responsibility for systematically implementing measures, processes and procedures to improve patient care – Be able to take responsibility for the integration of new technologies and procedures into his/her daily work as a doctor 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Quality and development work	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	

Learning objective a5 Medical science	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate a deeper knowledge and understanding of medical scientific methodology and ethical principles – Be able to critically examine and evaluate medical science information – Demonstrate a scientific evidence based approach to his/her daily way of working and routines 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Independent written work based on scientific methodology	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	

Learning objective a6 Legislation and other regulations and the health and medical care system's organisation	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Demonstrate knowledge of the legislation and regulations which govern the healthcare system and its staff – Demonstrate knowledge of the health and medical care system's organisation and administration – Demonstrate knowledge of the health and medical care system's various financial control systems and their importance for the balancing of priorities in his/her daily work 	<p>Participation in one or more courses</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor</p>

Learning objective b1 Communication with patients and families	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to adapt his/her way of communicating based on the patient's and their relatives' individual needs and communication capabilities – Be able to give patients and their families difficult news with respect, empathy and sensitivity – Be able to support the patient's ability to manage a change in life situation as a result of an illness or disability – Be able to consult with patients and their families concerning the patient's self-care 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups Clinical attachment	

Learning objective b2 Prevention of disease and ill-health	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to guide patients in matters of lifestyle choices in order to: – Prevent the development of diseases associated with one or more lifestyle habits – Improve the prognosis in patients with diseases associated with one or more lifestyle habits 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Attendance at large professional gatherings	

Learning objective b3 Medicines	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Be able to adapt pharmacotherapy to the patient’s age, sex, weight, kidney and liver function as well as any comorbidity and other medication – Be able to assess the risks of interactions and side effects with pharmacotherapy – Be able to work with patients and their families to achieve compliance with medications – Be able to work with other parties in the patient care chain with regard to pharmacotherapy – Be able to critically review and evaluate scientific evidence surrounding pharmacotherapy – Demonstrate knowledge of the environmental impacts of pharmacotherapy – Demonstrate knowledge of the health economics aspects of pharmacotherapy 	<p>Clinical practice under supervision</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the supervisor</p>
	<p>Participation in one or more courses</p>	<p>Certificate of completed programme activities and attained required competencies requirements issued by the course provider or the supervisor</p>

Learning objective b4 Insurance medicine	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to apply procedures in insurance medicine as part of the treatment of the individual patient – Be able to collaborate on insurance medicine matters relating to the individual patient with actors within and outside the healthcare system 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or supervisor
	General recommendations Attendance at large professional gatherings	

Learning objective b5 Palliative care in the final stages of life	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to identify the need for and initiate palliative care in the final stages of life – Be able to hold conversations with patients and their families concerning transiting to palliative care – Be able to apply the fundamental principles of palliative symptom relief with regard to physical, psychological, social and existential needs 	Clinical practice under supervision or alternatively clinical attachment	Certificate of completed programme activities and attained the required competences issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competences issued by the course provider or the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings Clinical attachment Training in simulated environment	

Learning objectives c

The specialist doctor is to have a good command the management of all common mental illnesses with an emphasis on the most prevalent disorders, such as:

- Affective disorders,
- Anxiety disorder,
- Psychoses, and
- Personality disorders.

The specialist doctor should additionally:

- Be able to manage the less common mental illnesses and acute mental illnesses,
- Be able to initiate psychiatric responses to disasters,
- Be able to manage common addiction disorders,
- Be able to assess what psychological method might be appropriate for the treatment of various mental illnesses and be able to manage patients using psychotherapy methods,
- Master psycho-pharmacological and electroconvulsive treatment, and
- Be able to initially manage physical conditions in patients with mental illnesses.

The specialist doctor shall also have knowledge of:

- The mechanisms behind the emergence of mental illnesses and for treatment of the illness,
- The theoretical foundations of the various psychotherapy methods,
- Methods for investigating and determining the patient's cognitive function,
- Coordination and follow-up of treatment and rehabilitation efforts, and
- Differential diagnosis of internal medicine, neurological and mental illnesses.

In addition, the specialist doctor is to have knowledge of neurodegenerative diseases with an emphasis on the major dementia disorders.

The specialist doctor should also have knowledge in child and adolescent psychiatry. The specialty resident is to have:

- Knowledge of developmental mental disorders, and
- Knowledge of paediatric psychiatry approaches and abnormal and normal neurological development in childhood and adolescence.

Finally, the specialist doctor is to master the application of the legislation and other regulations concerning the exercise of public authority within psychiatry and have knowledge of other legislation and regulations that are relevant to psychiatry.

Learning objective c1	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master the management of common and major mental illnesses with the emphasis on the most prevalent widespread conditions such as affective disorders, anxiety disorder, psychoses, and personality disorders – Have knowledge of the mechanisms underlying the emergence of these illnesses and disorders and have knowledge of their treatment, 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in seminars Clinical attachment Theoretical studies	

Learning objective c2	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to manage other mental illnesses 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in seminars Clinical attachment Theoretical studies	

Learning objective c3	Programme activities	Assessment
The specialist doctor shall: – Be able to manage acute psychiatric disorders and be able to initially manage situations requiring mass catastrophe and disaster psychiatry	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in seminars Clinical attachment Theoretical studies	

Learning objective c4	Programme activities	Assessment
The specialist doctor shall: – Master psycho-pharmacological and electroconvulsive treatment	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in seminars Theoretical studies	

Learning objective c5	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Have knowledge of the differential diagnosis of internal medicine, neurological and mental illnesses. – Be able to detect and initially manage physical conditions in patients with mental illnesses. 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in seminars Clinical attachment Theoretical studies	

Learning objective c6	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to manage common substance addiction disorders and have knowledge of their comorbidity with internal medicine conditions and other mental illnesses 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in seminars Clinical attachment Theoretical studies	

Learning objective c7	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Have knowledge of neurodegenerative diseases with an emphasis on the major dementia disorders. – Be able to diagnose and manage patients with mental illness and also suffering from cognitive distortion 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	<p>General recommendations</p> <p>Participation in seminars</p> <p>Clinical attachment</p> <p>Theoretical studies</p>	

Learning objective c8	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Have knowledge of developmental mental illnesses – Be cognisant of paediatric psychiatry approaches and abnormal versus normal neurological development in childhood and adolescence. – Be able to take adequate steps where there is a suspicion that a child is being neglected or abused 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	<p>General recommendations</p> <p>Participation in seminars</p> <p>Theoretical studies</p>	

Learning objective c9	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Have knowledge of the theoretical foundations of the various psychotherapy methods, – Be able to assess potentially suitable psychological methods for the treatment of various mental illnesses – Be able to manage patients using psychotherapy methods 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c10	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master the application of the legislation and other regulations concerning the exercise of public authority in the skills area – Have knowledge of other legislation and regulations relevant to psychiatry – Be cognisant of the organisation and responsibilities of forensic psychiatry 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in seminars Theoretical studies	

Learning objective c11	Programme activities	Assessment
The specialist doctor shall: – Have knowledge of cognitive disabilities and their importance for patient care and treatment and have knowledge of the testing methods used for these	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in seminars Theoretical studies	

Learning objective c12	Programme activities	Assessment
The specialist doctor shall: – Have knowledge of the coordination and follow-up of patients over long periods, which includes for example a combination of treatment with psychiatric medications and psychosocial interventions in collaboration with other professional groups – Be cognisant of the role of drug user organisations as a resource	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in seminars Theoretical studies	

Learning objective c13	Programme activities	Assessment
The specialist doctor shall: – Be able to apply the legislation and other regulations applicable to the specialty, including having knowledge of the organisation, regulatory framework and conditions under which social services and other relevant government agencies operate	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor

General recommendations

Programme structure

Practice in adult psychiatry with inpatient and outpatient care forms the basis of specialty training in this skills area. Experience in acute psychiatry and compulsory care/involuntary treatment early in the programme is important.

Clinical practice in the following areas should be included:

- In addiction medicine
- At units that investigate and manage old age psychiatry patients
- In child and adolescent psychiatry
- At the units managing an undifferentiated patient clientele
- At units offering sub-specialties.

A course in psychotherapy is essential, where the specialty resident can acquire knowledge of different psychotherapy methods. During this course, it is important that theory and practical skills are integrated under the supervision of registered psychotherapists trained in providing supervision. The course should alternate with clinical practice so that specialty resident can apply the knowledge acquired in his/her daily medical practice.

Furthermore, clinical practice in adjacent specialties should be included in the specialty training. Clinical practice in neurology and an internal medicine specialty are of particular value. Clinical practice in family medicine can completely replace the internal medicine residency.

Towards the end of the programme, the specialty resident should:

Be placed within adult psychiatry to facilitate the transition to independent practice as a specialist.

Actively participate in the regular local continuing education gatherings, and the exchange of knowledge and experience with external parties is recommended.

Supplementary specialties

Addiction Medicine

Description of skills

The specialty of Addiction Medicine is characterised by:

- The investigation, diagnosis, assessment, treatment and follow-up of addiction disorders and substance abuse conditions which are so severe that they require specialised addiction care,
- The planning and coordination of other care interventions for addiction disorders and substance abuse conditions which are so severe that they require specialised addiction care, and
- The management of other mental health problems of the patient concurrent with the substance abuse or addiction and which complicate or are complicated by the substance abuse or addiction.

This skills area covers patients of all ages and their families.

Addiction Medicine is a supplementary specialty.

Skills requirements

For Addiction Medicine, learning objectives a1-a6, b1-b5 and c1-c12 apply.

Learning objectives a and b

Learning objective a1 Teamwork, leadership and pedagogy	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Be able to take responsibility for his/her continuous learning in the workplace – Be able to exercise leadership in his/her daily work, including lead a healthcare team – Be able to take responsibility for the development of multi-professional teamwork – Be able to take responsibility for cooperation with patients and their families** – Be able to work in networks looking after the patient – Be able to collaborate with agencies outside the hospital healthcare system such as social welfare boards, agencies within the social services, schools and Försäkringskassan (the Swedish Social Insurance Agency) – Be able to present and explain medical information in a way that is understandable to the recipient, orally and in writing – Be able to plan and carry out teaching and training – Be able to supervise and instruct colleagues and students 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	<p>General recommendations</p> <ul style="list-style-type: none"> Participation in intra- or inter-professional reflection in groups Supervise under supervision Teach under supervision 	

Learning objective a2 Ethics, diversity and equality	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate knowledge and understanding of the principles of medical ethics and be able to identify ethical problems and analyse these in a structured way – Be able to handle conflicts in values in his/her daily work – Be able to treat people as individuals and with respect regardless of gender, transgender identity or expression, ethnic origin, religion or other faith, disability, sexual orientation or age. 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups	

Learning objective a3 Infection Prevention and Control	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to take responsibility for the prevention and control of healthcare-associated infections 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor

Learning objective a4 Systematic quality and patient safety management	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Critically examine his/her own practice and be able to conduct a risk and outcome analysis – Be able to take responsibility for systematically implementing measures, processes and procedures to improve patient care – Be able to take responsibility for the integration of new technologies and procedures into his/her daily work as a doctor 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Quality and development work	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	

Learning objective a5 Medical science	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate a deeper knowledge and understanding of medical scientific methodology and ethical principles – Be able to critically examine and evaluate medical science information – Demonstrate a scientific evidence based approach to his/her daily way of working and routines 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Independent written work based on scientific methodology	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	



Learning objective a6 Legislation and other regulations and the health and medical care system's organisation	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none">– Demonstrate knowledge of the legislation and regulations which govern the healthcare system and its staff– Demonstrate knowledge of the health and medical care system's organisation and administration– Demonstrate knowledge of the health and medical care system's various financial control systems and their importance for the balancing of priorities in his/her daily work	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor

Learning objective b1 Communication with patients and families	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to adapt his/her way of communicating based on the patient's and their relatives' individual needs and communication capabilities – Be able to give patients and their families difficult news with respect, empathy and sensitivity – Be able to support the patient's ability to manage a change in life situation as a result of an illness or disability – Be able to consult with patients and their families concerning the patient's self-care 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups Clinical attachment	

Learning objective b2 Prevention of disease and ill-health	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to guide patients in matters of lifestyle choices in order to: – Prevent the development of diseases associated with one or more lifestyle habits – Improve the prognosis in patients with diseases associated with one or more lifestyle habits 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Attendance at large professional gatherings	

Learning objective b3 Medicines	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Be able to adapt pharmacotherapy to the patient’s age, sex, weight, kidney and liver function as well as any comorbidity and other medication – Be able to assess the risks of interactions and side effects with pharmacotherapy – Be able to work with patients and their families to achieve compliance with medications – Be able to work with other parties in the patient care chain with regard to pharmacotherapy – Be able to critically review and evaluate scientific evidence surrounding pharmacotherapy – Demonstrate knowledge of the environmental impacts of pharmacotherapy – Demonstrate knowledge of the health economics aspects of pharmacotherapy 	<p>Clinical practice under supervision</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the supervisor</p>
	<p>Participation in one or more courses</p>	<p>Certificate of completed programme activities and attained required competencies requirements issued by the course provider or the supervisor</p>

Learning objective b4 Insurance medicine	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to apply procedures in insurance medicine as part of the treatment of the individual patient – Be able to collaborate on insurance medicine matters relating to the individual patient with actors within and outside the healthcare system 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or supervisor
	General recommendations Attendance at large professional gatherings	

Learning objective b5 Palliative care in the final stages of life	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to identify the need for and initiate palliative care in the final stages of life – Be able to hold conversations with patients and their families concerning transiting to palliative care – Be able to apply the fundamental principles of palliative symptom relief with regard to physical, psychological, social and existential needs 	Clinical practice under supervision or alternatively clinical attachment	Certificate of completed programme activities and attained the required competences issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competences issued by the course provider or the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings Clinical attachment Training in simulated environment	

Learning objectives c

The specialist doctor shall:

- Master the management of all commonly occurring conditions in addiction medicine
- Be able to manage the abuse of new and uncommon substances,
- Have knowledge of the physical effects and metabolism of substances, and
- Have knowledge of the areas of application and restrictions on psychometric and biological diagnostic methods.

In addition, the specialist doctor is to master:

- The assessment of the individual's functional level from the psychiatric help and addiction medicine perspectives,
- The planning of treatment based on interactions between the individual and his/her family, social network and environment from an addiction medicine perspective,
- The development of a treatment alliance,
- Motivational interviewing methodology, and
- The implementation of relapse prevention.

The specialist doctor shall also:

- Be able to manage addiction patients using psychotherapy methods
- Have knowledge of the relevant psychosocial treatment methods,
- Have knowledge in family support and family intervention,
- Master how current medications are used in the addiction area in the case of acute intoxication, withdrawal symptoms, maintenance treatment and relapse prevention for youth and adults,
- Master the implementation of secondary preventive efforts at the individual and group levels,
- Have knowledge of the risk factors for the development of addiction problems at the individual, group and the local community levels (i.e. primary prevention),
- Master the management of common and major categories of psychological disorders of significance for illnesses covered by the area of addiction medicine, and
- Master communication and conversation with children and youth taking into account their needs and level of development.

In addition, the specialist doctor is to be able to initially manage commonly occurring physical comorbidity and be able to take this into account in the planning of care.

Furthermore, the specialty resident is to master the identification and management of static

and dynamic factors in patients with substance abuse or addiction problems which are significant for the risk over time that the patient will harm others.

The specialist doctor must also have knowledge of the organisation, the regulatory framework and the conditions that apply to providing specialised addiction medicine care in:

- Child and adolescent psychiatric care,
- Adult psychiatric care,
- Social services
- Forensic psychiatry,
- The Swedish Prison and Probation Service, and
- Other government agencies which are relevant for the area.

The specialty resident should also be cognisant of the role of drug user organisations as a resource. Finally, the specialist doctor is to master the application of the legislation and other regulations concerning the exercise of public authority within this skills area and have knowledge of other legislation and regulations that are relevant to addiction medicine.

Learning objective c1	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master the management of all commonly occurring substance abuse and addiction disorders – Be able to manage the abuse of new and uncommon substances – Have knowledge of the physical effects and metabolism of substances 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in seminars Clinical attachment Theoretical studies	

Learning objective c2	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Have knowledge of the areas of application and restrictions on psychometric and biological diagnostic methods. 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in seminars Theoretical studies	

Learning objective c3	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master the assessment of the individual’s functional level and main disabilities from the perspectives of psychiatry and addiction medicine – Master the planning of treatment based on the interaction between the individual and his/her family, social network and environment from an addiction medicine perspective, 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in seminars Clinical attachment Theoretical studies Work in a care team	

Learning objective c4	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master the development of a treatment alliance, motivational interviewing methodology and the management of relapse prevention – Be able to manage addiction patients using psychotherapy methods – Have knowledge of the relevant psychosocial treatment methods, family support and family intervention 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in group reflection, within and between professions Participation in seminars Clinical attachment Theoretical studies	

Learning objective c5	Programme activities	Assessment
The specialist doctor shall: – Master how current medications are used in the addiction area in the case of acute intoxication, withdrawal symptoms, maintenance treatment and relapse prevention	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in seminars Theoretical studies	

Learning objective c6	Programme activities	Assessment
The specialist doctor shall: – Master secondary preventive efforts at the individual and group levels, – Have knowledge of the risk factors for the development of addiction problems at the individual, group and the local community levels	Clinical attachment at one or more units conducting such activities on managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in seminars Theoretical studies	

Learning objective c7	Programme activities	Assessment
<p>The specialist doctor shall:</p> <p>Master the management of common and major categories of psychological disorders of significance for illnesses covered by the area of addiction medicine in all ages, including developmental psychological disturbances and cognitive distortions related to addiction</p>	<p>Clinical practice under supervision at one or more units conducting such activities or managing such cases</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the supervisor</p>
	<p>Participation in one or more courses</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor</p>
	<p>General recommendations</p> <p>Clinical attachment</p> <p>Theoretical studies</p>	

Learning objective c8	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Master communication and conversation with children and youth taking into account their needs and level of development. – Have knowledge of the organisation, regulatory framework and conditions that apply for providing psychiatric care in child and adolescent psychiatric care and adult psychiatric care 	<p>Clinical practice under supervision at one or more units conducting such activities or managing such cases</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the supervisor</p>
	<p>General recommendations</p> <p>Participation in seminars</p> <p>Clinical attachment</p> <p>Theoretical studies</p>	

Learning objective c9	Programme activities	Assessment
The specialist doctor shall: – Be able to manage commonly occurring physical comorbidity, and taking this into account in the planning of care	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Clinical attachment Participation in seminars Clinical attachment	

Learning objective c10	Programme activities	Assessment
The specialist doctor shall: – Master the application of the legislation and other regulations applicable to the exercise of public authority in the skills area – Have knowledge of other legislation and regulations relevant to addiction medicine, including those to do with traffic medicine	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Clinical attachment Theoretical studies	

Learning objective c11	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Have knowledge of the organisation, regulatory framework and conditions that apply for social services and other relevant government agencies for providing addiction medicine care – Be cognisant of the role of drug user organisations as a resource 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in seminars Theoretical studies Work in a care team	

Learning objective c12	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master the identification and management of static and dynamic factors in patients with substance abuse or addiction which are significant for the risk over time that the patient will harm others – Have knowledge of the organisation, regulatory framework and conditions that apply for the Swedish Prison and Probation Service to provide addiction care 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Clinical attachment Clinical attachment Theoretical studies	

General recommendations

Programme structure

Specialist medical training in addiction medicine can begin during or after completion of specialty training in either of the psychiatry specialties Child and Adolescent Psychiatry or Psychiatry. The foundation for the programme should be through clinical practice in addiction care, in inpatient, outpatient and acute care of young people and adults. The programme should include ancillary training in both adult psychiatry and child and adolescent psychiatry. The programme should also include ancillary training in forensic psychiatry.

A course in psychotherapy is essential, where the specialty resident can acquire knowledge of different psychotherapy methods, including specific methods for treating the problems associated with substance abuse and addiction. During this course, it is important to integrate theory and practical skills under the supervision of registered psychotherapists trained in providing supervision. The course should alternate with clinical practice so that specialty resident can apply the knowledge acquired in his/her daily medical practice. In conjunction with this and under supervision, the specialty resident should treat a patient with addiction problems.

The programme should also include ancillary training in physical medicine specialties, preferably in the emergency medicine, for the acquisition of knowledge in the diagnosis and initial management of common neurological, internal medicine and infectious diseases complications and emergency treatment.

The specialty resident should actively participate in regular local continuing education gatherings. International knowledge and experience exchanges should be included.

The programme should also include clinical practice by the specialty resident in closely related activities such as correctional care, institutional care and other related forms of care.

Nuclear Medicine

Description of skills

The specialty of Nuclear Medicine is characterised by skills in the diagnosis, staging, prognostication, treatment, evaluation of therapy and exclusion of disease in all organs.

In Nuclear Medicine, radiopharmaceuticals or tracers are administered and biochemical, physiological and pathological processes are measured with special detectors. These allow the visualisation of biochemical processes at the cellular and subcellular level and reveal pathological processes before they are expressed as structural changes.

Knowledge of how the procedures included in the skills area can be used within different organ systems is central. The specialist doctor should also be able to act as a consultant when using these procedures in order to contribute to the management of the patient.

Furthermore, the specialty has a responsibility to develop and pursue scientific and quality work within the skills area. This responsibility also includes procedure development and the training of colleagues, both within and outside nuclear medicine.

Multi-disciplinary collaboration with both referring units and the specialties of Clinical Physiology, Radiology, Neuroradiology and Oncology is central to this skills area.

Nuclear medicine is a supplementary specialty.

Skills requirements

For Nuclear Medicine, learning objectives a1-a6, b1 and b3 and c1-c13 apply.

Learning objectives a and b

Learning objective a1 Teamwork, leadership and pedagogy	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Be able to take responsibility for his/her continuous learning in the workplace – Be able to exercise leadership in his/her daily work, including lead a healthcare team – Be able to take responsibility for the development of multi-professional teamwork – Be able to take responsibility for cooperation with patients and their families** – Be able to work in networks looking after the patient – Be able to collaborate with agencies outside the hospital healthcare system such as social welfare boards, agencies within the social services, schools and Försäkringskassan (the Swedish Social Insurance Agency) – Be able to present and explain medical information in a way that is understandable to the recipient, orally and in writing – Be able to plan and carry out teaching and training – Be able to supervise and instruct colleagues and students 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	<p>General recommendations</p> <ul style="list-style-type: none"> Participation in intra- or inter-professional reflection in groups Supervise under supervision Teach under supervision 	

Learning objective a2 Ethics, diversity and equality	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate knowledge and understanding of the principles of medical ethics and be able to identify ethical problems and analyse these in a structured way – Be able to handle conflicts in values in his/her daily work – Be able to treat people as individuals and with respect regardless of gender, transgender identity or expression, ethnic origin, religion or other faith, disability, sexual orientation or age. 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups	

Learning objective a3 Infection Prevention and Control	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to take responsibility for the prevention and control of healthcare-associated infections 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor

Learning objective a4 Systematic quality and patient safety management	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Critically examine his/her own practice and be able to conduct a risk and outcome analysis – Be able to take responsibility for systematically implementing measures, processes and procedures to improve patient care – Be able to take responsibility for the integration of new technologies and procedures into his/her daily work as a doctor 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Quality and development work	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	

Learning objective a5 Medical science	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate a deeper knowledge and understanding of medical scientific methodology and ethical principles – Be able to critically examine and evaluate medical science information – Demonstrate a scientific evidence based approach to his/her daily way of working and routines 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Independent written work based on scientific methodology	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	

Learning objective a6 Legislation and other regulations and the health and medical care system's organisation	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Demonstrate knowledge of the legislation and regulations which govern the healthcare system and its staff – Demonstrate knowledge of the health and medical care system's organisation and administration – Demonstrate knowledge of the health and medical care system's various financial control systems and their importance for the balancing of priorities in his/her daily work 	<p>Participation in one or more courses</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor</p>

Learning objective b1 Communication with patients and families	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to adapt his/her way of communicating based on the patient’s and their relatives’ individual needs and communication capabilities – Be able to give patients and their families difficult news with respect, empathy and sensitivity – Be able to support the patient's ability to manage a change in life situation as a result of an illness or disability – Be able to consult with patients and their families concerning the patient's self-care 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups Clinical attachment	

Learning objective b3 Medicines	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to adapt pharmacotherapy to the patient’s age, sex, weight, kidney and liver function as well as any comorbidity and other medication – Be able to assess the risks of interactions and side effects with pharmacotherapy – Be able to work with patients and their families to achieve compliance with medications – Be able to work with other parties in the patient care chain with regard to pharmacotherapy – Be able to critically review and evaluate scientific evidence surrounding pharmacotherapy – Demonstrate knowledge of the environmental impacts of pharmacotherapy – Demonstrate knowledge of the health economics aspects of pharmacotherapy 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained required competencies requirements issued by the course provider or the supervisor

Learning objectives c

The specialist doctor shall:

- Master the most common nuclear medicine examination procedures,
- Have knowledge of the nuclear medicine treatment methods occurring in the specialty,
- Master the anatomy, physiology and pathophysiology of relevance to Nuclear Medicine, and
- Have knowledge of the most common medical imaging analyses in radiology and clinical physiology, in order to give priority to patient investigations on the basis of medical benefit, safety and degree of urgency.

The specialist doctor shall also have knowledge of:

- Physics related to the area,
- Radiation biology and radiation protection related to the area,
- Legislation and regulations that apply to the skills area,
- Radiology procedures of relevance for Nuclear Medicine,
- Radiology procedures used in combination with *hybrid imaging* technology,
- How the findings and the therapy can impact the medical management as well as the consequences for the individual patient and for the community,
- Physical, technical, mathematical and statistical principles of the most common procedures used,
- The strengths and weaknesses of the most common procedures, and
- Medical and technical quality assurance of examination data.

The specialist doctor shall also be cognisant of radiobiology and radiopharmacy.

Learning objective c1	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Have knowledge of the advantages and disadvantages of different examination procedures in nuclear medicine – Be able to evaluate examination procedures in clinical physiology and radiology in relation to the nuclear medicine procedures for the most common clinical questions – Have knowledge of how examination results impact the ongoing management of the patient 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Theoretical studies	

Learning objective c2	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master anatomy, physiology and pathophysiology of relevance to the skills area 	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c3	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Have knowledge of physical, technical, mathematical and statistical principles and their strengths, weaknesses and risks – Have knowledge of image processing for the examination modalities in the area of knowledge and about their strengths, weaknesses and risks – Have knowledge of radiation physics, radiation biology and radiation protection, 	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c4	Programme activities	Assessment
The specialist doctor shall: – Have knowledge of examinations in clinical physiology and radiology of relevance to the skills area	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Theoretical studies	

Learning objective c5	Programme activities	Assessment
The specialist doctor shall: – Have knowledge of radiology procedures of relevance for nuclear medicine when using <i>hybrid imaging</i> technology – Master the identification of serious incidental findings when using <i>hybrid imaging</i> technology	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in diagnostic and treatment conferences Theoretical studies	

Learning objective c6	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Have knowledge of procedures for physiological provocation of relevance for nuclear medicine examinations 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Theoretical studies	

Learning objective c7	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master the most common nuclear medicine examinations of the thorax, including the thoracic cavity organs, in children and adults – Be able to initially manage other nuclear medicine examinations of the thorax, including the thoracic cavity organs, in children and adults 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in diagnostic and treatment conferences Attendance at large professional gatherings Theoretical studies	

Learning objective c8	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Master the most common nuclear medicines examinations of the abdomen, pelvis and urogenital organs in children and adults – Be able to initially manage other nuclear medicines examinations of the abdomen, pelvis and urogenital organs in children and adults 	<p>Clinical practice under supervision at one or more units conducting such activities or managing such cases</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the supervisor</p>
	<p>Participation in one or more courses</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor</p>
	<p>General recommendations</p> <p>Participation in diagnostic and treatment conferences</p> <p>Attendance at large professional gatherings</p> <p>Theoretical studies</p>	

Learning objective c9	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Master the most common nuclear medicine examinations of the thorax, including the musculoskeletal system, in children and adults – Be able to initially manage other nuclear medicine examinations of the musculoskeletal system, in children and adults 	<p>Clinical practice under supervision at one or more units conducting such activities or managing such cases</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the supervisor</p>
	<p>Participation in one or more courses</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor</p>
	<p>General recommendations</p> <p>Participation in diagnostic and treatment conferences</p> <p>Attendance at large professional gatherings</p> <p>Theoretical studies</p>	

Learning objective c10	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master the most common nuclear medicine examinations of the nervous system, including the spine and head and neck, in children and adults – Be able to initially manage other nuclear medicines examinations of the nervous system including the spine and head and neck, in children and adults 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in diagnostic and treatment conferences Attendance at large professional gatherings Theoretical studies	

Learning objective c11	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Have knowledge of the most common nuclear medicine therapies covering children and adults – Be cognisant of other nuclear medicine therapies covering children and adults 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Theoretical studies	

Learning objective c12	Programme activities	Assessment
The specialist doctor shall: – Be cognisant of radiobiology and radiopharmacy	Clinical attachment at one or more units conducting such activities on managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Theoretical studies	

Learning objective c13	Programme activities	Assessment
The specialist doctor shall: – Be able to apply legislation and other regulations applicable to the specialty	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor

General recommendations

Programme structure

Specialist medical training in Nuclear Medicine can begin during or after specialty training in clinical physiology, radiology or oncology and can be integrated with training in the core specialty.

To give the specialty resident the opportunity to develop within all the Learning objectives, it is essential that the training can be carried out at a university hospital (or equivalent, i.e. hospitals with a full-scale, specialised department) and at units with more generalised practice. It is important that the specialty training is provided in a way that fosters logically clear and continuous skills development with sufficiently long continuous training periods within each unit/department.

In Nuclear Medicine, collaboration with other clinical specialties is essential, and hence the programme should include ancillary training in another specialty that is relevant to the programme.

To give the specialty resident the opportunity to acquire and build on his/her applied knowledge in nuclear medicine using an evidence-based approach, it is important that time is allocated to advanced theoretical studies in parallel with and directly connected to the specialty resident's clinical practice. The theoretical programme should consist of both self-study and external knowledge acquisition. The specialty resident should be given the opportunity to attend international courses and conferences throughout the programme.

Palliative Medicine

Description of skills

The specialty of Palliative Medicine is characterised by the management of patients with incurable, progressive, life-threatening disease where the objective is to prevent and alleviate suffering and give the patient the conditions for the best possible quality of life.

This specialty is characterised by:

- General knowledge of life-threatening, progressive diseases and injuries,
- The ability to diagnose, treat and evaluate complex physical and psychological symptoms, and
- The ability to diagnose, treat and evaluate the social problems and spiritual and existential needs of patients with incurable, progressive, life-threatening diseases, and of their families.

Skills in palliative medicine are also applicable earlier in the course of the illness.

The specialty covers all health and medical care areas: highly specialised care, inpatient care, home care, special care homes and primary healthcare. Knowledge of the organisation and approaches of the health and medical care system and social services, including municipal care, is important for the skills area.

Palliative medicine is a supplementary specialty.

Skills requirements

For Palliative Medicine, learning objectives a1-a6, b1-b5 and c1-c13 apply.

Learning objectives a and b

Learning objective a1 Teamwork, leadership and pedagogy	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Be able to take responsibility for his/her continuous learning in the workplace – Be able to exercise leadership in his/her daily work, including lead a healthcare team – Be able to take responsibility for the development of multi-professional teamwork – Be able to take responsibility for cooperation with patients and their families** – Be able to work in networks looking after the patient – Be able to collaborate with agencies outside the hospital healthcare system such as social welfare boards, agencies within the social services, schools and Försäkringskassan (the Swedish Social Insurance Agency) – Be able to present and explain medical information in a way that is understandable to the recipient, orally and in writing – Be able to plan and carry out teaching and training – Be able to supervise and instruct colleagues and students 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	<p>General recommendations</p> <ul style="list-style-type: none"> Participation in intra- or inter-professional reflection in groups Supervise under supervision Teach under supervision 	

Learning objective a2 Ethics, diversity and equality	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate knowledge and understanding of the principles of medical ethics and be able to identify ethical problems and analyse these in a structured way – Be able to handle conflicts in values in his/her daily work – Be able to treat people as individuals and with respect regardless of gender, transgender identity or expression, ethnic origin, religion or other faith, disability, sexual orientation or age. 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups	

Learning objective a3 Infection Prevention and Control	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to take responsibility for the prevention and control of healthcare-associated infections 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor

Learning objective a4 Systematic quality and patient safety management	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Critically examine his/her own practice and be able to conduct a risk and outcome analysis – Be able to take responsibility for systematically implementing measures, processes and procedures to improve patient care – Be able to take responsibility for the integration of new technologies and procedures into his/her daily work as a doctor 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Quality and development work	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	

Learning objective a5 Medical science	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate a deeper knowledge and understanding of medical scientific methodology and ethical principles – Be able to critically examine and evaluate medical science information – Demonstrate a scientific evidence based approach to his/her daily way of working and routines 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Independent written work based on scientific methodology	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	

Learning objective a6 Legislation and other regulations and the health and medical care system's organisation	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Demonstrate knowledge of the legislation and regulations which govern the healthcare system and its staff – Demonstrate knowledge of the health and medical care system's organisation and administration – Demonstrate knowledge of the health and medical care system's various financial control systems and their importance for the balancing of priorities in his/her daily work 	<p>Participation in one or more courses</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor</p>

Learning objective b1 Communication with patients and families	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to adapt his/her way of communicating based on the patient's and their relatives' individual needs and communication capabilities – Be able to give patients and their families difficult news with respect, empathy and sensitivity – Be able to support the patient's ability to manage a change in life situation as a result of an illness or disability – Be able to consult with patients and their families concerning the patient's self-care 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups Clinical attachment	

Learning objective b2 Prevention of disease and ill-health	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to guide patients in matters of lifestyle choices in order to: – Prevent the development of diseases associated with one or more lifestyle habits – Improve the prognosis in patients with diseases associated with one or more lifestyle habits 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Attendance at large professional gatherings	

Learning objective b3 Medicines	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Be able to adapt pharmacotherapy to the patient’s age, sex, weight, kidney and liver function as well as any comorbidity and other medication – Be able to assess the risks of interactions and side effects with pharmacotherapy – Be able to work with patients and their families to achieve compliance with medications – Be able to work with other parties in the patient care chain with regard to pharmacotherapy – Be able to critically review and evaluate scientific evidence surrounding pharmacotherapy – Demonstrate knowledge of the environmental impacts of pharmacotherapy – Demonstrate knowledge of the health economics aspects of pharmacotherapy 	<p>Clinical practice under supervision</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the supervisor</p>
	<p>Participation in one or more courses</p>	<p>Certificate of completed programme activities and attained required competencies requirements issued by the course provider or the supervisor</p>

Learning objective b4 Insurance medicine	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to apply procedures in insurance medicine as part of the treatment of the individual patient – Be able to collaborate on insurance medicine matters relating to the individual patient with actors within and outside the healthcare system 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or supervisor
	General recommendations Attendance at large professional gatherings	

Learning objective b5 Palliative care in the final stages of life	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to identify the need for and initiate palliative care in the final stages of life – Be able to hold conversations with patients and their families concerning transiting to palliative care – Be able to apply the fundamental principles of palliative symptom relief with regard to physical, psychological, social and existential needs 	Clinical practice under supervision or alternatively clinical attachment	Certificate of completed programme activities and attained the required competences issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competences issued by the course provider or the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings Clinical attachment Training in simulated environment	

Learning objectives c

The specialist doctor shall have:

- Knowledge of the values, ethical principles and approaches of palliative care,
- The ability to manage difficult clinical situations and ethical problems,
- Knowledge of the disease process in life-threatening, incurable, progressive conditions,
- Knowledge of the complex physical and psychological symptoms, social problems and spiritual and existential needs that may appear in patients with incurable, progressive, life-threatening disease, regardless of age, diagnosis or multimorbidity,
- The ability to manage complex physical and psychological symptoms, social problems and spiritual and existential needs that may appear in patients with incurable, progressive, life-threatening disease, with both pharmacological and non-pharmacological methods,
- Knowledge of the psychological responses to crisis, loss and symptoms,
- Knowledge of the religious and cultural impacts on all aspects of palliative care,
- Ability to communicate effectively and empathetically about difficult, threatening news and existential needs as well as recognise and respond to the needs of the patient's relatives for practical and emotional support,
- Knowledge and the capacity to create, lead and also collaborate in multi-professional teams, and
- Knowledge of the possibilities and limitations of palliative medicine.

The specialist doctor should be able to act as an independent, advisory expert. The ability to work with the organisational, group and individual perspectives in conjunction with other expertise, government agencies and organisations in the fields of occupational health and safety area and the environment is therefore central. It is also important to master the specific medical-ethical problems that can arise within the area.

Learning objective c1	Programme activities	Assessment
The specialist doctor shall: – Have knowledge of the hospice philosophy and the development of palliative medicine and the definitions, terms and concepts that are central in the area	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Attendance at large professional gatherings Theoretical studies	

Learning objective c2	Programme activities	Assessment
The specialist doctor shall: – Have knowledge of how the need for palliative care is calculated	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Attendance at large professional gatherings Theoretical studies	

Learning objective c3	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Have knowledge of the values of palliative care – Have the ability to manage difficult clinical situations and ethical dilemmas and problems 	<p>Clinical practice under supervision at one or more units conducting such activities or managing such cases</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the supervisor</p>
	<p>Participation in one or more courses</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor</p>
	<p>General recommendations</p> <p>Participation in group reflection, within and between professions</p> <p>Attendance at large professional gatherings</p> <p>Theoretical studies</p>	

Learning objective c4	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Have knowledge of the biology, pathophysiology and natural progression of life-threatening conditions and diseases and about disease modifying therapies, and be able to distinguish between the symptoms of disease and treatment-related adverse reactions – Have knowledge of the painful symptoms that can appear in the final stages of life and the significance of simultaneous complex multimorbidity – Be able to manage the patient's various treatments in consultation with other specialists during the course of the illness 	<p>Clinical practice under supervision at one or more units conducting such activities or managing such cases</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the supervisor</p>
	<p>Participation in one or more courses</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor</p>
	<p>General recommendations</p> <p>Theoretical studies</p>	

Learning objective c5	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – From a holistic perspective and with focus on the individual’s situation, master the diagnosis, prevention, treatment and evaluation of basic and complex physical and psychological symptoms as well as social and existential problems in patients with incurable, progressive, life-threatening disease, in order to alleviating suffering and achieving the best possible quality of life for patients and their relatives – Master the pharmacological methods for alleviating advanced symptoms in patients with incurable, progressive, life-threatening disease – Be well able to question, refrain from and gently discontinue drug treatments that do not confer patient benefit 	<p>Clinical practice under supervision at one or more units conducting such activities or managing such cases</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the supervisor</p>
	<p>Participation in one or more courses</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor</p>
	<p>General recommendations</p> <p>Participation in intra- or inter-professional reflection in groups</p> <p>Theoretical studies</p>	

Learning objective c6	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Have knowledge of non-pharmacological methods of alleviating symptoms and suffering – Have knowledge of complementary and alternative treatment methods and procedures used by patients in palliative care as well as the legislation and other regulations that apply to these methods and procedures 	<p>Clinical practice under supervision at one or more units conducting such activities or managing such cases</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the supervisor</p>
	<p>Participation in one or more courses</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor</p>
	<p>General recommendations</p> <p>Clinical attachment</p> <p>Theoretical studies</p>	

Learning objective c7	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Have knowledge of psychological responses to crisis, loss, uncertainty and physical symptoms, as well as how psychological defence mechanisms can manifest themselves and how coping strategies can be used – Be able to assess and manage patients with anxiety, depression and disorientation and other psychological and mental health problems using pharmacological and non-pharmacological therapies – Have knowledge of the impact of family relationships and economic factors on the experience of symptoms and well-being, and be able to refer on to relevant professionals 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in seminars Theoretical studies	

Learning objective c8	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Have knowledge of religious and cultural impact, including language, on all aspects of palliative care – Have the ability to recognise and respond to the patient's existential needs and search for meaning and be able to differentiate this from religious needs 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c9	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master effective and empathetic communication with patients, their relatives and carers when taking medical history, providing information, delivering difficult or threatening news and in existential conversations 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups Clinical attachment Theoretical studies	

Learning objective c10	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Have knowledge of how a multi-professional team functions as well as how the team's structure, process and group dynamics affect the results of their work – Master building, leading and collaborating in palliative care teams 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies Work in a care team	

Learning objective c11	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Have knowledge of the social support resources available to families – Be able to assess the individual needs of families for practical and emotional support and be able to assess how relatives can be involved in the planning of the patient’s care to create a sense of security and meaningfulness – Have knowledge of anticipatory grief, the components of grief and pathological grief as well as how pathological grief can be prevented in relatives 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in seminars Theoretical studies Work in a care team	

Learning objective c12	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Have knowledge of the possibilities and limitations of palliative medicine – Be aware of his/her own personal values and beliefs and attitudes to death and how these can affect his/her professional attitude and capability of closeness and distance – Have knowledge of the significance of continuous exposure to grief and losses, how personal losses and grief affect one’s work, the value of mentoring and when and where to get help 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups Theoretical studies	



Learning objective c13	Programme activities	Assessment
The specialist doctor shall: – Be able to apply legislation and other regulations applicable to the specialty	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor

General recommendations

Programme structure

Specialist medical training should be located at clinics specialising in palliative care, including palliative inpatient care unit or hospice, in home care and consulting teams. Clinical practice should give the specialty resident experience of working in multi-professional teams. During his/her training, the specialty resident should be supervised by a specialist in palliative medicine or a doctor with considerable experience in the field.

It is desirable that the training is continuous so that the specialty resident can follow patients under care in the end stages of life and experience the value of continuity in relationships, medical decisions, ethical choices and existential conversations. It is of great importance that the specialty resident is able to follow the whole process in patients, their families, in the team and in themselves.

During clinical practice, the specialty resident should get insight into how general palliative care is practised at units other than his/her own base clinic, for example in residential care, in municipal home care and in hospital clinics.

It is important that the specialty resident seeks self-knowledge through reflection and guidance.

Throughout the entire programme, theoretical studies should be alternated with clinical practice.

Pain Management

Description of skills

The specialty of Pain Management is characterised by knowledge and skills in investigating, diagnosing, assessing, treating and monitoring all types of pain states in the population, regardless of the patient's age and the genesis of the pain. This skills area also covers education, preventive measures and rehabilitation.

The pain management skills area covers all health and medical care environments, from primary care with its unselected patient population to highly specialised care. The skills area is characterised by a cross-professional approach which requires the coordination of efforts between various professional groups, forms of care and principals. Knowledge of the organisation of the health and medical care system as well as familiarity with the way it works is therefore important for the skills area.

Pain management is a supplementary specialty.

Skills requirements

For Pain Management, learning objectives a1-a6, b1-b5 and c1-c15 apply.

Learning objectives a and b

Learning objective a1 Teamwork, leadership and pedagogy	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Be able to take responsibility for his/her continuous learning in the workplace – Be able to exercise leadership in his/her daily work, including lead a healthcare team – Be able to take responsibility for the development of multi-professional teamwork – Be able to take responsibility for cooperation with patients and their families** – Be able to work in networks looking after the patient – Be able to collaborate with agencies outside the hospital healthcare system such as social welfare boards, agencies within the social services, schools and Försäkringskassan (the Swedish Social Insurance Agency) – Be able to present and explain medical information in a way that is understandable to the recipient, orally and in writing – Be able to plan and carry out teaching and training – Be able to supervise and instruct colleagues and students 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	<p>General recommendations</p> <ul style="list-style-type: none"> Participation in intra- or inter-professional reflection in groups Supervise under supervision Teach under supervision 	

Learning objective a2 Ethics, diversity and equality	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate knowledge and understanding of the principles of medical ethics and be able to identify ethical problems and analyse these in a structured way – Be able to handle conflicts in values in his/her daily work – Be able to treat people as individuals and with respect regardless of gender, transgender identity or expression, ethnic origin, religion or other faith, disability, sexual orientation or age. 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups	

Learning objective a3 Infection Prevention and Control	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to take responsibility for the prevention and control of healthcare-associated infections 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor

Learning objective a4 Systematic quality and patient safety management	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Critically examine his/her own practice and be able to conduct a risk and outcome analysis – Be able to take responsibility for systematically implementing measures, processes and procedures to improve patient care – Be able to take responsibility for the integration of new technologies and procedures into his/her daily work as a doctor 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Quality and development work	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	

Learning objective a5 Medical science	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate a deeper knowledge and understanding of medical scientific methodology and ethical principles – Be able to critically examine and evaluate medical science information – Demonstrate a scientific evidence based approach to his/her daily way of working and routines 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Independent written work based on scientific methodology	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	

Learning objective a6 Legislation and other regulations and the health and medical care system's organisation	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Demonstrate knowledge of the legislation and regulations which govern the healthcare system and its staff – Demonstrate knowledge of the health and medical care system's organisation and administration – Demonstrate knowledge of the health and medical care system's various financial control systems and their importance for the balancing of priorities in his/her daily work 	<p>Participation in one or more courses</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor</p>

Learning objective b1 Communication with patients and families	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to adapt his/her way of communicating based on the patient's and their relatives' individual needs and communication capabilities – Be able to give patients and their families difficult news with respect, empathy and sensitivity – Be able to support the patient's ability to manage a change in life situation as a result of an illness or disability – Be able to consult with patients and their families concerning the patient's self-care 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups Clinical attachment	

Learning objective b2 Prevention of disease and ill-health	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to guide patients in matters of lifestyle choices in order to: – Prevent the development of diseases associated with one or more lifestyle habits – Improve the prognosis in patients with diseases associated with one or more lifestyle habits 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Attendance at large professional gatherings	

Learning objective b3 Medicines	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Be able to adapt pharmacotherapy to the patient’s age, sex, weight, kidney and liver function as well as any comorbidity and other medication – Be able to assess the risks of interactions and side effects with pharmacotherapy – Be able to work with patients and their families to achieve compliance with medications – Be able to work with other parties in the patient care chain with regard to pharmacotherapy – Be able to critically review and evaluate scientific evidence surrounding pharmacotherapy – Demonstrate knowledge of the environmental impacts of pharmacotherapy – Demonstrate knowledge of the health economics aspects of pharmacotherapy 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained required competencies requirements issued by the course provider or the supervisor

Learning objective b4 Insurance medicine	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to apply procedures in insurance medicine as part of the treatment of the individual patient – Be able to collaborate on insurance medicine matters relating to the individual patient with actors within and outside the healthcare system 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or supervisor
	General recommendations Attendance at large professional gatherings	

Learning objective b5 Palliative care in the final stages of life	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to identify the need for and initiate palliative care in the final stages of life – Be able to hold conversations with patients and their families concerning transiting to palliative care – Be able to apply the fundamental principles of palliative symptom relief with regard to physical, psychological, social and existential needs 	Clinical practice under supervision or alternatively clinical attachment	Certificate of completed programme activities and attained the required competences issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competences issued by the course provider or the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings Clinical attachment Training in simulated environment	

Learning objectives c

Using the pain analysis process, the specialist doctor is to investigate, diagnose, assess and treat acute and chronic pain states, depending on the underlying disease process. This includes skills in interview and examination techniques, examination procedures and pharmacological and non-pharmacological therapies, as well as setting therapeutic goals, evaluation and rehabilitation.

The specialist doctor in pain management requires specialist expertise in a clinical core specialty that involves patient contact.

Learning objective c1	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master the established definitions of pain and the application of them in working with the pain patient – Master the epidemiology of various pain states 	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c2	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to analyse and diagnose pain, taking into account the psychological, social, cultural and existential aspects of pain – Be able to set realistic and relevant therapeutic goals – Be able to adapt evaluation methods on the basis of the individual patient's circumstances – Be able to process information from different doctors in work in a multi-disciplinary team 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in diagnostic and treatment conferences Theoretical studies Work in a care team	

Learning objective c3	Programme activities	Assessment
The specialist doctor shall: – Be able to apply evidence-based structured interview methods	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Clinical attachment	

Learning objective c4	Programme activities	Assessment
The specialist doctor shall: – Master the investigation, diagnosis, management, assessment, treatment methods and monitoring of nociceptive pain	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor

Learning objective c5	Programme activities	Assessment
The specialist doctor shall: – Master pain analysis, diagnosis and management of neuropathic pain	Clinical practice under supervision, or alternatively clinical attachment at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor

Learning objective c6	Programme activities	Assessment
The specialist doctor shall: – Master pain analysis, diagnosis and management of visceral pain	Clinical practice under supervision, or alternatively clinical attachment at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor

Learning objective c7	Programme activities	Assessment
The specialist doctor shall: – Be able to identify and initially manage patients where mental illnesses or psychological disorders or conditions seem to be the main determinant of the patient's pain problem – Be able to identify and initially manage patients with drug dependence	Clinical practice under supervision, or alternatively clinical attachment at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in diagnostic and treatment conferences Clinical attachment Theoretical studies	

Learning objective c8	Programme activities	Assessment
The specialist doctor shall: – Master pain analysis, diagnosis and management of chronic musculoskeletal pain states	Clinical practice under supervision, or alternatively clinical attachment at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor

Learning objective c9	Programme activities	Assessment
The specialist doctor shall: – Master pain analysis, diagnosis and management of tumour-related pain – Master the pain analysis, diagnosis and treatment of other pain that can be related to cancer or its treatment	Clinical practice under supervision, or alternatively clinical attachment at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor

Learning objective c10	Programme activities	Assessment
The specialist doctor shall: – Master pain analysis, diagnosis and management of acute pain states	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor

Learning objective c11	Programme activities	Assessment
The specialist doctor shall: – Master the choice of pharmacological and non-pharmacological therapies for pain states of varying etiologies	Clinical practice under supervision, or alternatively clinical attachment at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c12	Programme activities	Assessment
The specialist doctor shall: – Be able to assess the applicability of evidence-based forms of rehabilitation in commonly occurring pain states	Clinical practice under supervision, or alternatively clinical attachment at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in diagnostic and treatment conferences Theoretical studies	

Learning objective c13	Programme activities	Assessment
The specialist doctor shall: – Have knowledge of the management of chronic and acute pain in children	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c14	Programme activities	Assessment
The specialist doctor shall: – Be able to manage elderly patients with chronic and acute pain states	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c15	Programme activities	Assessment
The specialist doctor shall: – Be able to apply legislation and other regulations applicable to the specialty	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor

General recommendations

Programme structure

Specialist medical training in Pain Management can begin during or after core specialty medical training and may be integrated with this. It is important that clinical practice is alternated and integrated with theoretical studies.

A longer continuous period of the training should be done at a multi-disciplinary pain clinic. This part of the programme may be scheduled when it suits. However, it is an advantage if the clinical practice can be completed at a unit where several disciplines and professions collaborate.

The introductory part of the specialty training should contain a longer continuous period of clinical practice with a focus on the pain states usually found within his/her own core specialty. This clinical practice should be focused on investigating, diagnosing, assessing, treating and following up commonly occurring pain diagnoses within the skills area of the core specialty.

In order to broaden his/her skills outside his/her own core specialty, it is valuable for the specialty resident to receive ancillary training through clinical practice or clinical attachment within a surgery or pharmacology intensive specialty, or both, such as anaesthesia and intensive care or neurosurgery.

In the latter part of the specialty training, ancillary training in the form of clinical practice or clinical attachment comprising one or more of the following is essential (if they are not covered by the core specialty): cancer-related pain, acute and postoperative pain and chronic non-cancer-related pain.

Some parts of the specialty training are specific to each core specialty, for example:

- Surgical management within orthopaedics, obstetrics and gynaecology, urology and oncology
- Invasive interventional treatment in anaesthesia and intensive care and neurosurgery
- Specific pain rehabilitation in Physical and Rehabilitation Medicine.

At the end of the programme, it is important that the specialty resident is given the opportunity to practice independently within his/her own core specialty's pain management domain.

Infection Prevention and Control

Description of skills

The specialty Infection Prevention and Control is characterised by in-depth knowledge of the prevention of healthcare-associated infections and their transmission in healthcare facilities. The professional competence also includes the skills that allow this knowledge to benefit patients and staff.

The specialty has a supportive role in relation to healthcare providers – practitioners as well as purchasers of healthcare – in their efforts to provide care with a high standard of hygiene. This skills area therefore includes collaboration with representatives of healthcare providers at different levels, other medical specialties, quality management functions and technical consultants working in the organisations of healthcare providers, as well as national and regional government agencies.

Infection Prevention and Control is a supplementary specialty.

Skills requirements

For Infection Prevention and Control, learning objectives a1-a6 and c1-c12 apply.

Learning objectives a

Learning objective a1 Teamwork, leadership and pedagogy	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to take responsibility for his/her continuous learning in the workplace – Be able to exercise leadership in his/her daily work, including lead a healthcare team – Be able to take responsibility for the development of multi-professional teamwork – Be able to take responsibility for cooperation with patients and their families** – Be able to work in networks looking after the patient – Be able to collaborate with agencies outside the hospital healthcare system such as social welfare boards, agencies within the social services, schools and Försäkringskassan (the Swedish Social Insurance Agency) – Be able to present and explain medical information in a way that is understandable to the recipient, orally and in writing – Be able to plan and carry out teaching and training – Be able to supervise and instruct colleagues and students 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups Supervise under supervision Teach under supervision	

Learning objective a2 Ethics, diversity and equality	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate knowledge and understanding of the principles of medical ethics and be able to identify ethical problems and analyse these in a structured way – Be able to handle conflicts in values in his/her daily work – Be able to treat people as individuals and with respect regardless of gender, transgender identity or expression, ethnic origin, religion or other faith, disability, sexual orientation or age. 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups	

Learning objective a3 Infection Prevention and Control	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to take responsibility for the prevention and control of healthcare-associated infections 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor

Learning objective a4 Systematic quality and patient safety management	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Critically examine his/her own practice and be able to conduct a risk and outcome analysis – Be able to take responsibility for systematically implementing measures, processes and procedures to improve patient care – Be able to take responsibility for the integration of new technologies and procedures into his/her daily work as a doctor 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Quality and development work	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	

Learning objective a5 Medical science	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate a deeper knowledge and understanding of medical scientific methodology and ethical principles – Be able to critically examine and evaluate medical science information – Demonstrate a scientific evidence based approach to his/her daily way of working and routines 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Independent written work based on scientific methodology	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	

Learning objective a6 Legislation and other regulations and the health and medical care system's organisation	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Demonstrate knowledge of the legislation and regulations which govern the healthcare system and its staff – Demonstrate knowledge of the health and medical care system's organisation and administration – Demonstrate knowledge of the health and medical care system's various financial control systems and their importance for the balancing of priorities in his/her daily work 	<p>Participation in one or more courses</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor</p>

Learning objectives c

The specialist doctor should have the medical competence required to function as an expert in infection prevention and control. The specialist doctor is to have knowledge of:

- The causes, symptomatology and natural course of infectious diseases,
- The diagnosis, investigation and treatment of infectious diseases (in particular healthcare-associated infections or infections related to care interventions),
- The occurrence, mode of transmission, ability to cause disease and resistance mechanisms of microorganisms,
- The rational use of antibiotics,
- Transmission routes for the microorganisms that can cause infections in healthcare,
- Methods of infectious disease epidemiology and how these can be used to investigate disease outbreaks and their transmission both within the community at large and within healthcare,
- The measures and procedures that can be used to prevent and arrest the transmission of infections,
- The measures and procedures that can be used to prevent healthcare-associated infections (those related to surgical interventions as well as others),
- Clinical microbiology laboratory procedures: the specialist doctor should be able to select the relevant procedures for the detection and typing of microorganisms, and interpret the results aptly in the investigation of outbreaks of infections and their transmission within healthcare facilities, and
- The principles and procedures for the monitoring of the presence of infections, infectious agents and antibiotic resistance in healthcare and in the community.

In addition, the specialist doctor is to have knowledge of how the spread of infectious agents and infectious diseases to patients, staff and visitors within the healthcare sector can be prevented through:

- Correct behaviour,
- Adequate equipment,
- Suitable facilities, and
- In some cases through vaccination or other immunoprophylaxis.

The specialist doctor shall also have knowledge of:

- Means, methods and equipment for cleaning, disinfection and sterilization, and how they can be used for patients, staff, equipment and facilities,

- How to design the layout of the built healthcare environment, as well as their technical installations and choice of materials so that the built facilities meet the requirements of a high standard of hygiene,
- How the built healthcare environment should be maintained in order to retain a high standard of hygiene,
- The risks of infection in connection with construction and renovation,
- How equipment to be used in healthcare facilities should be constituted, maintained, and handled to minimise the risk of infection transmission, and
- The relevant standards for medical devices.

The specialist doctor should also have knowledge of the legislation and other regulations applicable to communicable disease prevention and control, infection hazards in relation to occupational health and safety for healthcare staff, environmental and health protection, patient safety and safety of medical devices with regard to risks of infection.

Finally, the specialist doctor should be skilled in providing advice, support and guidance in quality assurance to healthcare staff, managers at different organisational levels, and to healthcare leaders at the level of County Councils or Regions.

Learning objective c1	Programme activities	Assessment
The specialist doctor shall: – Be able to manage the investigation and treatment of infectious diseases	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Theoretical studies	

Learning objective c2	Programme activities	Assessment
The specialist doctor shall: – Master the subject area microbiological agents including mechanisms for the development of antimicrobial resistance and how the development of resistance can be prevented	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c3	Programme activities	Assessment
The specialist doctor shall: – Be able to manage clinical microbiology diagnostics including methods for typing	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c4	Programme activities	Assessment
The specialist doctor shall: – Master the modes and mechanisms of transmission of microorganisms within healthcare settings.	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Theoretical studies	

Learning objective c5	Programme activities	Assessment
The specialist doctor shall: – Master the principles of and procedures for preventing, investigating and managing outbreaks of infectious diseases and their transmission in healthcare facilities	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c6	Programme activities	Assessment
The specialist doctor shall: – Master the principles and procedures for the prevention of healthcare-associated infections	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Theoretical studies	

Learning objective c7	Programme activities	Assessment
The specialist doctor shall: – Master the principles and procedures for the epidemiological surveillance of infections	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c8	Programme activities	Assessment
The specialist doctor shall: – Master the principles and the choice of the methods for cleaning, disinfecting and sterilization in healthcare settings	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Clinical attachment at one or more units conducting such activities on managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c9	Programme activities	Assessment
The specialist doctor shall: – Master the infection prevention and control principles for the planning, design and maintenance of the built healthcare environment	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Clinical attachment at one or more units conducting such activities on managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c10	Programme activities	Assessment
The specialist doctor shall: – Master infection prevention and control principles for the selection, servicing, and maintenance of equipment in healthcare facilities	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c11	Programme activities	Assessment
The specialist doctor shall: – Be able to apply the legislation and other regulations applicable to the specialty, including having knowledge of other relevant legislation	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c12	Programme activities	Assessment
The specialist doctor shall: – Be able to provide advice, support and quality assurance in relation to healthcare staff, managers at different organisational levels, and healthcare leaders at the level of County Councils or Regions.	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Theoretical studies	

General recommendations

Programme structure

The programme in Infection Prevention and Control should be conducted at an infection prevention and control unit engaged in activities that target all forms of healthcare. The aim is for the specialty resident to acquire a comprehensive set of skills. For this reason, clinical practice may need to be supplemented with a placement at a different infection prevention and control unit so that the specialty resident can acquire advanced knowledge in specialised areas, and also knowledge about less common questions.

In the initial stage of the programme, the emphasis should be on the management of commonly occurring infection outbreaks and questions surrounding the management of patients with notifiable diseases or infectious agents. Thereafter, the programme should be expanded with primary and secondary prevention of all types of healthcare-associated infections and their transmission the healthcare setting. In addition to activities that directly support healthcare, the specialty resident should participate in activities that target healthcare managers and healthcare leaders at the level of County Councils or Regions.

The programme should include ancillary training through clinical practice in a clinical microbiology laboratory and an infectious diseases clinic. The length of the individual specialty resident's period of clinical practice in these activities should be adapted to his/her core specialty.

Clinical practice at the unit of a County Medical Officer is of great importance. The specialty resident should in addition acquire advanced knowledge in infection prevention and control by means of a shorter observation visit at a national governmental body with responsibility for the infection prevention and control area, an observation visit to a central sterilization processing unit as well as to a surgical centre, a patient safety unit, a local or national Strama unit (the Swedish strategic programme against antibiotic resistance), and at a procurement and property management unit. Other ancillary training may also be considered.

Theoretical studies should be completed in the form of self-study and participation in the internal course programmes of the infection prevention and control unit, where the specialty resident is expected to participate and actively contribute.

Old Age Psychiatry

Description of skills

The specialty of Old Age Psychiatry is characterised by skills in all diseases and conditions that result in mental or cognitive symptoms in the elderly, regardless of cause. This applies to both cognitive impairments in dementia and disorientation or to other mental or physical illnesses such as affective disorders, anxiety, disorientation, psychosis, crises, addiction disorders and personality disorders, etc.

Old age psychiatry demands greater skills in physical medicine than in general psychiatry because mental and physical conditions are often comorbid and interact with each other. Since these conditions usually mean that patients have reduced autonomy, this places high demands on the doctors's capacity taking into account ethical considerations as well as knowledge of the law.

The need for old age psychiatric care occurs primarily when biological ageing accelerates and morbidity and cognitive difficulties emerge. Skills in old age psychiatry may also be required when the younger people suffer cognitive diseases or multimorbidity.

The skills area is characterised by a cross-professional approach which requires the coordination of efforts between different forms of care and principals. This requires knowledge of the organisation and approaches of the health and medical care system and collaboration beyond the health and medical care system itself.

Old age psychiatry is a supplementary specialty.

Skills requirements

For Old Age Psychiatry, learning objectives a1-a6, b1-b5 and c1-c12 apply.

Learning objectives a and b

Learning objective a1 Teamwork, leadership and pedagogy	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to take responsibility for his/her continuous learning in the workplace – Be able to exercise leadership in his/her daily work, including lead a healthcare team – Be able to take responsibility for the development of multi-professional teamwork – Be able to take responsibility for cooperation with patients and their families** – Be able to work in networks looking after the patient – Be able to collaborate with agencies outside the hospital healthcare system such as social welfare boards, agencies within the social services, schools and Försäkringskassan (the Swedish Social Insurance Agency) – Be able to present and explain medical information in a way that is understandable to the recipient, orally and in writing – Be able to plan and carry out teaching and training – Be able to supervise and instruct colleagues and students 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups Supervise under supervision Teach under supervision	

Learning objective a2 Ethics, diversity and equality	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate knowledge and understanding of the principles of medical ethics and be able to identify ethical problems and analyse these in a structured way – Be able to handle conflicts in values in his/her daily work – Be able to treat people as individuals and with respect regardless of gender, transgender identity or expression, ethnic origin, religion or other faith, disability, sexual orientation or age. 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	<i>General recommendations</i> Participation in intra- or inter-professional reflection in groups	

Learning objective a3 Infection Prevention and Control	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to take responsibility for the prevention and control of healthcare-associated infections 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor

Learning objective a4 Systematic quality and patient safety management	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Critically examine his/her own practice and be able to conduct a risk and outcome analysis – Be able to take responsibility for systematically implementing measures, processes and procedures to improve patient care – Be able to take responsibility for the integration of new technologies and procedures into his/her daily work as a doctor 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Quality and development work	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings	

Learning objective a5 Medical science	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Demonstrate a deeper knowledge and understanding of medical scientific methodology and ethical principles – Be able to critically examine and evaluate medical science information – Demonstrate a scientific evidence based approach to his/her daily way of working and routines 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Independent written work based on scientific methodology	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in seminars Attendance at large	

	professional gatherings	
Learning objective a6 Legislation and other regulations and the health and medical care system's organisation	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Demonstrate knowledge of the legislation and regulations which govern the healthcare system and its staff – Demonstrate knowledge of the health and medical care system's organisation and administration – Demonstrate knowledge of the health and medical care system's various financial control systems and their importance for the balancing of priorities in his/her daily work 	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor

Learning objective b1 Communication with patients and families	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to adapt his/her way of communicating based on the patient’s and their relatives’ individual needs and communication capabilities – Be able to give patients and their families difficult news with respect, empathy and sensitivity – Be able to support the patient's ability to manage a change in life situation as a result of an illness or disability – Be able to consult with patients and their families concerning the patient's self-care 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Participation in intra- or inter-professional reflection in groups Clinical attachment	

Learning objective b2 Prevention of disease and ill-health	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to guide patients in matters of lifestyle choices in order to: – Prevent the development of diseases associated with one or more lifestyle habits – Improve the prognosis in patients with diseases associated with one or more lifestyle habits 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Attendance at large professional gatherings	

Learning objective b3 Medicines	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Be able to adapt pharmacotherapy to the patient’s age, sex, weight, kidney and liver function as well as any comorbidity and other medication – Be able to assess the risks of interactions and side effects with pharmacotherapy – Be able to work with patients and their families to achieve compliance with medications – Be able to work with other parties in the patient care chain with regard to pharmacotherapy – Be able to critically review and evaluate scientific evidence surrounding pharmacotherapy – Demonstrate knowledge of the environmental impacts of pharmacotherapy – Demonstrate knowledge of the health economics aspects of pharmacotherapy 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained required competencies requirements issued by the course provider or the supervisor

Learning objective b4 Insurance medicine	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to apply procedures in insurance medicine as part of the treatment of the individual patient – Be able to collaborate on insurance medicine matters relating to the individual patient with actors within and outside the healthcare system 	Clinical practice under supervision	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or supervisor
	General recommendations Attendance at large professional gatherings	

Learning objective b5 Palliative care in the final stages of life	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to identify the need for and initiate palliative care in the final stages of life – Be able to hold conversations with patients and their families concerning transiting to palliative care – Be able to apply the fundamental principles of palliative symptom relief with regard to physical, psychological, social and existential needs 	Clinical practice under supervision or alternatively clinical attachment	Certificate of completed programme activities and attained the required competences issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competences issued by the course provider or the supervisor
	General recommendations Participation in seminars Attendance at large professional gatherings Clinical attachment Training in simulated environment	

Learning objectives c

The specialist doctor is to have knowledge of:

- Gerontology,
- The effects of ageing on pharmacokinetics and pharmacodynamics,
- Differential diagnosis of internal medicine, neurological and mental illnesses, and
- The theoretical basis for the different psychotherapy methods, in particular for the methods that are suitable for the elderly.

In addition, the specialist doctor is to master:

- The management of all common mental illness in the elderly, including dementia and other mental illnesses,
- Electroconvulsive treatment (ECT) and psychopharmacology treatment, and
- Collaboration with municipal aged care and other healthcare providers, and have knowledge of resources outside the health and medical care system itself available for the mentally ill elderly.

The specialist doctor shall be able to manage:

- Conditions that result in central chest pain or shortness of breath, especially chronic conditions associated with severe mental suffering,
- Alcohol and drug addiction in the elderly, and have knowledge of other types of substance dependence, and
- Mental symptoms, and be able to alleviate other symptoms in palliative care patients.

The specialist doctor should also be able to initially manage other common physical illnesses in ageing.

In addition, the specialist doctor is to:

- Be able to assess the suitability of psychotherapy methods for elderly patients and be able to manage older patients with psychotherapy methods,
- Be cognisant of the foundations for care in adjacent specialties and other forms of care and be able to work in a consultative capacity,
- Have a good ability to communicate with people with various types of communication difficulties, and
- Have a holistic view of the needs of the elderly person.

Since, to a large extent, patients in older age psychiatry have reduced autonomy, the specialist doctor is to have a very good ability to take ethical considerations into account. The specialist doctor should also be able to apply the legislation and regulations applicable to the exercise of public authority within the skills area, as well as legislation and regulations applicable to the care and medical treatment of the elderly, including assessment of testamentary capacity and legal capacity.

Learning objective c1	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Have knowledge of gerontology in order to be able to assess the elderly person’s physical and mental function, changed symptoms and changed conditions of prevention, diagnosis, treatment and rehabilitation – Have the ability from a holistic view point to see the needs of the elderly person on the basis of functional level, combined disease burden, social situation and networks – Be cognisant of the conditions for care in adjacent specialties, other forms of care, residential care, the home, etc. – Be able to manage conditions of the elderly in different forms of care, for instance as a consultant doctor at other clinics, in residential care, and within home care 	<p>Clinical practice under supervision at one or more units conducting such activities or managing such cases</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the supervisor</p>
	<p>General recommendations</p> <p>Theoretical studies</p>	

Learning objective c2	Programme activities	Assessment
<p>The specialist doctor shall:</p> <ul style="list-style-type: none"> – Master the management of cognitive impairments in the case of dementia illnesses and alcohol abuse, affective disorders, psychoses general debilitation and other conditions that seriously affect cognition 	<p>Clinical practice under supervision at one or more units conducting such activities or managing such cases</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the supervisor</p>
	<p>Participation in one or more courses</p>	<p>Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor</p>
	<p>General recommendations</p> <p>Attendance at large professional gatherings</p> <p>Theoretical studies</p>	

Learning objective c3	Programme activities	Assessment
The specialist doctor shall: – Master the management of other common and major mental illnesses such as affective disorders, psychoses, anxiety, personality disorders and crisis reactions in the elderly in the acute and chronic stages, also with regard to impaired organ function, multimorbidity and individual treatment gains	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	<i>General recommendations</i> Attendance at large professional gatherings Theoretical studies	

Learning objective c4	Programme activities	Assessment
The specialist doctor shall: – Be able to manage other mental illness in the elderly, including multimorbidity, and differential diagnosis of physical and mental illnesses	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	<i>General recommendations</i> Theoretical studies	

Learning objective c5	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to manage conditions that generate central chest pain or shortness of breath, especially chronic complaints in relation to psychiatric comorbidity – Be able to initially manage other, common physical illnesses in the elderly 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Theoretical studies	

Learning objective c6	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to manage alcohol and drug addiction in the elderly, and have knowledge of other types of substance dependence 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	General recommendations Attendance at large professional gatherings Theoretical studies	

Learning objective c7	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to manage mental disorder symptoms and alleviate other symptoms in palliative care patients 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Theoretical studies	

Learning objective c8	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Have knowledge of the theoretical basis for psychotherapy methods suitable for the elderly – To be able to assess what is an appropriate psychotherapy method for treating the elderly – Be able to manage older patients using psychotherapy methods 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor

Learning objective c9	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master ECT treatment – Master psycho-pharmacological treatment in the elderly, including multimorbidity with polypharmacy – Have knowledge of the effects of ageing on the pharmacokinetics and pharmacodynamics of pharmacotherapy 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	<i>General recommendations</i> Attendance at large professional gatherings Theoretical studies	

Learning objective c10	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to apply the legislation and regulations applicable to the specialty, including legislation and other regulations governing the exercise of public authority – Have knowledge of the organisation and responsibilities of forensic psychiatry – Be able to manage the assessment of testamentary capacity and legal capacity in the elderly 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	Participation in one or more courses	Certificate of completed programme activities and attained the required competencies issued by the course provider or the supervisor
	<i>General recommendations</i> Theoretical studies	

Learning objective c11	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Master collaboration with municipal aged care the elderly and other healthcare providers – Have knowledge of the medical and social resources outside the healthcare system which are important for the target group, for example municipal and private aged care, the political organisation and social planning, the work of the committees of chief guardians, the police service, volunteer organisations, faith communities, funeral services, family law, immigrant associations and pharmacies 	Clinical attachment at one or more units conducting such activities on managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor
	General recommendations Theoretical studies	

Learning objective c12	Programme activities	Assessment
The specialist doctor shall: <ul style="list-style-type: none"> – Be able to communicate with the patients and their relatives with communication difficulties which may arise for example in the case of impairments to general state of health, eyesight and hearing or in aphasia – Be able to use aids for alternative and complementary communication – Be able to use an interpreter for patients with cognitive impairments 	Clinical practice under supervision at one or more units conducting such activities or managing such cases	Certificate of completed programme activities and attained the required competencies issued by the supervisor

General recommendations

Programme structure

Specialists in Geriatrics or Psychiatry can have very different knowledge and experience depending on when and where they receive their specialist training. This is partly due to the fact that the content of the specialties Psychiatry and Geriatrics differs significantly in different parts of Sweden, in particular with regard to responsibility for dementia illnesses.

The management of cognitive impairments due to dementia or other causes is one of the most important tasks of a specialist in Old Age Psychiatry. A significant portion of the programme in old age psychiatry should therefore be carried out at highly specialised clinics for cognitive disorders. This kind of clinic may belong in either psychiatry or geriatrics.

Furthermore, doctors with a background in both psychiatry and geriatrics will probably also need to supplement their knowledge concerning addiction disorders in the elderly.

Competency in collaborating with municipal aged care and other healthcare providers and knowledge of important medical and social resources outside the healthcare system is developed by the specialty resident continuously in his/her routine practice. This competency should be further developed by clinical attachment full-time for 2-3 weeks, not involving the specialty residents own patient cases. The specialty resident to complete part of this clinical attachment within a municipal activity, for example the social welfare board, committee for the elderly (*äldrenämnd*), chief guardian, social assistance officer (*biståndshandläggare*) or politicians. Clinical attachment should also be done for example with the police, volunteer organisations, faith communities, funeral services, family law, immigrant associations, pharmacies or in private aged care.

It may also be appropriate for the specialty resident to receive voice and pronunciation training with a speech therapist or speech coach.

Specialty residents with the core specialty of Geriatrics

Specialists in Geriatrics should complete specialist training at a highly specialised old age psychiatry unit. Part of the programme can be completed within general psychiatry practice. What is important to learn is the mental illness panorama and ECT treatment as well as to supplement knowledge in psychopharmacology and learn about the legislation and other regulations which are important for psychiatry, in particular the law governing the exercise of public authority.

Specialist training in geriatrics does not include psychotherapy training. Therefore, the specialty resident should take a course in psychotherapy methods. This course should focus on methods suitable for the elderly.

Specialty residents with the core specialty of Psychiatry

Specialists in psychiatry should supplement their knowledge of physical conditions to a level where they can work as a ward doctor at a geriatric ward. A longer period of specialist training at a general geriatric ward should also be included in the programme therefore. In connection with this specialist training, the specialty resident should also deepen his/her knowledge in gerontology.

In general, and with the exception of cognitive disorders, the specialty resident with specialist competence in Psychiatry has high level skills concerning mental disorders, but needs to deepen knowledge his/her knowledge of these disorders from the perspective of the elderly, preferably and a highly specialised unit.

The programme should also include a period of specialist training at residential care and at a palliative care unit as well as training in working in a consultative capacity.

The specialist in Psychiatry will likely also need to supplement his/her knowledge in pharmacology with a focus on the elderly and polypharmacy. The specialist in Psychiatry have experience of the exercise of public authority within the framework of Sweden's Act on compulsory psychiatric care (*Lag (1991:1128) om psykiatrisk tvångsvård, LPT*), but may need to supplement his/her knowledge of other parts of the law, for example with regard to legal capacity, testamentary capacity, trustees and administrator