

Educational institution: TALLINN HEALTH CARE COLLEGE  
Code of educational institution: 70003980  
Curriculum title: HAMBATEHNIK  
(in Estonian and English) *DENTAL TECHNICIAN*

Curriculum level: Applied higher education  
Academic field: Health and well-being  
Orientation of study: Health  
Curriculum group: Health care  
Accreditation data: Directive of the Minister of Education and Science No 53 from Jan. 27<sup>th</sup>, 2009: to accredit until Jan. 27<sup>th</sup>, 2016  
Volume in European Credit Transfer and Accumulation System (ECTS): 210  
Nominal period of studies: 3,5 years

Admission requirements:  
Secondary education or equivalent foreign qualification.

The curriculum objective is to prepare dental technicians with applied higher education who possess the knowledge and skills for producing dentures to be installed into oral cavity and to produce orthodontic apparatuses, to compose applied research with the readiness to develop the profession. Graduates will be issued a dental technician diploma.

Brief description of curriculum and teaching:  
Volume of speciality subjects: 110 ECTS  
Volume of basic subjects: 65 ECTS  
Volume of practical training: 60 ECTS (28% of curriculum volume)  
Volume of final exam/ final work: 5 ECTS  
Volume of elective and optional subjects: 5 ECTS  
Volume of contact studies: not more than 54% from total volume of curriculum theory studies  
Languages of teaching: Estonian  
Other languages needed for achieving learning outcomes: English

Graduation requirements:  
completing curriculum in full volume and final exam/final work passed with positive grade.

Documents issued upon graduation  
An applied higher education diploma with an academic statement and *Diploma Supplement* in English.

Curriculum code in the Estonian Education Info-System (EEIS) Register of Curricula:

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### *Module passports*

Module code	2DR109
Module title	<b>DENTAL RESTAURATIONS 1</b>
Module volume	25 ECTS / 650 hours
Contact learning (incl e-learning)	290 hours
Independent work	At least 126 hours
Practical training	9 ECTS / 234 hours
Year of studies	I and II year
Integrated modules	Basics of function studies, Anatomy and first aid, Basics of material and colour studies, Health and sickness, Research and development work methodology, Professional development
Module objective	The student knows, recognizes and is able to produce acrylic partial and total dentures, and knows the aesthetic principles of dentures.
Learning outcomes	Having passed the module, the student: <ol style="list-style-type: none"> <li>1. knows, recognizes and applies speciality terminology, knows the main stages of the history of prosthetic dentistry;</li> <li>2. knows and recognizes the classifications of dental arc defects and acrylic dentures, the indications and contraindications of prosthetic dentistry, the completing stages of denture;</li> <li>3. considers the principles of functioning and occlusion in producing a denture;</li> <li>4. can select and use materials, apparatuses and work instruments accordingly with the work's nature by observing instructions, requirements for safety measures and environment saving;</li> <li>5. is able to produce removable acrylic partial and total dentures;</li> <li>6. has an overview about the installing of acrylic dentures into oral cavity, about the adaptation and maintenance;</li> <li>7. can describe and evaluate work process and the done work, to analyze the technological, instructing related and organisational causes of successful and unsuccessful works;</li> <li>8. can compare in practical training report the justifications for selecting the dental restorations, technologies, resources etc in different practical training locations.</li> </ol>
Contents and method of independent work	<ol style="list-style-type: none"> <li>1. Reading, analyzing, abstracting, summarizing speciality literature.</li> <li>2. Completing practical exercise works;</li> <li>3. Composing study-map;</li> <li>4. Preparation for seminars, graded prelim, exam.</li> </ol>
Evaluation	Exam

Module code	2DR209
Module title	<b>DENTAL RESTAURATIONS 2</b>

Module volume	30 ECTS / 780 hours
Contact learning (incl e-learning)	352 hours
Independent work	At least 142 hours
Practical training	11 ECTS / 286 hours
Year of studies	II and III year
Integrated modules	Dental restorations <sup>1</sup> , Research and development work methodology, Anatomy and first aid, Professional development, Basics of function studies
Module objective	The student gets to know and to apply the elements of partial and combined dentures, can construct partial and combined dentures. Student acquires the technological methods for producing partial and combined dentures during practical rehearsal works.
Learning outcomes	Having passed the module, the student: <ol style="list-style-type: none"> <li>1. knows, recognises and uses speciality terminology;</li> <li>2. knows and recognises the classifications of dental arc defects and casted framings of partial dentures, the indications and contraindications of prosthetic dentistry, the completing stages of denture;</li> <li>3. considers the principles of functioning and occlusion in producing a denture;</li> <li>4. can select and use materials, apparatuses and work instruments accordingly with the work's nature by observing instructions, requirements for safety measures and environment saving;</li> <li>5. is able to produce partial dentures with casted framings and simpler combined dentures;</li> <li>6. has an overview about the installing of dentures into oral cavity, about adaptation and maintenance;</li> <li>7. can describe and evaluate the work process and the done work, to analyze the technological, instructing related and organisational causes of successful and unsuccessful works;</li> <li>8. can compare in practical training report the justifications for selecting the dental restorations, technologies, work organization, resources etc in different practical training locations.</li> </ol>
Contents and method of independent work	<ol style="list-style-type: none"> <li>1. Reading, analyzing, abstracting, summarizing speciality literature;</li> <li>2. Completing practical exercise works;</li> <li>3. Composing study-map;</li> <li>4. Preparation for seminars, graded prelim, exam.</li> </ol>
Evaluation	Exam

Module code	2DR309
Module title	<b>DENTAL RESTAURATIONS 3</b>
Module volume	35 ECTS / 910 hours
Contact learning (incl e-learning)	384 hours
Independent work	At least 214 hours
Practical training	12 ECTS / 312 hours
Year of studies	III year

Integrated modules	Dental restorations <sup>2</sup> , Basics of function studies, Basics of material and colour studies, Anatomy and first aid, Health and sickness, Research and development work methodology
Module objective	During the practical exercise works the student will be prepared to produce full casted, metal ceramic and metal-plastic crowns, and bridge-dentures, therewith acquiring theoretical knowledge and practical work methods.
Learning outcomes	Having passed the module, the student: <ol style="list-style-type: none"> <li>1. knows, recognises and uses speciality terminology;</li> <li>2. knows and recognises the classifications of dental defects and fixed dentures, the indications and contraindications of prosthetic dentistry, the completing stages of denture;</li> <li>3. considers the principles of functioning and occlusion in producing a denture;</li> <li>4. can select and use materials, apparatuses and work instruments accordingly with work's nature by observing instructions, requirements for safety measures and environment saving;</li> <li>5. is able to produce crowns, bridge-dentures, inlays and other fixed dentures;</li> <li>6. has an overview about the installing of dentures into oral cavity, about the adaptation and maintenance;</li> <li>7. can describe and evaluate work process and the done work, to analyze the technological, instructing related and organisational causes of successful and unsuccessful works, is responsible in team work;</li> <li>8. can compare in practical training report the justifications for selecting the dental restorations, technologies, resources etc in different practical training locations.</li> </ol>
Contents and method of independent work	<ol style="list-style-type: none"> <li>1. Reading, analyzing, abstracting, summarizing speciality literature;</li> <li>2. Completing practical exercise works;</li> <li>3. Composing study-map, incl e-study map;</li> <li>4. Study-visits to hi-tec laboratories;</li> <li>5. Preparation for seminars, graded prelim, exam.</li> </ol>
Evaluation	Exam

Module code	2OD09
Module title	<b>ORTHODONTICS</b>
Module volume	10 ECTS / 260 hours
Contact learning (incl e-learning)	104 hours
Independent work	At least 78 hours
Practical training	3 ECTS / 78 hours
Year of studies	II year
Integrated modules	Health and sickness, Basics of function studies, Basics of material and colour studies, Anatomy and first aid, Research and development work methodology
Module objective	The student learns to know the concept of orthodontics, the development stages of face scull and morphological-functional description of occlusion, occlusion anomalies, the classification of orthodontic apparatuses, children dentures, the principles of orthodontic

	treatment. To provide an overview about the principles of constructing orthodontic apparatuses and the requirements for the apparatuses.
Learning outcomes	Having passed the module, the student: <ol style="list-style-type: none"> <li>1. knows and recognises the basics of producing orthodontic treatment apparatuses, uses speciality terminology;</li> <li>2. knows and recognises the classifications of occlusion and orthodontic apparatuses, the indications and contraindications of orthodontic treatment, the completing stages of orthodontic apparatuses;</li> <li>3. can produce different orthodontic apparatuses, knows their advantages and disadvantages;</li> <li>4. can select and use materials, apparatuses and work instruments accordingly with work nature by observing instructions, the requirements for safety measures and environment saving;</li> <li>5. has an overview about the installing of orthodontic apparatuses into oral cavity, about the adaptation and maintenance;</li> <li>6. can describe and evaluate work process and the done work, to analyze the technological, instructing related and organisational causes of successful and unsuccessful works, is responsible in team work;</li> <li>7. carries out comparison analyses about the produced dental restorations, technologies, resources etc in different practical training locations.</li> </ol>
Contents and method of independent work	<ol style="list-style-type: none"> <li>1. Reading, analyzing, abstracting, summarizing speciality literature;</li> <li>2. Completing practical exercise works;</li> <li>3. Composing study-map, incl e-study map;</li> <li>4. Analyzing of orthodontic work models, constructing treatment apparatuses according to treatment plan with written justification;</li> <li>5. Finalizing conspectus on the basis of lectures and obligatory speciality literature;</li> <li>6. Preparation for seminars, graded prelim, exam.</li> </ol>
Evaluation	Exam

Module code	2FA09
Module title	<b>BASICS OF FUNCTION STUDIES</b>
Module volume	10 ECTS / 260 hours
Contact learning (incl e-learning)	144 hours
Independent work	At least 116 hours
Practical training	-
Year of studies	I, II and III year
Integrated modules	Dental restorations 1-3, Basics of material and colour studies, Health and sickness, Research and development work methodology
Module objective	The student can connect the principles of occlusion and articulation with the producing of dental restorations, and understands the associations of morphology and occlusion.
Learning outcomes	Having passed the module, the student: <ol style="list-style-type: none"> <li>1. uses the terminology of occlusion and articulation, knows and</li> </ol>

	<p>recognises the most important factors influencing occlusion, the biomechanics of stomatognathic system, the criteria of optimal functional occlusion, the connections between lower and upper teeth in case of different occlusion forms;</p> <ol style="list-style-type: none"> <li>2. recognises the structure and functioning of temporomandibular joint, limited and functional motions of lower chin bone, the connection between neuromuscular system and occlusion;</li> <li>3. recognises the functional disorders of lower chin bone;</li> <li>4. knows and recognises the internal relation between occlusion and chewing, between speech and the outlook of face, the principles of occlusion therapy;</li> <li>5. knows and recognises different types of articulator, their structure and functioning mechanisms, and uses these on agreed level with face bow in practical work;</li> <li>6. understands the general connections between morphology and occlusion, can differentiate the morphological structures on tooth surface and knows their names;</li> <li>7. can model teeth and make waxing up that correspond to the tooth's morphological features and harmonize with real teeth, considering function, occlusion and aesthetics.</li> </ol>
Contents and method of independent work	<ol style="list-style-type: none"> <li>1. Reading, analyzing, abstracting, summarizing speciality literature;</li> <li>2. Completing practical exercise works;</li> <li>3. Composing study-map, incl e-portfolio;</li> <li>4. Study visits to hi-tec laboratories and dentist offices;</li> <li>5. Preparation for seminars, graded prelim, exam.</li> </ol>
Evaluation	Graded prelim

Module code	2AE09
Module title	<b>ANATOMY AND FIRST AID</b>
Module volume	10 ECTS / 260 hours
Contact learning (incl e-learning)	130 hours
Independent work	At least 130 hours
Practical training	-
Year of studies	I year
Integrated modules	Research and development work methodology
Module objective	<p>The student understands the mechanisms regulating human organism development, structure, functioning and organ systems' activities, relying on physical processes happening inside it.</p> <p>Student understands the anatomy and physiology of skull and teeth.</p> <p>Student knows the basics of Latin terminology and knows how to apply it.</p> <p>Student has general knowledge and skills of first aid.</p>
Learning outcomes	<p>Having passed the module, the student:</p> <ol style="list-style-type: none"> <li>1. knows the development, structure and functioning of human organism and the mechanisms regulating them, can explain the biological, physical and chemical processes taking place in organism;</li> </ol>

	<ol style="list-style-type: none"> <li>2. knows and recognises main pathological processes;</li> <li>3. knows and recognises the basics of chewing physiology and can define teeth basing on anatomic features;</li> <li>4. knows the basics of Latin terminology and uses speciality terminology, knows how to compose necessary expressions and can forward them correctly, values correct speciality language and it's adequate use;</li> <li>5. knows and recognises the possibilities of pre-medical help, and is able to use the instruments and methods of first aid.</li> </ol>
Contents and method of independent work	<ol style="list-style-type: none"> <li>1. Finalizing exercise book, creating necessary illustrations and concept cards, exercising the use of Latin terms;</li> <li>2. Preparation for seminar, prelim and exam;</li> <li>3. The familiarizing with the causes of particular types of injuries, trauma mechanisms, action instructions and first aid instruments in use.</li> </ol>
Evaluation	Exam

Module code	2MVA09
Module title	<b>BASICS OF MATERIAL AND COLOR STUDIES</b>
Module volume	10 ECTS / 260 hours
Contact learning (incl e-learning)	130 hours
Independent work	At least 130 hours
Practical training	-
Year of studies	I, II and III year
Integrated modules	Dental restorations 1-3, Orthodontics, Health and sickness, Anatomy and first aid, Professional development, Research and development work methodology
Module objective	The student gets to know the history and basic principles of dental technical materials. The student learns the materials used for producing dentures, their physical and mechanical features. Student develops the skills of colour perception.
Learning outcomes	<p>Having passed the module, the student:</p> <ol style="list-style-type: none"> <li>1. knows, recognises and uses speciality terminology;</li> <li>2. knows and recognises the methods, the physical and chemical qualities for producing materials used for making dentures, originating from solidity studies;</li> <li>3. knows and recognises the internal matching and classification of materials, and can analyze the mistakes occurring during their use;</li> <li>4. knows and recognises different types and categories of gypsum, the consistencies and types of wax; imitational, abrasive, isolative, duplicating and fireproof materials; metals and their alloys, ceramic materials, polymers and their handling;</li> <li>5. knows and recognises the affect of disinfection devices on different dental technical materials;</li> <li>6. knows and recognises the essence of electrolysis, the principles of soldering and brazing;</li> <li>7. knows and recognises the colours of light and object, wavelengths of spectre colours, and can connect it with tooth shade guides and with natural tooth colours;</li> </ol>

	8. knows and recognises the effect colours used in producing dentures, and the factors influencing the defining of colour.
Contents and method of independent work	1. Reading, analyzing, abstracting, summarizing speciality literature; 2. Composing study-map, 3. Preparation for seminars, graded prelim, exam.
Evaluation	Exam

Module code	2TH09
Module title	<b>HEALTH AND SICKNESS</b>
Module volume (ECTS tunnid)	15 ECTS / 390 hours
Contact learning (incl e-learning)	192 hours
Independent work	At least 198 hours
Practical training	-
Year of studies	I, II year
Integrated modules	Research and development work methodology, Anatomy and first aid, Dental restorations <sup>1</sup> , Dental restorations <sup>2</sup>
Module objective	The student knows and recognises risk factors, possesses knowledge about microbiology, a- and antiseptics, genetics, immunology, teeth and oral cavity hygiene and diseases. Student knows and recognises the legislature regulating the areas of health and social care, the theoretical principles of population health and health promotion.
Learning outcomes	Having passed the module, the student: <ol style="list-style-type: none"> <li>1. knows, recognises and uses speciality terminology;</li> <li>2. knows and can define the risk factors of working environment, knows the principles of risk analyses and necessary precaution measures, knows how to use them;</li> <li>3. acquires safe working methods, can safely use work instruments, apparatuses and materials;</li> <li>4. has knowledge about micro-biology, the diseases caused by micro-organisms and the spreading of it;</li> <li>5. has an overview about the micro-flora in human oral cavity, tooth pulp and teeth;</li> <li>6. has knowledge about the basics of immunology, infection, a- and antiseptics;</li> <li>7. knows and recognises the basic principles of health care and social policy, knows the most important legal acts regulating social protection and health care, can analyse the functioning of health care and social protection system;</li> <li>8. knows and recognises the theoretical principles of anticipating diseases/injuries, of population health and health promotion; the principles of epidemiology;</li> <li>9. knows and recognises the physical, mental and social risk factors of health;</li> </ol>



	10. knows and recognises the organization and possibilities of health promotion in Estonian health policy.
Contents and method of independent work	1. Reading, analyzing, abstracting, summarizing speciality literature; 2. Composing risk-analysis, solving tasks, composing and finalizing written works; 3. Preparation for seminars, graded prelim.
Evaluation	Graded prelim

Module code	2PA09
Module title	<b>PROFESSIONAL DEVELOPMENT</b>
Module volume	15 ECTS / 390 hours
Contact learning (incl e-learning)	114 hours
Independent work	At least 176 hours
Practical training	-
Year of studies	I, II, III year
Integrated modules	Dental restorations 1-3, Orthodontics, Basics of function studies, Anatomy and first aid, Basics of material and colour studies, Health and sickness, Research and development work methodology
Module objective	The student knows the ethic's central principles and theories in philosophy, sociology, psychology, entrepreneurship, management training, and acts in one's activities by following aesthetic principles. Student realizes the importance of personal professional development in future speciality. Student acquires the knowledge and skills for developing the speciality, and for life long learning.
Learning outcomes	Having passed the module, the student: <ol style="list-style-type: none"> <li>1. has an overview about the contents of speciality curriculum, subject programs and teaching regulations, and uses studying info-system;</li> <li>2. knows, recognises and uses different learning styles and teaching methods used in the college;</li> <li>3. is able to plan and lead independent work and career, and develop learning skills;</li> <li>4. can systematize and generalize the learned knowledge from curriculum subjects, and to apply theoretical knowledge in practice;</li> <li>5. can analyze critically, discuss and ground one's positions;</li> <li>6. knows, applies and develops different communication techniques, one's own personal learning resources and abilities, and realizes the necessity of personal motivation in acquiring the profession and planning the career;</li> <li>7. acquires knowledge and experience for instructing fellow students, values and uses team-work principles.</li> </ol>
Contents and method of independent work	1. Searching, reading, analyzing, abstracting, summarizing and making reports of speciality information; 2. Preparation for seminars, graded prelim. 3. Composing study-map
Evaluation	Graded prelim

Module code	2UAM09
Module title	<b>RESEARCH AND DEVELOPMENT WORK METHODOLOGY</b>
Module volume	15 ECTS / 390 hours
Contact learning (incl e-learning)	151 hours
Independent work	At least 239 hours
Practical training	-
Year of studies	I, II and III year
Integrated modules	Professional development, Basics of material and colour studies, Dental restorations 1-3, Orthodontics, Basics of function studies, Anatomy and first aid, Health and sickness
Module objective	The student knows and recognises the starting points, models and methods of evidence based research works, can collect and process data, to compose an applied research work that meets all requirements, to present the work results in Estonian and English, and to apply the acquired knowledge in practice.
Learning outcomes	Having passed the module, the student: <ol style="list-style-type: none"> <li>1. possesses general knowledge about information society, info-technological devices, data studies and databases;</li> <li>2. uses e-learning possibilities in web-based learning environment IVA;</li> <li>3. knows, recognises and uses terminology in Estonian and English;</li> <li>4. knows and recognises different starting points, models and methods of research works and researches, and can apply them;</li> <li>5. is able to define the work objective, hypothesis and action plan, originating from evidence based know-how, has an understanding and skill to apply it;</li> <li>6. can compose and present written work and defend it in discussion;</li> <li>7. uses different starting points, models and methods of research works and researches.</li> </ol>
Contents and method of independent work	<ol style="list-style-type: none"> <li>1. Searching, reading, analyzing, abstracting, summarizing and making reports about speciality information;</li> <li>2. Preparation for seminars, graded prelim.</li> <li>3. Writing of required short research work, course paper and project of final work.</li> </ol>
Evaluation	Exam

Module code	2LP09
Module title	<b>FINAL PRACTICAL TRAINING</b>
Module volume	25 ECTS / 650 hours
Contact learning (incl e-learning)	520 hours
Independent work	At least 130 hours
Practical training	25 ECTS
Year of studies	IV year
Integrated modules	All passed curriculum modules.
Module objective	The student evolves professionally, associates and values acquired theories and practices with speciality and with all curriculum subjects. Student learns to understand dentist's prescriptions.

	<p>Student observes the requirements of quality and profession ethics in work.  Student acquires team work experience: client, dentist, dental technician.  Student learns to rationally use the working hours.  Student learns to compose, finalize and present documentation.  Student composes common study-map about the practical training in training bases and presents it at the end of practical training.</p>
Learning outcomes	<p>Having passed the module, the student:</p> <ol style="list-style-type: none"> <li>1. knows and recognises the clinical and laboratorial stages of producing removable and fixed dentures, and orthodontic treating apparatuses, can produce them, has the preparation for passing the professional skills and knowledge to others;</li> <li>2. is independently able to critically and creatively interpret the collected information, and shows initiative and responsibility in development and team-work;</li> <li>3. can analyze in written report as well as in seminar the working process and final result relating technological, management related and organizational components, and to evaluate it;</li> <li>4. can compare the executing of similar or same work types in different environments, to compare different environments and practical training bases;</li> <li>5. connects and values the acquired theories and practices with speciality and with all curriculum subjects, can express it in study-map.</li> </ol>
Contents and method of independent work	<ol style="list-style-type: none"> <li>1. Searching, reading, analyzing, abstracting, summarizing and making reports of speciality information;</li> <li>2. Composing and finalizing of practical training report;</li> <li>3. Preparation for seminars, exam.</li> <li>4. Completing of practical training study-map, and finalizing it.</li> </ol>
Evaluation	Exam

Module code	
Module title	<b>ELECTIVE- AND OPTIONAL SUBJECTS</b>
Module volume	5 ECTS / 130 hours
Contact learning (incl e-learning)	According to the selected subject
Independent work	According to the selected subject
Practical training	-
Year of studies	I-IV year
Integrated modules	According to the descriptions of the selected subjects
Module objective	Complementing speciality knowledge originating from curriculum objectives, and the developing of general knowledge through subjects that are independently selected by the student.
Learning outcomes	According to the learning outcomes of the selected subjects
Contents and method of independent work	Accordingly with independent work foreseen by the subject.
Evaluation	Prelim

Module code	2LTE09
Module title	<b>FINAL WORK / FINAL EXAM</b>
Module volume	5 ECTS
Contact learning (incl e-learning)	
Independent work	130 hours
Practical training	-
Year of studies	IV year
Integrated modules	All curriculum modules
Module objective	To guarantee the integration of professional knowledge and skills, and readiness to start working.
Learning outcomes	Having passed the module, the student demonstrates the knowledge, skills and value judgements having learned from the curriculum by composing the final work or taking the final exam.
Contents and method of independent work	Repeating all material from the curriculum. Composing final work.
Evaluation	Exam