

SPECIALITY TRAINING PROGRAM FOR RADIOLOGY

Title of the residency study program	State code
Radiology	733A30085

Academic awarding institution	Language
Lithuanian University of Health Sciences, Medical Academy, Clinic of Radiology, A. Mickevičiaus st. 2, LT-44307 Kaunas, Lithuania	Lithuanian

Kind of studies	Cycle of studies	Level of qualification according to Lithuanian Qualification Structure (LKS)
University studies	Non-degree studies	7 th level

Mode of the studies and length in years	Volume of the program in ECTS credits	Total amount of student work	Formal teaching and practice hours	Independent self-direct learning hours
Full-time studies, 4 years	264	7040	6280	760

Area of studies	Main field of the study program	Parallel study program (if available)
Biomedical sciences	Medicine	-

Professional qualification awarded
Radiologist

Study program director	Director's contact information
Professor dr. Algidas Basevicius	E-mail: algidas.basevicius@kaunoklinikos.lt Office tel.: (+370 37) 327191

Institution of accreditation	Accreditation until
Centre for Quality Assessment in Higher Education	Year 2014

Aim of the residency study program
To prepare a doctor specialist, universally educated, creative, interested in science innovations, able to solve problems and work in a team, having radiologist professional qualification, able to apply acquired knowledge, skills and abilities in practice and to provide knowledge and skills in scientific research and public presentation of professional matters

Program profile		
Disciplines/subject areas	Disciplines/subject areas	Disciplines/subject areas
Program consists of obligatory and optional cycles including theory, practice and self-sustaining job in all fields of radiology. Studies of radiological anatomy and diagnostics of various pathology – congenital abnormalities, inflammatory and degenerative lesions, benign and malignant tumors, systemic diseases, traumatic lesions, urgent conditions, posttreatment changes – in images of different radiologic techniques (x-ray, ultrasound, computed	Applied orientation program, orientated to practical activity and developing abilities for scientific research work, providing professional qualification of radiologist.	The program has been prepared following LR legislation, LUHS valid documents, Requirements of European Society of Radiology (EAR) and European Union of Medical Specialists (U.E.M.S.) for preparation of radiologists (European training charter for clinical radiology. Detailed curriculum for the initial structured common programme. Detailed curriculum for subspecialty training. EAR office, Vienna, November 2005). Radiology residency program is based on theoretical studies,

<p>tomography, magnetic resonance imaging, nuclear medicine and interventional radiology) are included in obligatory cycles.</p> <p>Optional cycles are meant to inquire one particular field of radiology (as mammography screening).</p>		<p>practical and scientific performance integration. Residents obtain practical skills and theoretical knowledge with the contribution of University professors – residency base specialists. Other hospitals – LSMU are accredited for some cycles of Radiology Residency Program. All kinds of radiologic diagnostics (neuroradiology, head and neck, chest, abdomen and pelvis radiology, gastrointestinal, pediatric radiology, special women’s imaging) and all types of radiology examinations (x-ray, ultrasound, computed tomography, magnetic resonance imaging, nuclear (including SPEC-CT, and PET-CT) interventional radiology) are concentrated in the accredited main, residency base - LUHS Hospital Public Institution “Kaunas Clinics”. An opportunity to accomplish part of the residency (up to one year) in other accredited hospitals - LUHS Oncology Hospital, Subsidiary of Kaunas Clinics Romainiu Hospital of Tuberculosis – for some cycles of residency is provided as well as in accredited clinics abroad.</p>
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Admission requirements	Recognition of previous learning
<p>Master degree in medicine and medical doctor professional qualification are obligatory. Admission by the way of general competition. Competitive score structure of is given in the conditions for entrance to the LUHS residency programs. The main components of competitive score is the average assessment of all subjects, studied during integral studies, final exam assessment, clinical medicine practice assessment, student’s scientific activities assessment (appointed by Student Science Association (SMD)), motivational interview assessment. Motivational interview takes place according to the schedule set in advance. Motivation Committee is composed of academic radiologist staff and residents representatives. Scientific activities in the field of radiology as well as qualities of human being are evaluated. Competition is public and takes place separately to every residential study program in two stages (main and additional). Second or additional stage can be organised if after the main admission free places are still available.</p>	<p>Results of previous studies are accepted individually, taking into account the developed competencies and goals of program that correspond to „Radiology“ residency study program, with the guidance of procedures set by LUHS Senate.</p>

Access to further education
<p>Third cycle degree studies may be an option (5-20% choose to proceed to PhD).</p>

Access to professional activities (employability)
<p>Doctor with radiology speciality can do practical job in state as well as in private health care institutions, which have a licence to run radiology services, according to the licence obtained in Lithuania or abroad, can seek a scientific degree in doctoral studies, do pedagogical job. Radiologist licence is given by the State Health Care Accreditation Agency under the Ministry of Health of the Republic of Lithuania, after submitting diploma of completed medical studies program, internship certificate and certificate of completed residency. This certificate is validated in EU</p>

countries. All radiologists graduated Radiology residency are employed.

Learning and teaching approaches	Methods of assessment (of learning achievements)
<p>Learning and teaching includes formal teaching and work-based experiential learning. Formal teaching includes lectures&seminars, consultations, case and review presentations, journal clubs, grand rounds, clinical skills demonstration and teaching different radiology equipment.</p> <p>Activities of independent self-directed learning may include reading, maintenance of personal portfolio (log-book, self-assessment, reflective learning, personal development plan), research projects, reading journals.</p>	<p>The knowledge of not less than 75% of theoretical topics should be assessed. The equalization of assessments is permitted herewith the successive year residents or following individual schedule.</p> <p>Revision of theoretical knowledge (oral or written) happens at the end of every cycle. Written revision - the test - consist of open and closed questions/tasks, clinical situations.</p> <p>For the assessments the ten point score system is used.</p>
<p>Skills and competences are acquired via performing an evaluation of radiology examinations under the supervision of resident's supervisor in X-ray Department, Tomography department, Department of Nuclear Medicine, Department Interventional Radiology, and Emergency Department, participation in daily, weekly case-discussions, multi-disciplinary team meetings, staying on-call in Radiology clinic according to requirements of residency base.</p>	<p>Weekly evaluation of clinical work, performance and interpretation of diagnostic procedures is based on Daybook records certified by Resident's Supervisor.</p> <p>Scientific reviews and case presentations at the weekly residents conferences are recorded in the Daybook and certified by resident's supervisor.</p> <p>The records of hospital staff about the resident's self-sustaining work are collected as supplements to Daybook.</p> <p>The assessment of practical skills and competence is carried out at the end of every cycle and is recorded in the Daybook and Resident Credit Book.</p> <p>The subject of the research study can be proposed by the resident or by his supervisor and should be confirmed by the Residency Board. The process of the research study is discussed with the Residency Board every year. The results should be presented at the Radiology conference or as the publication. The final assessment depends on research study publications.</p> <p>The end of Radiology residency is theoretic and practical examinations.</p> <p>Theoretic exam is the written test (multi-choice), consisting of 60 questions. The assessment of the test is based on percentage of positive answers.</p> <p>Practical exam - oral analysis of not less than two clinical cases (different radiologic techniques included) and discussion with members of Qualification board. The mean The assessment of practical exam consist of Qualification board members mean evaluation (50 % of final score), resident's research study evaluation (20% of final score), mean evaluation of all cycles of residency (30%).</p> <p>Final assessment – the mean score of theoretic and practical examinations.</p>

General competencies (knowledge, abilities, values and attitudes)		Outcomes (results) of residency study program	
1.	Professional attributes	1.1	Be honest and honourable with patients, follow medicine ethics norms and requirements for good medicine practice, be critical toward others and himself/herself, be able to feel compassion for the patient, be creative and initiative.

2.	Professional activity	2.1	Have ability to evaluate the boundaries of his/her competencies in radiology, to know modern radiologic examination techniques, to act independently, if there is a need, seek for a help, solve problems and take decisions, communicate and work in a team with specialists from other fields, be able to organise work and to plan time properly.
3.	Doctor as an expert	3.1	Be able to recognize, analyse, correlate and summarize radiologic pathologic symptoms, constantly seek perfection in radiology while continuing lifelong learning be able to apply theoretical knowledge in practice, to pass own knowledge and abilities to colleges that have less practice, abilities and to plan and to pursue scientific research.

Subject-specific competences (knowledge, abilities, values and attitudes)		Aims (results) of residency study program	
4.	Patient consultation	4.1	Be able to evaluate the general condition of patient on the base of medical documentation, to get objective information for the optimisation of radiologic examination, to evaluate diagnostic and screening imaging, to give the radiologic conclusion and to recommend further examinations required.
		4.2	Be able to explain to the patient and/or his relatives a goal and a meaning for the actions taken to the patient, to explain procedure related possible risk, to discuss further actions, to reassure and to motivate patient and/or his relatives, to understand legal aspects regarding informing patient and/or his relatives. Be able fill up properly medical documents
5.	Medical emergencies and resuscitation	5.1	Be able to recognise conditions that need emergency medical treatment and to provide first aid according to the valid recommendations
6.	Performance, evaluation and interpretation of radiology examination,	6.1	Be able to evaluate indications to radiologic examination, to form the optimal protocol of the examination, to perform fluoroscopy and ultrasound examinations of different body areas, to perform interventional procedures on imaging control.
		6.2	Be able to evaluate the results of all radiological examinations and to give the differential diagnostics.
7.	Health promotion, engagement in population health issues and effective work in health care system	7.1	Be able to assess risk for patient's health and apply proper and rational remedies to lower the risk, apply infection control precautions, assess professional activities risk for his/her own health and take precautions to avoid this risk.
		7.2	To participate and work in screening programs