

Degree Programme in Radiography and Radiotherapy (210 cr)

English translation, degree programme conducted in Swedish. Degree: **YH-examen inom social- och hälsovård**
Qualification title: **Röntgenskötare (YH)**
Duration of studies: **3,5 år**
Study type: **Full-time** **Part-time**

- » [Generic competences](#)
- » [Language Information for Students with Swedish or Finnish as Prior Language of Instruction.](#)

Kontaktuppgifter: [Enheter](#) | [Utbildningsansvariga](#)

Code	Name	Cr/year/total					
		1	2	3	4	5	Total
Gru	Core Studies						12 cr
RA16IN	Language and introduction to academic studies <i>The students are familiar with academic studies and are able to plan and take responsibility for their own studies. They are able to retrieve and use different kinds of information and literature, as well as express themselves suitably and clearly in different situations. They can use the tools of project planning and handling. They have developed and enriched their vocabulary and language skills so they correspond to the requirements of professional life and future studies.</i>	9	3				12 cr
RA18IN01	• Introduction to academic studies <i>The student</i> - reflects on his/her studies and future plans and is aware of the significance of personal development in relation to life-long learning and the profession - is familiar with his/her UAS, professional field and individual learning style - can generate new knowledge and create personal learning environments - is familiar with the ethical values of the profession - can retrieve and critically view information - can work in groups and teams with individuals regardless of their background - understand the importance of environmental responsibility and sustainable development within different fields, seen from an ecological, technical and economical aspect with special attention to sustainable development from a health- and social welfare-perspective - are able to see his/her own responsibility as practitioners of a profession, and implement this knowledge within his/her own field but also possess the tools to work for global and lasting social development, as well as know the position outlined by the management of Novia, University of Applied Science - is knowledgeable on how the environment affects our health, and is able to work for sustainable development <i>utveckling</i>	3					3 cr
RA16FI01	• Finnish <i>The student</i> - demonstrates ability to communicate in a natural and professional manner, in speaking as well as writing, in a work context, including customer service. - demonstrates proficiency in the terminology of the field and is able to benefit from research and literature in his/her professional development - shows such skills in the Finnish language as are in accordance with the Act on the Knowledge of Languages Required of Personnel in Public Bodies (424/2003). This means that the student must show satisfactory (grade 1, 2 or 3) or good (grade 4 or 5) skills in speaking and writing Finnish. Written and oral skills are assessed separately.	3					3 cr
RA16SV01	• Swedish <i>Studerande</i> -kan kommunicera både muntligt och skriftligt på ett strukturerat och språkligt välfungerande sätt, i enlighet med arbetslivets och samhällslivets krav -känner till arbetsprocessen för vetenskapligt skrivande och kunna använda referenssystem. -är efter kursen medveten om olika vägar att söka information och kan rapportera enligt reglerna för standarduppställning. <i>Studeranden med finska som skolbildningsspråk ska uppvisa sådana kunskaper i svenska som enligt lagen (424/2003) krävs av offentligt anställda. Detta innebär att dessa studerande bör visa nöjaktig (vitsord 1-3) eller god (vitsord 4-5) förmåga att använda svenska i tal och skrift. Muntlig och skriftlig förmåga bedöms separat.</i>	3					3 cr
RA16EN01	• English <i>The student</i> - shows the ability to communicate in a professional manner in a work context in speaking as well as writing - is familiar with essential terminology within his/her field and is able to benefit from professional literature - has a positive attitude to developing his/her receptive and productive language skills and is familiar with the relevant tools - is aware of cultural differences in international contexts		3				3 cr
YRK VÅ	THEORETICAL STUDIES						108 cr
RA16GR	Basics of clinical radiography and nursing care <i>The students have basic insights into the field of radiography and radiation as being a part of health care and social welfare, as well as the clinical caring profession. They have the ability to apply their knowledge and skills within basic care and first aid. They work in an ergonomic way.</i>	12					12 cr
RA16GR01	• Introduction to clinical radiography and radiotherapy <i>Studerande</i> -känner till historiska rön gällande radiografi och strålbehandling -har en inblick i de olika modaliteter inom diagnostiken och terapeutiska radiografien och har grundläggande kunskap om röntgenskötarens profession. -har insikt i grundläggande begrepp -känner till den kliniska radiografins forskningsområde	5					5 cr

RA16GR02	<p>• Basic nursing care <i>Att studerande efter godkänd kurs har grundläggande insikter i kliniskt vårdarbete och kliniska vårdmetoder.</i></p>	3				3 cr
RA16GR03	<p>• First aid <i>Att studerande</i> -kan identifiera behov av första hjälp samt kan ge första hjälp. -känner till planer som gäller hälso- och sjukvård vid undantagstillstånd - har kompetenser enligt kurskraven i Finlands Röda Kors kurser Första hjälp 1 och Första hjälp 2</p>	2				2 cr
RA16GR04	<p>• Social- and health care in Finland <i>Att studerande</i> -har grundläggande insikter i hälso- och socialvårdens verksamhetsområde -är förtrogen med aktuell lagstiftning inom social- och hälsovården.</p>	2				2 cr
RA16BM	<p>Biosciences <i>The students have fundamental insights into the human skin-, support-, and movement organs, circulation, respiration, digestion and secretion. They are familiar with micro groups, the immune system and causes for illness. They are able to work in an aseptic manner. The students also understand how radiation interacts with matter, and are familiar with how radiation affects the human being, as well as the radiation sensitivity in different tissues.</i></p>	9	3			12 cr
RA16BV01	<p>• Human physiology and anatomy 1 <i>The students</i> - have knowledge of Latin and Greek anatomical terms - have knowledge about cells, tissues and the integumentary system - have knowledge about and understands how the nervous system regulates physiological processes in the body - understands the structure and function of the sense organs - understands how the endocrine system regulates body metabolism and organ functions - have knowledge about the structure and function of the reproductive system - have fundamental insights into the support- and movement organs</p>	3				3 cr
RA18BV02	<p>• Human physiology and anatomy 2 <i>The students</i> - have knowledge of the structure and function of the circulatory system - have knowledge of the structure and function of the lymphatic system - have knowledge of the structure and function of the respiratory system - have knowledge of the structure and function of the digestive and secretory organs - have knowledge of the structure and function of the kidneys and urinary tracts - have knowledge of the importance of the fluid, electrolyte and acid-base balance</p>	3				3 cr
RA18BV03	<p>• Clinical microbiology and hygiene <i>The student</i> -master the terminology of clinical microbiology to the extent needed in nursing care -master aseptic methods -understand the concept of microbe and become familiar with the biology of different microbe groups, bacteria, virus, protozoa, and fungi -become familiar with the most common pathogens -understand the human microbiota (normal flora) and how microbes spread -have fundamental insights into the resistance development of bacteria, and understand the biology behind the resistance of bacteria -be able to apply course competences to the above mentioned fields of nursing care</p>	3				3 cr
RA18BV04	<p>• Immunology and pathology <i>The students</i> - are familiar with the function of lymphocytes in human immune defence - knows the process of immunisation - command immunological and pathological terminology. - are familiar with the acute inflammation, and changes in cells and tissues in disease - are familiar with the main sources of information within immunology and pathology - understand the importance of immunology within health care professions</p>		3			3 cr
RA18ST	<p>Medical radiation 1 <i>Studerande har fördjupade insikter i människans anatomi samt kunskaper och färdigheter att planera och utföra de vanligaste röntgen- och ultraljudsundersökningarna. Har insikt i strålfysik och biologi samt trygg användning av strålning inom medicin. Förstår betydelsen av god hälso- och sjukvård och kan beakta patientens behov vid röntgenundersökningarna.</i></p>	15				15 cr
RA18ST01	<p>• Clinical physics and radiation biology <i>Student:</i> - has basic understanding in electricity and good insight into radiation in order to apply knowledge in future courses using different types of methods and thus different types of radiation</p>	4				4 cr

	- understands the interaction of radiation with matter, has insight into the effects of radiation on humans and the radiation sensitivity of different organs and tissues.					
RA18ST02	<p>• Radiation safety</p> <p>The student</p> <ul style="list-style-type: none"> - has knowledge of laws, regulations and directives regarding medical use of radiation and can apply them - understands the radiological hygiene work that the medical use of radiation requires and can work according to approved principles in the field. 	4				4 cr
RA18ST03	<p>• Diagnostic radiography 1</p> <p>Student</p> <ul style="list-style-type: none"> - understand the operating principles of X-ray tubes and generator, the origin of X-rays and have thorough insights into imaging techniques and the use of X-ray apparatus for native research - has in-depth knowledge of human anatomy - conducts basic projection learning and can be the basic principles for planning, performing and evaluating nativity studies - has basic knowledge of pathological findings. - has basic knowledge of ultrasound technology and is familiar with various surveys; preparation, implementation and aftercare. - has good insights into different types of X-ray equipment for examining the throat and jaws. - can apply an aseptic way of working and have knowledge of infectious diseases and insulation principles - understands the importance of good patient experience and has basic knowledge of nursing theories - understands principles for safe and safe patient care - can take into account the principles of sustainable development regarding radiation 	7				7 cr
RA18SM	<p>Medical radiation 2</p> <p>Students have good knowledge and can apply theoretical knowledge in the radiography modalities for the course. Have basic skills to plan, perform and evaluate independently and supervised fluoroscopy, mammography, and computer tomography and nuclear medicine investigations. Understands the basic principles for using the devices within the various modalities and areas. Have insight into contrast media and have readiness to use these safely. Have basic skills to perform nuclear medicine studies as well as basic insights in the use of radiopharmaceuticals and radioactive substances. Students have basic knowledge and skills in IV cannulation and catheterization. Understands the specific characteristics of the person at different ages in order to take into account and act accordingly in different situations, as well as having basic insights into the specific characteristics of transcultural care. Students are prepared to give good guidance and has good knowledge of interaction and communication. Optional support topics for radiographer education.</p>		16		3	19 cr
RA18SM01	<p>• Diagnostic radiography 2</p> <p>Student</p> <ul style="list-style-type: none"> - has basic insights on the methods of investigation and the invention in screening, mammography and computer tomography. - has basic skills to plan and perform the most common screening mammography and computer tomography surveys under supervision. - understands the importance of contrast agents and their safe use as well as first aid related to them - has in-depth knowledge in anatomy and projection and is familiar with the most common pathological findings in the field. - has basic knowledge and skills in IV canalization and catheterization in order to apply them to future practice. - can meet people with different cultural backgrounds and understand the importance of culture in health care - has basic knowledge of different theories of human development from 0 to 20 years and on the personal development of the adult and elderly person - has basic knowledge of teamwork and interaction in patient contact and in the work community. - has the ability to respond to the patient in general/overall 		9			9 cr
RA18SM02	<p>• Diagnostic radiography 3 - Nuclear medicine</p> <p>Student</p> <ul style="list-style-type: none"> - has insight into the basic principles for the use of gamma camera and know all the imaging methods in nuclear medicine - has knowledge of radioactive substances and radiopharmaceuticals and basic skills for safe use of these - has knowledge of nuclear medicine pathology - has basic preparedness to plan, perform and evaluate the most common nuclear medicine studies under supervision. - are able to take care of the patient overall in examination/treatment - can work according to sustainable development principles in nuclear medicine. 		3			3 cr
RA18SM03	<p>• Support subjects for radiographers</p> <p>The students have obtained knowledge that support them in their personal development and/or professionalism. Specific qualifications according to chosen course.</p>		4		3	7 cr
RA16FP	<p>The research process</p> <p>The students are familiar with and command the different stages of the research process. They have basic insights into epistemology and the philosophy of science. They command the basic quantitative and statistical terminology as well as the</p>		3	4		7 cr

	<i>most common qualitative research methods. They are also able to integrate and apply the stages of the research process based on a task relevant to their working life.</i>					
RA16FP01	<p>• Research methodology</p> <p><i>Studerande</i></p> <ul style="list-style-type: none"> - har grundläggande insikter i kunskapsteori och vetenskapsteori - kan både manuellt och digitalt söka efter evidensbaserad kunskap och vetenskapliga artiklar - kan i lärdomsprocessen samt i projekt tillämpa forskningsprocessen systematiskt och flexibelt - förstår och kan beskriva kvalitativa och kvantitativa närmelsesätt och kunskapsintressen - har beredskap att självständigt och under handledning genomföra examensarbete - har förmåga att analysera vetenskaplig kunskap och kan tillämpa kunskapen i vårdarbetet - kan reflektera över hur evidensbaserad kunskap kan tillämpas i vårdarbetet 		3			3 cr
RA16FP02	<p>• Research methods</p> <p><i>Studerande</i></p> <ul style="list-style-type: none"> - kan ange och värdera de vanligaste kvalitativa och kvantitativa forskningsmetoderna - kan återge forskningsprocessen och tillämpa de olika faserna i forskningsprocessen - kan använda olika metoder för kvalitativ datainsamling och dataanalys inom vårdforskning - kan använda de vanligaste metoderna för kvantitativ datainsamling och analys - kan göra enkla statistiska beräkningar och tester - har beredskap att självständigt och under handledning genomföra examensarbete 			4		4 cr
RA18KR	<p>Nursing care in clinical radiography context</p> <p><i>Students have knowledge of the most common inpatient and surgical diseases and have basic insights into the specificities of emergency care and intensive care. Is aware of its responsibility for drug treatment and master the drug bill. The student understands the age's impact on health and functional ability, geriatric diseases and the specificities of childcare. Students have basic knowledge of health sciences and the ethics of ethics.</i></p>		12	4		16 cr
RA16KR01	<p>• Clinical nursing care</p> <p><i>Studerande:</i></p> <ul style="list-style-type: none"> - har insikt i de vanligaste inremedicinska och kirurgiska sjukdomarna och i vården och behandlingen av dessa - har grundläggande kunskaper om pre- och postoperativ vård samt akutvården och intensivvården och förstår de säregna behoven hos dessa patienter. 			4		4 cr
RA16KR02	<p>• Medication therapy</p> <p><i>Studerande</i></p> <ul style="list-style-type: none"> - är förtrogen med etiska aspekter och de författningar som gäller vid läkemedelsbehandling - är förtrogen med olika läkemedelsformer och administreringssätt - har kunskap om olika läkemedelsgrupper; känner till indikationer, interaktioner och de vanligaste biverkningarna samt kan observera och utvärdera läkemedlens effekt - behärskar grundläggande räknesätt, som krävs för läkemedelsdosering och kan dosera samt administrera läkemedel felfritt vid övningar (dosett/medicinbricka, s.c., i.m.) - är medveten om sitt ansvar vid läkemedelshantering - är förtrogen med begrepp och terminologi inom farmakologin och har kunskap om farmakokinetik och farmakodynamik 		5			5 cr
RA16KR03	<p>• Geriatrics and paediatrics</p> <p><i>Studerande:</i></p> <ul style="list-style-type: none"> - har grundläggande insikter i problem och sjukdomar hos äldre och barn - har förutsättningar att bemöta barn och ungdomar samt äldre och förstår deras säregna behov. 		3			3 cr
RA18KR05	<p>• The theoretical and ethical basics in nursing care</p> <p><i>Student</i></p> <ul style="list-style-type: none"> - has knowledge of different health sciences and occupational history and development - has knowledge of and can apply the basic principles of health and well-being, human, patient, life-world, suffering and caring - has knowledge of the ethics of care and can apply them to healthcare - has the basic ability to work in accordance with ethical guidelines in their future profession and by respecting and respecting the values and life views of other people, without violating human rights - is familiar with the ethical guidelines of the profession 		4			4 cr
RA16SA	<p>Medical radiation 3</p> <p><i>Studerande har grundläggande kunskaper och kan tillämpa teoretisk kunskap inom delområdena magnetresonanstomografi och angiografi. Kan planera, utföra och utvärdera under handledning de vanligaste angiografi- och magnetresonanstomografiundersökningarna. Inom konventionell röntgen har studerande fördjupade kunskaper och färdigheter. Studerande har goda insikter om vården utanför egen bransch. Behärskar patientvården inom sitt område. Har förmåga att självständigt förvärva nya kunskaper i diagnostisk radiografi samt visar initiativförmåga och ansvar. Studerande har grundläggande insikter i cancersjukdomar, epidemiologi, vård och behandlingsmetoder. Studerande har beredskap planera, utföra och utvärdera</i></p>			15		15 cr

	<i>strålbehandlingar under handledning samt förmågan att stöda och vårda cancerpatienten och dennes anhöriga.</i>							
RA18SA01	<p>• Diagnostic radiography 4 Student</p> <ul style="list-style-type: none"> - master the basic principles of MRI and angiography equipment and utensils - has insight into the methods of investigation and the invention - has in-depth knowledge of anatomy, projection and radiation hygiene, and is familiar with radiological pathology - has the ability to care and supervise the patient as a whole in investigations, safety also for emergency situations - has the ability and consideration for safe patient care 			6				6 cr
RA18SA02	<p>• Therapeutic radiography Student</p> <ul style="list-style-type: none"> - has basic insights into cancer diseases, epidemiology and treatment methods - recognizes the special features of the oncological care - controls the basic principles for the use of radiotherapy equipment and has good knowledge of radiotherapy as a cancer treatment - has good knowledge of the care of cancer patients and understands its special features - is familiar with the importance of safe patient care. 			7				7 cr
RA18SA03	<p>• Patient safety in radiotherapy and in interventional radiology Student</p> <ul style="list-style-type: none"> -has insight into specific patient safety aspects of radiotherapy, intervention radiology and MRI 			2				2 cr
RA18AL	<p>Alternative enhanced studies and branch development Studierande har fördjupade kunskaper inom ett valt fördjupningsområde och har förmåga att utföra kvalitetsutveckling inom egen bransch. Förstår ledarskapets och arbetskulturens betydelse.</p>					12		12 cr
RA16AL02	<p>• Leadership and entrepreneurship Studerande</p> <ul style="list-style-type: none"> - känner till huvudprinciperna för organisationsverksamhet och ledning samt har beredskap att leda arbetet - får en inblick i att planera och organisera verksamheten - känner till arbetslivets verksamhetsformer och kan verka i en arbetsgemenskap - har grundläggande insikter i företagsamhet 					4		4 cr
RA18AL01	<p>• Quality assurance and radiation safety Student</p> <ul style="list-style-type: none"> - has in-depth knowledge of laws, regulations and directives regarding the medical use of radiation - controls the radiation hygiene work that the medical use of radiation requires - is familiar with development and quality work in radiography and radiotherapy and recognize their role in sustainable development - has skills to perform their own work / assignments in quality development. 					5		5 cr
RA18AL03	<p>• Alternative enhanced studies Student</p> <ul style="list-style-type: none"> - depend own knowledge in chosen alternative by analyzing the latest research and actualities as well as describing the quality aspects in the field. <p><i>The course runs parallel to the clinical course so that the work can be anchored in practice.</i></p>					3		3 cr
Val	<p>Elective Studies <i>De valfria studierna är studiehelheter eller kurser som den studerande kan välja fritt, men innehållet ska stöda den studerandes professionella tillväxt. De valfria studierna ska vara högskolestudier (Examensstadgan §9).</i></p>							cr
	<p>Optinal Studerande:</p> <ul style="list-style-type: none"> -har förvärvat kunskaper som stöder henne/honom i den personliga utvecklingen och/eller yrkeskunnighet. <p><i>Specifik kompetens enligt vald kurs.</i></p>							cr
EXA	Degree thesis							15 cr
EXAMENSA	<p>Bachelor's thesis <i>The students can, under supervision and gradually more independently, in co-operation with another student/student group write a thesis which corresponds to bachelor level (University of Applied Sciences). They are also able to integrate the stages of the research process in their thesis and apply their knowledge in their chosen area. They are able to consider research ethical aspects in their thesis as well as present their thesis and act as opponent to another thesis. They are finally</i></p>		3	10	2			15 cr

	<i>able to account for the most important research findings in a maturity exam that also manifests their ability to express him-/herself in the language of the thesis.</i>						
RA16EX01	<p>• Thesis, idea and framework <i>Studerande har förmågan att producer en ide för sitt lärdomsprov och kan framföra och argumentera för sina val.</i></p>		3				3 cr
RA16EX02	<p>• Thesis, plan and execution <i>Studerande har förmåga att självständigt utföra ett skriftligt examensarbete enligt högskolans regler. Kan arbeta systematiskt och målmedvetet enligt vetenskapliga grunder och etiska regler.</i></p>			10			10 cr
RA16EX03	<p>• Thesis, presentation and maturity test <i>Studerande har utfört sitt examensarbete och har förmåga att framföra sitt arbete i någon godkänd form samt påvisar i mognadsprov sina språkliga och fackliga kunskaper.</i></p>				2		2 cr
PRA VÅ	CLINICAL STUDIES						75 cr
RA18KS	<p>Clinical studies for radiographers <i>Student</i> - has the ability to plan, perform and evaluate the most common examinations and treatments in the compulsory internship practices and areas, independently but under supervision - has insight into the patient's overall care and can apply the care methods in clinical radiography - has the ability to apply theoretical knowledge in clinical work - deeply understand and works in accordance with principles for safe patient care in all areas and modalities</p>	15	20	27	13		75 cr
RA18KSG01	<p>• Basic clinical nursing care internship <i>Student</i> - has basic insights into clinical care and clinical care methods - has the ability to identify and meet the needs of the patient for basic care - has the ability to create a good patient relationship, can function responsibly and engage in patient care as well as realize the importance of collaboration.</p>	3					3 cr
RA18KSR01	<p>• Clinical radiography 1 <i>Student</i> - has the ability to plan, perform and evaluate the most common nativity studies under supervision - has the ability to act as a caretaker in ultrasound and biopsies, punctures - can plan, perform and evaluate dental examinations - can apply an aseptic way of working - has basic insights into the patient's overall care and can apply theoretical knowledge in diagnostic radiography - understands and works in accordance with principles for safe and safe patient care</p>	12					12 cr
RA18KSR02	<p>• Clinical radiography 2 <i>Student:</i> - has the ability to plan, execute and evaluate surveys and actions under supervision in the modalities of the course - can apply theoretical knowledge in diagnostic radiography and have skills to respond and care for the patient and his/her relatives - has developed the ability to collaborate and shows responsibility in work with increased demands for independence and initiative - demonstrate the ability to independently acquire new knowledge in diagnostic radiography. - has sufficient theoretical knowledge to carry out catheterization under supervision</p>		15				15 cr

RA18KSR03	<p>• Clinical radiography 3 - Nuclearmedizin Student</p> <ul style="list-style-type: none"> - has the ability to apply theoretical knowledge in nuclear medicine - has the ability to plan, perform and evaluate the most common surveys under supervision - can handle, care and treat the patient in general during the examination / treatment - has developed the ability to collaborate and shows responsibility in work - has the ability to independently acquire new knowledge in nuclear medicine radiography 		5			5 cr
RA18KSR04	<p>• Clinical radiography 4 Student:</p> <ul style="list-style-type: none"> - has the ability to apply theoretical knowledge in practice - has the ability to independently, as a member of the work team, plan, perform and evaluate nativity studies and easier MRI and angiography examinations - can handle, care and treat the patient overall in studies and inventions and have good readiness to care for the patient at different situations / different circumstances / with varying needs and problems. - understands the meaning of safe patient care - familiar with the care of other types of departments than their own - can apply the principles of sustainable development in all dimensions and have developed the ability to collaborate and demonstrate responsibility in work with increased demands for independence and initiative - has ability to independently acquire new knowledge in the diagnostic radiography's sub-areas. 			17		17 cr
RA18KSR05	<p>• Clinical radiotherapy Student</p> <ul style="list-style-type: none"> - can apply theoretical knowledge in radiotherapy and have the ability to plan, implement and evaluate radiotherapy under supervision - has the ability and ability to respond, care and support the cancer patient and his relatives - has insight into the importance of the care chain for the overall care of the cancer patient and has developed the ability to cooperate and shows responsibility in his work - has ability to independently acquire new knowledge in therapeutic radiography 			10		10 cr
RA18KSR06	<p>• Enhanced clinical studies Student</p> <ul style="list-style-type: none"> - has in-depth theoretical knowledge in the chosen field of study and skills to utilize them in clinical work - demonstrate self-esteem planning, execution and evaluation of frequent investigations and treatments in the choosen area of encanced clinical field - controls the treatment, overall care and supervision of the patient. - has good ability to cooperate and shows responsibility in the work with increased demands for independence and initiative - has ability to independently acquire new knowledge and to also, in new situations, pay attention to, analyze, structure and solve problems related to the deepening option 				13	13 cr