

SPECIALITY TRAINING PROGRAM FOR CARDIOLOGY

Title of the residency study program	State code
Cardiology	733A30068

Academic awarding institution	Language
Lithuanian University of Health Sciences, Medical Academy, Dept of Cardiology, A. Mickevičiaus g. 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	5280	880

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

Professional qualification awarded
General cardiologist

Study program director	Director's contact information
Professor dr. Aušra Kavoliūnienė	Office tel.: (+370 37) 326913, E-mail: ausra.kavoliuniene@kaunoklinikos.lt

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 in cardiology, universally educated, honest, initiative, self-sufficient but responsible ethically, creative, interested in science innovations, upholding democracy, able to solve problems and work in a team, having general cardiologist professional qualification and able to apply acquired knowledge, skills and abilities in practical job, correspondent to Lithuanian Medicine Norm No55 "Cardiology". Rights, duties, competency, responsibility". To provide knowledge and skills in scientific research and public presentation of professional matters.

Program profile		
Disciplines/subject areas	Orientation of the program	Distinctive features of the residency study program
<p>Program consists of obligatory and optional cycles including theory, practice and self-sustaining job. Obligatory cycles are Ischemic heart disease;</p> <ol style="list-style-type: none"> 1. Acquired and congenital valvular disease; 2. Myocardial – pericardial disease and heart failure; 3. Abnormalities of heart rhythm and conduction; 4. Surgical treatment of cardiovascular disease; 5. Prevention and rehabilitation of heart disease; 6. Intensive cardiology; 	<p>Applied program, oriented to the practical activity and developing abilities for scientific research work, and providing professional qualifications in cardiology</p>	<p>Unique cardiology residency program is based on theoretical studies, as well as practical and scientific job integration. Practical skills are obtained and theory courses are realised by academic staff of the University and also practising cardiologists.</p> <p>Skills in scientific research are obtained by assisting to postdoctoral students or researchers working in the Institute of Cardiology at LHSU.</p> <p>The main residency base of the cardiology residency study is accredited Hospital of LUHS "Kaunas Clinics".</p> <p>There is an opportunity to accomplish part</p>

<p>7. Non-invasive diagnostics, imaging techniques and nuclear cardiology;</p> <p>8. Echocardiography;</p> <p>9. Electrophysiology;</p> <p>10. Interventional cardiology.</p> <p>Elective cycles:</p> <ol style="list-style-type: none"> 1. Scientific activities and methodology of writing of the scientific paper; 2. Registries in cardiology and methods of medical statistics; 3. Basics of molecular biology in cardiovascular medicine. 		<p>of the residency programme (up to one year) in other accredited national hospitals or hospitals in foreign countries (based on an official agreement between universities).</p> <p>Program is prepared taking into account:</p> <ol style="list-style-type: none"> 1. LR legislation, 2. Valid documents issued by LUHS; 3. Order by LR Minister of Health of December 15, 2005 No 975 „About Lithuania Medicine Standard No 55: “ The cardiologist. Functions, duties, rights, competency and responsibility” http://sena.sam.lt/lt/main/teisine_informacija/medicinos_normos?id=26175 4. Recommendations of the European Board of the Specialty of Cardiology (EBSC) for the education and training in basic cardiology in Europe http://www.cardiology-accreditation.org/ebsc/recommendations.php 5. Cumming AD, Ross MT. The Tuning Project (medicine) – learning outcomes / competences for undergraduate medical education in Europe. Edinburgh: The University of Edinburgh, 2008. Prieiga per internetą: http://www.tuning-medicine.com.
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Admission requirements	Recognition of previous learning
<p>Master degree in medicine and medical doctor professional qualification are obligatory.</p> <p>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 Students’ Science Society), motivational interview assessment. Motivational interview takes place according to the schedule set in advance. Motivation Committee is composed of academic staff and residents’ representative. Scientific activities in the field of cardiology 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 free places are still available after the main admission.</p>	<p>Results of previous studies are accepted individually, taking into account the developed competencies and goals of program that correspond to „Cardiology” residency study program, with the guidance of procedures set by LUHS Senate.</p>

Access to further education
<p>Degree providing third cycle doctoral studies (are chosen by 5-10% with obtained professional qualification in cardiology).</p> <p>Third cycle degree studies may be an option (up to 10% choose to proceed to PhD).</p>

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

Learning and teaching approaches	Methods of assessment (of learning achievements)
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Various teaching and studying methods are applied: lectures, seminars, consultations, group discussions together with doctors-residents, daily activity logbook completion. Residents introduce patients in morning sessions, corporate patients' considerations, in Lithuanian and regional cardiology society meetings, annual residents scientific conferences, residents seminars. Resident in his/her logbook collects certificates or its' copies that prove these activities, if such documents are issued. Resident participates in scientific-practical conferences organised by Dept of Cardiology, Departments of Internal disease, in pathologoanatomy conferences organised by LUHS. There are conditions made for residents to participate in various approved teaching programs and courses where they go during the time free from primary studies or are sent to external exchange programmes by the residency base manager (general director) according to the settled procedures.

Learning and teaching includes formal teaching and work-based experiential learning. Formal teaching includes lectures&seminars, consultations, case presentations, journal clubs, grand rounds, clinical skills demonstration and teaching using simulators, research projects.

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.

Skills and competences are acquired via their job as residents in Dept of Internal diseases while as junior residents, and Cardiology facilities for senior residents.; Head of the Department/Unit led great-rounds, personal word-rounds, Multi-disciplinary team meetings, licenced cardiologist led night shifts. Residents have supervised responsibility for the care of hospitalized as well as out-patients . This includes day-to-day review of clinical conditions, case history note keeping, and the initial management of the acutely ill patient with referral to and liaison with clinical colleagues as necessary.

Resident assessment, according to LUHS Regulation on Student's Achievements Assessments (Decision by LUHS Senate, December 14th, 2012, No 25-07) consists of three assessment forms:

Initial assessment. The goal of this assessment is to check resident's minimum obligatory preparation for the studies, to set initial level of resident's knowledge and (or) ability level for further study progress assessment; help professors choose study methods and (or) adjust study content while creating conditions for residents to reach prospective study cycle results more efficiently. Usually initial assessment is done during the first year of residency studies. It consists of basic clinical cardiology as well as knowledge in internal disease. Basic theory knowledge, practical skills and abilities to master control is done at the beginning of the first year of residency studies. The scope of basic theory knowledge, practical skills and abilities to master are done by each Internal disease clinic. The model order for obtaining and assessing basic theory knowledge, practical skills and abilities is given.

Formative assessment. Formative assessment is applied during the residential studies seeking to assess critically and to adjust residents' learning.

In these parts of the residency study program, where practical and social skills are important (problem solutions in problem based learning studies, practice, residency programs etc.) with the goal to assess general competencies the forming assessment is done by multisource feedback method (360 degree assessment and other methodology). The forming assessment consists of:

- **Advanced** assessment. During it resident is learning and is assessed taking into account The resident characteristic is formed at the end of each yesar summarising resident's achievements and characteristics from cycles obtained during the year.

- **Credit** assesment. It is a forming assessment, one at the each specific cycle of studies. During it the specific cycle of residential study is summarised. Credit is multi-component. Resident is assessed according to LUHS Regulation on Medicine Residency. Credit assesment consists of the following:

- Workplace-based assessments;
- Multi-Source Feedback (MSF);
- mini-Clinical Evaluation Exercise (mini-CEX);
- Direct Observation of Procedural Skills (DOPS)
- Case-Based Discussion (CbD);
- Patient Survey (PS);
- Audit Assessment (AA);
- Teaching Observation (TO)

- **Final** assessment. This assessment summarises knowledge obtained by resident. It is done at the end of residency studies by the final cardiology residency exam:

- Assessment of **theoretical** knowledge : written test composed of randomly selected 10 form 40 questions to be answered during limites time of 2 hours.

- Test of the **practical** abilities during the 4 hours

	<p>duration check-out . Tikrinami: ability to evaluate the new patient with prevalent cardiological issues; evaluated are: ability to make decision, compose motivated plan of non-invasive as well as invasive tests; clinical case history analysis and decision</p> <ul style="list-style-type: none"> - personality assessment – 360 degree assessment (“multi-source feedback“ recommendations and point 2.1.2 of LUHS Regulation on Students Assessment, where professors and other staff that works with resident evaluates resident’s, clinical knowledge, punctuality, abilities to work in a team, politeness, deontology as well as discreetness towards patient, friendliness, collegiality, subordination; - logbook records assessment (minimal number of acquired qualification set by regulatory authorities); - research activities assessment (participation in the international/national surveys and registries, scientific paper preparation/ presentation/publication.
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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 cardiology, 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.	Expertise in the field	3.1	Be able to choose and to apply the most optimal methods of internal disease as well as of cardiology, constantly seek perfection in cardiology while continuing lifelong learning, be able to apply theoretical knowledge in practice, to share personal knowledge and abilities with colleges that have less practice, abilities to plan and to do scientific research.

Subject-specific competences (knowledge, abilities, values and attitudes)		Aims (results) of residency study program	
4.	Patient and/or relatives consultation	4.1	To make a patient's preparation plan, assess the influence of existing pathology to course of disease, interpret research results, evaluate patient's physical condition and define a risk group, prescribe best available method of treatment and inform regarding possible adverse effects and complications.
		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 discuss further actions, to reassure and to motivate patient and/or his relatives, to understand legal aspects regarding informing patient and/or his relatives.
5.	Making a diagnostic and management plan	5.1	To recognise conditions that have impact on diagnosis and treatment, to make a plan for necessary diagnostic tests, be able to interpret test results, to perform primary (complaints, anamnesis, total examination) and secondary (interpreting tests' results and planning, performing and interpreting complementary tests' results) differential diagnostics on patients symptoms reasons; to make a relevant treatment plan for an individual patient, to discuss it with a patient and/or his relatives, be able to evaluate possible pharmaceutical mutual interactions and possible side effects as well as evaluate effectivity of prescribed treatment; to inform properly and objectively about possible complications, about treatment and alternative methods of treatment.
		5.2	Ability to communicate with patient and his/her relatives in case of critical condition; to gain confidence and written agreement from informed person, communicate in writing (filling up medical documents), communicate with aggressive patient.
6.	Medical emergencies and resuscitation	6.1	Be able to recognise conditions that need emergency medical treatment, provide first aid, provide intensive care according to the valid recommendations, provide aid in case urgent conditions, have abilities to treat conditions that require emergency assistance.
7.	Performing or requesting of appropriate investigations and interpretation of the results	7.1	Be able to perform life saving procedures according to valid norms, according to his/her competencies perform and evaluate data of invasive and non-invasive tests, hereunder to choose the most optimal possible patient treatment and/or prevention.
8.	Health promotion, engagement in population health issues and effective work in health care system	8.1	Be able to assess risk for patient's health and apply proper and rational remedies to lower the risk, apply infection control precautions, asses professional activities risk for his/her own health and take precautions to avoid this risk.
		8.2	To participate in health promotion programs on the level of population and of an individual.