

RESIDENCY STUDY PROGRAM OF ORTHOPEDIC ODONTOLOGY

Title of the residency study program	State code
Orthopedic odontology	733A40011

Higher education institution and department	Language
Lithuanian University of Health Sciences, Medical Academy, Clinic of Dental and Maxillofacial Orthopedics, Sukilėlių pr. 51, LT-50106, Kaunas, Lithuania	Lithuanian

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

Format of the studies and duration in years	Scope of the program in ECTS credits	Total workload of the resident in hours	Hours of the contact work	Hours of the self-dependent work
Continual studies, 3 years	198	5270		

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

Awarded professional qualification
Doctor odontologist - orthopedist

Supervisor of the study program	Contact information of the supervisor
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Institution of accreditation	Accreditation until
Centre for Quality Assessment in Higher Education	Year 2020

Aim of the residency study program
The main goal of residency study program of orthopedic odontology is to prepare a doctor specialist with professional qualification of odontologist - orthopedist which is interested in scientific novelties and seeking for the higher scientific qualification in doctoral studies.

Profile of the residency study program		
Content of the residency study	Format of the residency study program	Distinctive features of the residency study program
<p>Program consists of obligatory cycles including theory, practical work and self-dependent clinical work. Obligatory cycles are orientated to improvement of knowledge and skills of the doctor odontologist-orthopedist in clinical diagnostics of oral, facial and mandibular diseases, congenital and acquired diseases of the nervous system, rehabilitation of disrupted structure and function of the masticatory system, prophylaxis of neurophysiological changes, assimilation of knowledge, abilities and practical skills.</p> <p>Separate obligatory cycles are formed for the para-clinical diagnostic methods such as radiology and neurophysiological analysis.</p>	<p>Program of applied format, orientated to practical activity and developing abilities for scientific research work, awarding professional qualification of doctor odontologist-orthopedist.</p>	<p>Program is prepared taking into account following juridical acts of LR:</p> <ol style="list-style-type: none"> 1. Directive 2001/19/EC and 93/16/EEC European Parliament and of the Council of 14 May 2001; 2. 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; 3. Bulajeva T., Lepaite D., Sileikaite-Kaishauri D. Study program manual. Vilnius, 40 p., 2012 (prepared for project “National Concept Preparation for European Credit Transfer and Accumulation System (ECTS): Harmonisation of Credits as well as Creation and Implementation of the Learning Outcomes Based Study Programs Methodology“(Nr. VP1-2.2-ŠMM-08-V-01-001);

		<p>4. Ruling by LR Government of October 31, 2003 No 1359 “On medical training”;</p> <p>5. Order by LR Minister of Education and Science and LR Minister of Health of June 17, 2004 No ISAK-969/V-445 “On the medicine residency, odontology residency and veterinary medicine residency curriculum requirements and selection and assessment regulations of residency bases“;</p> <p>6. Order by LR Minister of Education and Science of August 24, 2004 No ISAK-1310 “On the assessment and registration of medicine, odontology and veterinary medicine residency curriculum”;</p> <p>7. Order by LR Minister of Health of October 22, 2003 No V-620 "On the Lithuanian Medical Standard MN 101:2003 „Medical equipment installation, exploitation and procedures of use in the health care institutions” (Valstybės žinios 2003, Nr. 103-4621).</p> <p>8. Order by LR Minister of Health of April 9, 2004 No V-219 „On the professional qualifications categories of odontological practice“(Valstybės žinios 2004, Nr. 57-2010).</p> <p>9. Order by LR Minister of Health of May 24, 2010 No V-463 “Lithuanian Medical Norm MN 48:2010 "Doctor odontologist orthopedist. Rights, duties, competence and responsibility”;</p> <p>10. Council Directive 93/16/EEC of 5 April 1993 to facilitate the free movement of doctors and the mutual recognition of their diplomas, certificates and other evidence of formal qualifications;</p> <p>11. LUHS regulations of postgraduate study;</p> <p>12. Order by LUHS Rector of May 23, 2003 No 2848-R “About principles of residency study formation”;</p> <p>13. Order by LUHS Rector of June 30, 2004 No PS-8-105-R “About organisation of residency study”;</p> <p>14. Order by LHUS Rector of December 6, 2004 No V-419 “About rating and selection of residency and internship bases”.</p> <p>Program is based on integration of theoretical studies and practical work since the first year of studies. Practical skills are acquired and theory course is assimilated with the help of University professors – residency base specialists. The main base for odontologist- orthopedist residency study – LUHS Hospital Public Institution “Kaunas Clinics” has concentration of all the structures related with diagnostic, treatment and rehabilitation of oral, facial and mandibular diseases. Base of residency is selected according to LUHS regulations of Medical residency. Abilities of scientific work are developed during scientific activities in LUHS Clinic of Dental and Maxillofacial Orthopedics. There is an opportunity provided to accomplish part of the residency in accredited clinic in the chosen foreign country.</p>
<p>Admission requirements</p> <p>Master degree in odontology and professional qualification of doctor odontologist are obligatory. Admission is done by</p>	<p>Possibilities for recognition of previous studies</p> <p>Results of previous studies are accepted individually, taking into account the developed competencies and</p>	

<p>the way of general competition. Structure of the competitive score is given in the conditions for admission to the LUHS residency programs. The main components of competitive score are: the average assessment of all subjects studied during continuous studies, assessment of the final exam, assessment of the clinical medicine practice, assessment of the student's scientific activities (given by the Student Science Association (SSA)) and assessment of the motivational interview. Motivational interview takes place according to the schedule set in advance. Motivation Committee is composed of academic staff and residents representatives from the Clinic of Dental and Maxillofacial Orthopedics. Scientific activities in the field of orthopedic odontology, voluntary clinical activity in the cabinets of odontology as well as qualities of human being are assessed. Motivational letter addressed to the Motivation Committee must be submitted one day before the scheduled interview. The competition is public and takes place separately to each residency study program in two stages (main and additional). Second or additional stage can be organised if there are free positions still available after the main admission.</p>	<p>goals of program that correspond to „Orthopedic odontology“ residency study program, with the guidance of procedures set by LUHS Senate.</p>
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Possibilities for further studies
<p>Degree awarding third level doctoral (PhD) studies (are chosen by up to 5% from those who obtained professional qualification of doctor odontologist- orthopedist).</p>

Possibilities for professional activities (employability)
<p>Doctor odontologist – orthopedist can do practical job in state as well as in private health care institutions, which have a licence to run orthopedic odontology profile services. A licence of a doctor odontologist – orthopedist is given by the Lithuanian Dental Chamber after submitting diploma of completed program of odontology studies, internship certificate and certificate of completed residency studies. Besides, doctor odontologist – orthopedist can do scientific – investigative and pedagogical work in higher education institutions. Certificate of completed residency studies and awarded professional qualification are recognized in countries of the European Union. All graduates of orthopedic odontology residency program get employed.</p>

Methods of studies	Methods of assessment
<p>Various teaching and studying methods are applied: lectures, seminars, consultations, group discussions together with doctors-residents, daily activity diary writing. Presentation and discussion of clinical cases during meetings of academic staff, review of the educational movies, formation and realisation of the individual plan of perfection.</p>	<p>Evaluation of theoretical knowledge is done in verbal and in written forms at the end of every cycle. Written report is done in form of test where questions/tasks of open and closed types as well as clinical situations are submitted. Assessment results in a mark of ten scores system. Participation in lectures, activity during seminars, consultations and group discussions are marked in a separate register. It is required to report not less than 75% of all themes of theoretical course according to the annual schedule of lectures, seminars and group discussions. Compensation of theoretical reports is possible with previous year's residents or by individual timetable.</p>
<p>Competences and practical skills are acquired via patient's examination and treatment in the Clinic of Dental and Maxillofacial Orthopedics, participating in daily and monthly discussions of clinical cases, curating the patients under observation of the resident's supervisor. All the curative activity is done under supervision of the resident's supervisor or the licensed doctor odontologist – orthopedist.</p>	<p>Continual assessment of clinical work, proper implementation and/or interpretation of diagnostic procedures is done weekly by reviewing the daily activity diary; fulfilment of tasks is confirmed by stamp of the resident's supervisor. Assessment of individual clinical cases analysis and presentation is done during weekly discussions; this must be marked weekly in the daily activity diary and confirmed by stamp of the resident's supervisor. Practical skills and competences acquired during cycle era assessed in mark of ten scores system and written into the daily activity diary as well as resident's credit book. Reviews of scientific literature and analysis of clinical cases together with review of publications, preparation and presentation of presentations during meetings of academic staff are done according to the individual</p>

	<p>schedule. Presentations of presentations are registered in the daily activity diary and confirmed by stamp of the resident's supervisor half-yearly.</p> <p>Theme of the scientific – investigative work can be offered by the resident or by his/her supervisor. Preliminary theme of scientific work, subject and methods of investigation are discussed and approved during academic staff meeting of the Clinic of Dental and Maxillofacial Orthopedics. Results of the scientific – investigative work must be presented during meeting of academic staff not later than one month before the final examination.</p> <p>Residency study program is finished by practical and theoretical examinations. Practical examination takes place during reception of outpatient by full evaluation of patient's oral health status and formation the plans of treatment and rehabilitation. Theoretical examination is done in written form; resident must answer 10 questions and discuss them verbally later.</p>
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General competencies (knowledge, abilities, values and attitudes)		Objectives (results) of residency study program	
1.	Professional characteristics	1.1	Be honest and honourable with patients, follow professional ethics principles of doctor odontologist, respect patients laws and don't infringe them, be critical toward others and himself/herself, be able to feel compassion for the patient, teach patients a healthy lifestyle, rational nutrition and correct oral care, be creative and initiative, improve professional qualification according to order determined by juridical acts of LR, give information about patient's health status and treatment to the state institutions and other offices according to order determined by juridical acts of LR.
2.	Professional activity	2.1	Be able to evaluate the boundaries of his/her competencies in general and orthopedic odontology, adjacent specialties, be able to act independently, solve problems and take decisions, communicate and work in a team with specialists from other fields (oral and maxillofacial surgeons, doctors orthodontists, doctors endodontists, pediatricists, doctors of general medicine). Apply only methods of treatment legalised by the European Union and Lithuanian Republic in practical work.
3.	Expert activity of the doctor	3.1	Be able to analyse odontological symptoms specific to oral pathology, diagnose oral diseases, and constantly improve acquired professional qualification considering progress of science and practice of orthopedic odontology. Be able to apply theoretical knowledge in practice, to pass own knowledge and abilities to the younger colleges, be able to plan and to do scientific research.
Subject-specific competences (knowledge, abilities, values and attitudes)		Objectives (results) of residency study program	
4.	Odontological consultation of the patient	4.1	Be able to evaluate extreme conditions of the organism, principles of their diagnostic, differential diagnostic, first aid and treatment. Be able to ascertain and evaluate odontological symptoms, gather anamnesis of odontological diseases, reasons of pathological process, possible course and prognosis. To do complex examination

			of the stomatognathic system applying all available contemporary means of diagnostic and treatment. Be able to evaluate relation between dental pathology and physical as well as psychological health of a patient.
		4.2	Be able to explain to the patient and/or his relative's goal and meaning for the actions taken to the patient, to clarify general and odontological findings, to discuss further actions of treatment and rehabilitation, to reassure and to motivate patient and/or his relatives for treatment.
5.	Odontological examination of the patient and formation of treatment plan	5.1	Be able to diagnose disorders of dental development, eruption of teeth and teeth loss, periodontal diseases, mandibular inflammatory conditions, oral, facial and mandibular precancerous diseases, other specific alterations of gingiva and edentulous alveolar ridge, traumas of teeth and their surrounding tissues and complications, structural and functional changes of temporomandibular joint. Be able to evaluate severity degree of found changes, to make a plan of necessary diagnostic tests, be able to interpret test results, to perform primary (complaints, anamnesis, odontological examination) and secondary (interpreting special instrumental tests' results and planning, performing and interpreting complementary tests' results) differential diagnostics on patients symptoms reasons; to make a relevant treatment and rehabilitation plans for an individual patient, to discuss them with a patient and/or his relatives, be able to evaluate efficiency, outlying results and prognosis of the designated treatment.
		5.2	Be able to communicate with patient and his/her relatives; be able to gain confidence and get written agreement from informed person, communicate in written form according to approved documents of medical law, to communicate with aggressive or partially conscious patient.
		5.3	To recognise character of structural and functional changes in the masticatory system, to evaluate degree of their severity, to make a plan of necessary diagnostic tests, be able to interpret test results, to prognosticate possible course of patient's pathology development, to make differential diagnostics of patients symptoms, to set stage treatment plan appropriate for the individual patient including actions of , outlying rehabilitation and prospective results and discuss them with the patient and/or his relatives. To discuss with the patient and/or his relatives and explain significance of a multi-stage treatment, ensuring aesthetic demands of the patient.
6.	Providing of urgent medical aid	6.1	Be able to recognise extreme conditions of the organism, be able to provide initial resuscitation aid according to the valid recommendations, keep constant improvement in this area. Be able to provide first aid in case of dental traumas and pains, have abilities to treat odontological conditions that require urgent aid, and be able to provide medical first aid.
7.	Performing of diagnostic procedures, evaluation and interpretation of their results	7.1	Be able to perform intraoral and extraoral survey of the stomatognathic system, to examine soft and

			hard oral tissues, to evaluate risk factors of oral diseases, to perform diagnostic radiology of teeth, jaws and facial bones, as well as analysis of radiograms and results of radiological examination.
		7.2	Be able to identify structural changes of the masticatory system, to predict possible variants of process course. Be able to identify functional changes of the masticatory system, to evaluate their influence on development of pathology.
		7.3	Be able to evaluate risk factors of orthodontic anomalies, degree of orthodontic anomalies, efficiency of orthodontic treatment and its influence on further rehabilitation of pathology. Be able to evaluate importance of diseases and pathology of other organism systems on function of the masticatory system and prognosis of course; to estimate need and value of the complex team treatment.
8.	Functional neuroanatomy of mastication	8.1	To know evolution of masticatory organs and their function of biological individuals.
		8.2	To know functional anatomy of the stomatognathic system.
		8.3	To know anatomy of sensory function of nervus trigeminus.
		8.4	To know motor innervation of masticatory muscles and masticatory reflexes.
		8.5	To know functional anatomy of oral- pharynx phase of swallowing and its neural regulation.
9.	Anaesthesia	9.1	To know peculiarities of physical and psychomotor development of a child and adult, be able to evaluate general condition of patient's health.
		9.2	To know peculiarities of masticatory system development and considering that be able to select and to perform appropriate method of local anaesthesia and dose of anaesthetic.
		9.3	To know indications and contraindications for the local anaesthesia.
		9.4	To know development mechanisms of allergic and toxic reactions, early symptoms of their development, be able to provide first aid and qualified assistance.
		9.5	Be able to perform method of the conscious sedation, to know groups of pharmaceuticals, mechanisms of their effect, usage indications and contraindications of the method.
		9.6	Be able to provide facilities in the general anaesthesia.
10.	Basic manufacturing technologies of dental prostheses. Constructive materials, processes of bio-tolerance and clinical methods of their evaluation	10.1	To know requirements of medical norm MN 4:2009 „Technical regulations of medical devices security” and medical norm MN 100:2009 “Technical regulations of active implantable medical devices security”. To know contents and meaning of EEC Directives in orthopedic odontology. To know law characteristic of dental prostheses as individual medical products.
		10.2	To know interaction processes between dental prostheses constructive materials and human organism, methods of bio-tolerance evaluation, be able to perform tests of bio-tolerance.
		10.3	Constantly interest in latest odontological materials and manufacturing technologies of

			dental prostheses. Be able to apply methods of digital diagnostic and manufacturing technologies of dental prostheses in the clinical practice.
11.	Physiological occlusion, its elements, complex clinical methods of evaluation. Pathological occlusion, prognostication of its course variants and substantiation of occlusal correction	11.1	To know occlusal elements, their groups and roles in balance of masticatory function. To know methods of occlusal correction and balancing. Be able to evaluate and adjust balance of occlusion. Be able to evaluate balance of occlusion its disorders and corrections applying means of digital diagnostic.
		11.2	Be able to diagnose pathological teeth wear, perform rehabilitation and apply prophylactic methods.
12.	Organization of epidemiological research, assessment and interpretation of results	12.1	Be able to assess state of the patient's mouth according to indexes of WHO. To know methods of epidemiological research organisation, be able to perform and assess indicators of mastication efficiency.
		12.2	Be able to form samples for research of oral state.
13.	Analysis of the scientific literature	13.1	Be able to prepare protocol of the scientific research.
		13.2	To analyse scientific articles and prepare reviews in subject of systematic topics.
14.	Diagnosis of dental crown and dental arches defects, selection of treatment methods		Be able to perform survey of stomatognathic system structures, methods and technologies of restoration and rehabilitation.
15.	Etiopathogenesis of periodontal diseases. Biomechanical characteristic of a healthy and damaged dental arch, orthopedic rehabilitation methods of damaged dental arch, prognosis, prophylaxis	15.1	To know biomechanical structure of a healthy and damaged dental arch, structure and function of periodont.
		15.2	To know etiopathogenesis of periodontal diseases.
		15.3	To know and be able to perform complex treatment methods of periodontal diseases.
		15.4	Be able to perform prosthetic treatment of teeth and dental arches defects for the patients with periodontal pathology.
16.	Systems of dental implants. Comparative characteristic of dental implantation methods. Processes of osseointegration, their medical-biological evaluation. Clinical methods of planning the prosthetics on implants. Systems of suprastructures, clinical criterions of their selection	16.1	To know processes of osseointegration and influencing factors.
		16.2	To know latest systems of dental implants, their biomechanics, medical-biological parameters.
		16.3	Be able to perform structural analysis of the stomatognathic system and to model implantation applying digital technologies and methods. Be able to perform prosthetic treatment of all the types of dental arch defects by using screw implants.
17.	Gerodontology	17.1	Be able to assess biology of personalities aging processes, peculiarities of nutrition and alterations of mastication neurophysiology.
		17.2	Be able to perform rehabilitation of stomatognathic system of elderly and old person using adequate individual methods.
18.	Rehabilitation of a toothless persons	18.1	To know and be able to assess structural and functional changes in stomatognathic system of a toothless person.
		18.2	To know problems of prostheses fixation and stabilisation, be able to select adequate methods for their solution.
		18.3	To know construction variants and their functional values for prostheses of a toothless persons.
		18.4	Be able to provide optimal services of masticatory function rehabilitation for a toothless person.
19.	Evaluation of temporomandibular joint function, its norm, pathology, methods of complex treatment,	19.1	To know and be able to perform manual and instrumental methods of evaluation of

	prognosis and prophylaxis		temporomandibular joint structure and function, interpretation of findings.
		19.2	Be able to perform correction of damaged function of temporomandibular joint.
		19.3	Be able to perform prophylaxis of temporomandibular joint diseases, to assess influence of existing prostheses on possible pathology.
20.	Orthopedic treatment of stomatognathic system traumas	20.1	Be able to evaluate characteristic of stomatognathic system traumas and to provide services of treatment and rehabilitation using methods of orthopedic odontology. Be able to fabricate preoperative and postoperative fixative corrective appliances and to make timely corrections. Be able to work in team.
		20.2	To know restoration methods of congenital and acquired defects of stomatognathic system.
21.	Orthopedic odontological rehabilitation of oncological patients	21.1	To know characteristics of oncological diseases of stomatognathic system, their treatment and rehabilitation methods.
		21.2	Be able to fabricate rehabilitating apparatuses and prostheses for oncological patients.
22.	Methods of the orthognathic surgery in odontological rehabilitation	22.1	To know classification of structural and functional alterations in stomatognathic system and their complex treatment methods. Be able to fabricate preoperative and postoperative fixative corrective appliances and to make timely corrections. Be able to work in team.
		22.2	Be able to perform modelling the structural-functional changes of stomatognathic system in phantoms, in graphical information, in computer using digital technology methods.
23.	Treatment of patients with disability and general diseases		Be able to treat patients with physical disability. Be able to treat patients with mental disability. Be able to treat patients in general anaesthesia.
24.	Principles of ergonomics in odontology		Be able to establish ergonomic workplace. Be able to work by “four hands” principle.
25.	Promotion and stimulation of a healthy lifestyle and practical activity	25.1	Be able to assess risk for patient’s health and apply proper and rational means to reduce the risk, to apply infection control measures, to assess risk of professional activities for his/her own health and to undertake means to avoid this risk.
		25.2	To participate in health promotion programs on the levels of population and of an individual.