

SPECIALITY TRAINING PROGRAM FOR INFECTIOUS DISEASES

Title of the residency study program	State code
Infectious diseases	733A30067

Academic awarding institution	Language
Lithuanian University of Health Sciences, Medical Academy, Clinic of Infectious Diseases, 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	6160	880

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

Professional qualification awarded
Physician of infectious diseases

Study program director	Director's contact information
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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, having infectious diseases professional qualification, acquired theoretical knowledge, skills, and abilities in practical job that are required to engage in an infectious diseases physician practices, interested in science innovations and reaching a higher scientific qualification studies.

Program profile		
Disciplines/subject areas	Orientation of the program	Distinctive features of the residency study program
<p>Program consists of mandatory and optional cycles including theory, practice and self-sustaining work. The mandatory cycles are focused on infectious diseases physician's knowledge and skills deepening in the internal diseases field, development of knowledge, abilities and skills in the clinical, laboratory, and differential diagnosis, treatment, and prevention of infectious diseases. The optional cycles are for knowledge and skills deepening in the field of the elderly patients' infections, and infections in neutropenia case.</p>	<p>Applied orientation program, orientated to practical activity and developing abilities for scientific research work, providing professional qualification of infectious diseases physician.</p>	<p>Program is prepared taking into account: Lithuanian legislation, European Parliament and Council Directive 2005/36/EB, European Union requirements for medical specialists in infectious diseases physician training (European Union of Medical Specialists. Section for Infectious Diseases European Union for Medical Specialties (UEMS). Charter on Training of Medical Specialists in the EU. Requirements for the speciality Infectious diseases. UEMS 2007. Web access: www.uems-id.org); Recommendation by European Parliament and Council of February 15, 2006 "For further European cooperation in quality assurance in</p>

		<p>higher education”; Professional qualification standards - Infectious diseases physician. Rights, duties, competence and responsibility (Order by LR Minister of Health of November 21, 2004 No V-778, Vilnius); Cumming AD, Ross MT. The Tuning Project (medicine) – learning outcomes / competences for undergraduate medical education in Europe. Edinburgh: The University of Edinburgh, 2008. Web access: http://www.tuning-medicine.com;</p> <p>McKendrick M. The European Union of Medical Specialties core training curriculum in infectious diseases: overview of national systems and distribution of specialists. Clin Microbiol Infect 2005; 11 (Suppl. 1): 28–32.</p> <p>The residency program is based on theoretical studies and practical job integration. Practical skills are obtained and theory course is realised with the help of University professors – residency base specialists.</p> <p>The main residency bases – Kaunas Clinical Hospital, LUHS Hospital Public Institution “Kaunas Clinics”, VU Hospital Public Institution Santariskiu Clinic branch “Žvėryno Infectious Diseases Inpatient Department”, and Hospital Public Institution “Klaipėdos University hospital” are accredited for the infectious diseases residency study separate cycles.</p> <p>The main training base of infectious diseases residency in the 3rd and 4th year of residency – LUHS Clinic of Infectious Diseases in the Kaunas Clinical Hospital is characterized by all structures related to infectious diseases diagnosis and treatment being in one place. The base of residency is selected by the LUHS Medical residency regulation. The abilities of scientific work are developed performing scientific work in LUHS Clinic of Infectious Diseases. Per resident`s request, within the agreement with the Head of the Clinic of Infectious Diseases and Postgraduate Center, any cycle or part of it can be performed in any EU country according to international postgraduate student exchange programs, because LUHS program of residency of infectious diseases is adapted from UEMS Infectious diseases specialist training program in 2004 standard (Web access: http://www.uems_id.org)</p>
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Admission requirements	Recognition of previous learning
<p>Master`s degree in medicine and medical doctor professional qualification are obligatory. Specific requirements - good knowledge of the Lithuanian language. Admission by 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 and published in LUHS website. Motivation Committee is composed of academic staff of the Clinic of Infectious diseases and residents representative. Scientific activities in the field of infectious diseases, volunteering in the departments of infectious diseases profile as well as qualities of human being are evaluated. Letter of motivation addressed to the committee, submitted before the motivational interview. 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 „Infectious diseases“ 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 infectious diseases professional qualification).</p>

Access to professional activities (employability)
<p>Physician of infectious diseases can do practical job in state as well as in private health – care institutions, which have a licence to run infectology profile services. Licence of physician of infectious diseases 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. Also, physician of infectious diseases can work in a scientific-research field and do pedagogical work in higher education institutions. Residency graduation certificate and professional qualification recognized by the European Union. Considering the declining number of licensed infectious diseases doctors, their aging, and the growth of infectious diseases tendencies in the Lithuania, infectious diseases medical training needs not decrease and employment prospects after residency of infectious diseases remains high.</p>

Learning and teaching approaches	Methods of assessment (of learning achievements)
<p>Various teaching and studying methods are applied: lectures, seminars, consultations, group discussions together with doctors-residents. Everyday activity logbook writing, clinical cases preparation and presentation in medical conferences, review of educational films, making of personal development plan and its implementation.</p>	<p>Participation in the lectures, activity in the seminars, consultations, and group discussions are identified in the separate register. Required to be covered for not less than 75% of the theoretical sessions the themes provided by the annual lectures, seminars, and group discussion schedule. Allowed equalization of account for the previous year resident or an individual schedule. Written and oral assessments take place at the end of every cycle. Written assessments consist of answering the questions from the themes of the cycle, presented in open and closed-ended questions, tasks, clinical situation. Graded ten-point grading system.</p>
<p>Abilities, skills, and competences are acquired by researching and treating patients suffering from infectious diseases and somatic patients in the departments of infectious diseases, and in other in-patient and outpatient departments, Emergency department, Intensive Care Unit; participation in daily and weekly Head of the Clinic and Manager of the Department led word-rounds, discussions about the patients; personal word-rounds; mentoring of patients under resident manager supervision in residency</p>	<p>Continuous clinical work, diagnostic procedures, and appropriate performance / interpretation are evaluated weekly with the review of daily activity diary and task completeness, approved by the residency head seal. Assessment of evaluation and presentation of individual clinical cases during weekly word-rounds, weekly commemoration of daily activity diary, confirmed by the residency head seal. Residency Database staff (doctors and junior medical</p>

<p>base units; participation in licenced physician – led night shifts in the order of the need.</p>	<p>staff, other employees) reviews (written in free form or questionnaire-based) on the activities of a resident physician working independently at the end of each cycle. Reviews recorded as additions to the daily activity diary. Practical skills and abilities gained during the cycle are assessed by a mark ten-point grading system, and recorded in the daily activity diary and resident credits booklet. Preparation of the review of the scientific literature and analysis of clinical cases with the review of the literature and presentation it in the conferences by the individual schedule. Presentations recorded in daily activity diary and approved by the resident manager once every six months.</p> <p>Research work theme can be offered by the physician resident, Head of the Clinic, or Residency Coordinator. Preliminary scientific work topic, the subject matter and methods are discussed and approved in the Clinic during the meeting. Results of the research work are presented during Infectious Diseases Residency Commission meeting no later than one month before the final exam. Residency program concludes with the practical and theoretical examinations. The practical exam takes place at the patient's bed. The theoretical exam conducted in writing in response to the five randomly selected questions from a total package of questions and then discussing them orally.</p>
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General competencies (knowledge, abilities, values and attitudes)		Outcomes (results) of residency study program	
1.	Professional attributes	1.1	To be honest and honourable with patients who, have infectious or related diseases problems, to follow medicine ethics norms and requirements for good medicine practice, to be critical toward others and himself/herself, to be able to feel compassion for the patient, to be creative and initiative.
2.	Professional activity	2.1	To have ability to evaluate the boundaries of his/her competencies in infectious diseases and relative specialties and, if necessary, seek for help; to act in urgent situation conditions with the ability to adapt; to solve problems and take decisions independently, communicate and work in a team with specialists from other fields, primarily with clinical microbiologists, internists, neurologists, reanimatologist, etc.; to be able to organise work and to plan time properly.
3.	Doctor as an expert	3.1	To be able to analyze symptoms of infectious diseases and syndromes, independently to explore, diagnose and treat infectious diseases and their complications in adults independently, to know the infectious diseases prevention, surveillance, and control; to constantly seek perfection in infectology while continuing lifelong learning; to be able to apply theoretical knowledge in practice; to pass own knowledge and abilities to colleges that have less practice; to be able to plan and to do scientific research.

Subject-specific competences (knowledge, abilities, values and attitudes)		Aims (results) of residency study program	
4.	Patient with infectious disease consultation	4.1	To be able to make a fair general somatic status of the patient; to identify and interpret the symptoms of infectious diseases and syndromes, to collect purposeful information on infectious disease epidemiological and immunological anamnesis and to interpret, to do patient testing of infectology; to formulate syndromological infectious disease diagnosis.
		4.2	To be able to explain to the patient and/or his relatives the goal and the meaning of the actions taken; to explain to the patient the findings of infectious disease, infectious disease transmission ways, and methods of the potential risk to others; to discuss further actions, to reassure and to motivate the patient.
		4.3	To run ambulatory patient care procedures for patients with acute and chronic infectious diseases.
5.	Patient's infectology diagnostics and formation of treatment plan	5.1	To recognize the clinical condition of the infectious disease, and to assess its level of difficulty; to make necessary diagnostic testing plan; to appoint, assess, and interpret non-specific and specific immunological or microbiological analysis results; to appoint analysis to the most common internal medicine diagnostics and interpret them; to do initial (complaints, history, infectological examination) and secondary (interpreting the results and planning, conducting, and interpreting further findings) differential diagnoses of the causes of the patient's symptoms; to diagnose the disease.
		5.2	To heal infectious diseases, their complications and their co-morbidity contraction by etiological, pathogenesis, and symptomatic means; to rationally and independently select antibacterial therapy based on the results of microbiological analysis; to be able to assess the possible interactions and unwanted effects of prescribed medicine and the efficiency of appointed treatment.
		5.3	To be able to communicate with the patient and his/her relatives in case of critical condition; to gain confidence and written agreement from informed person, to communicate in writing (filling up medical documents); to communicate with an aggressive patient; to preserve confidentiality.
6.	Medical emergencies and resuscitation	6.1	To be able to recognise conditions that need emergency medical treatment requiring somatic and infectological condition; to provide first – aid; to provide intensive care according to the valid recommendations; to be able to treat an emergency, requiring infectology conditions.
		6.2	To timely suspect, determine and heal hospital-acquired infection; to provide emergency post – exposure prevention from past contact with an infected or potentially infected biological fluids, after contact with potentially infectious disease sick people and animals.

7.	Performing or requesting of appropriate investigations and interpretation of the results	7.1	To assess and interpret the results of microbiological analysis; to select important agents of infectious diseases, depending on the localization of infection, to interpret defined microorganisms responsiveness / resistance to antibiotics; to assess non-specific and specific immunological analysis results of infectious diseases to diagnostics; to assess the biological samples.
		7.2	To be able to do lumbar puncture and assess cerebrospinal fluid of microscopical, biochemical, microbiological, immunological analysis results; to be able to assess radiological, electrophysiological analysis of the brain and spinal cord results.
		7.3	To be able to assess the radiological results of the internal organs; to be able to do liver biopsy and to evaluate the data of live biopsy.
		7.4	To summarize and assess all studies in the diagnosis of infectious diseases.
8.	Participation in preserving health, health promotion and encouragement	8.1	To be able to assess risk to patient's health and to apply proper and rational remedies to lower the risk; to apply infection control precautions, to determine the contamination in people employed in epidemiologically dangerous jobs; to give blood-borne infections for pre-and post-exposure prophylaxis; to assess professional activities risk for his/her own health and take precautions to avoid this risk.
		8.2	To perform immuno-prophylaxis of infectious diseases (vaccinated adults), and chemical prophylaxis; to assess adverse events after vaccination.
		8.3	To participate in health programs on the level of population and of an individual.