

**DEN5003 Orthodontics and Dentofacial Orthopedics III (Craniofacial anomalies)**

Course title	Code	Semester	Type of course	Course structure and volume (hours)			ECTS
Orthodontics and Dentofacial Orthopedics III (Craniofacial anomalies)	DEN5003	IX	Mandatory	LECTURE	30	120	4
				Seminar	24		
				Teaching in Stimulatory environment (TSE)			
				Teaching in clinical environment (TCE)	15		
				Midterm EX.	1		
				FINAL EX.	2		
				INDEP. WORK	48		
Faculty, the educational program and level of education	School of Dental Medicine One cycle (5-year duration) Higher Educational Program “Dentistry”						
Staff	<b>Tinatin Maminaishvili</b> E-mail: <a href="mailto:maminaishvili.t@gmail.com">maminaishvili.t@gmail.com</a> . <b>Nikoloz Jorjikashvili</b> E-mail: <a href="mailto:nikolozjorjikashvili.@gmail.com">nikolozjorjikashvili.@gmail.com</a> <b>Duygu Yetkin- invited lecturer</b> E-mail: <a href="mailto:duygu.yetkin@bauinternational.edu.ge">duygu.yetkin@bauinternational.edu.ge</a> <b>Nino Gachechiladze -invited lecturer</b> E-mail: <a href="mailto:nino.gachechiladze@bauinternational.edu.ge">nino.gachechiladze@bauinternational.edu.ge</a>  Personal one-to-one consultation can be arranged at an agreed upon date and time.						
Duration	17 weeks						
Prerequisite	Orthodontics and Dentofacial Orthopedics II (Diagnostics and orthodontic appliances) DEN 4006						
Aim	The aim of this course is to give knowledge about normal development of craniofacial complex and ability to determine growth anomalies of it.						
Methods of Teaching/Learning	Interactive lectures; Seminars; Teaching in clinical environment						

	<p><b>Student's knowledge assessment:</b></p> <ul style="list-style-type: none"> <li>• Testing (2 sessions, 5 points each) - 10 points</li> <li>• Verbal Quiz (2 sessions, 5 points each) – 10 points</li> <li>• CBL ( 4 sessions, 5 points each) - 20 points</li> <li>• Midterm –MCQ - 20 points</li> <li>• Final exam - Oral Examination 4x5=20 points and MCQ - 20 points.</li> </ul> <p><b>Total -100 points</b></p> <p><b>Evaluations of ongoing MCQ tests</b></p> <p>MCQ (Multiple Choice Question).</p> <ul style="list-style-type: none"> <li>• Each MCQ question is assessed by 0.4 point.</li> </ul> <p><b>Verbal quiz</b></p> <p><b>Method Description:</b> Demonstration of knowledge of theoretical topics, discussion over specific issues in the form of narration or answering questions.</p> <p><b>Assessment System and Criteria</b></p> <p><b>Assessment criteria</b></p> <p><b>3-5 Points:</b> The answers to the questions are correct/mostly correct, justified and reasoned.</p> <p><b>1 -2 Points:</b> The student knows only part of the questions, the answers to the questions are correct but incomplete / unreasonable.</p> <p><b>0 Points:</b> The student is completely unprepared. Does not have knowledge/prepared a represented factual material, cannot answer any questions.</p> <p><b>CLINICAL CASE ASSESSMENT (CBL) CRITERIA:</b></p> <ul style="list-style-type: none"> <li>• Ability of case interpretation - 1 point;</li> <li>• Ability to use additional sources - 1 point;</li> <li>• Ability to apply theoretical knowledge - 1 point;</li> <li>• Ability of correlating normal and pathological conditions - 1 point;</li> <li>• Ability to conclude – 1 points</li> </ul> <p><b>Midterm exam – MCQ - 20 points.</b> Each MCQ question is assessed by 0.4 point. For a positive result, the student must correctly answer at least <b>50%</b> of the total number of questions.</p> <p><b>Final exam - 40 points.</b></p> <p><b>Final exam prerequisites:</b> the total number of points from all</p>
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other assessment components, namely, the midterm exam and activity quizzes and classroom activity, must be at least **30 points**.

## Final exam

### Oral Exam Assessment Criteria

**5 points** - The answer is comprehensive. Student's thinking ability is clearly visible. The topic is precisely and fully presented. The terminology is duly used. The student masters the material regarded by the course on a proper level.

**4 points** - The student answers all questions, but independent thinking ability is not clearly visible. The terminology is correctly used. No major errors can be found. The student masters the material regarded by the course on a proper level. He/she has learnt the main literature.

**3 points** - The answer is incomplete. The topic is presented on a satisfactory level but it lacks the thinking ability and is rather based on memorizing. The terminology is scarcely used. The student masters the material regarded by the course but a few errors can be detected.

**2 points** - The answer is incomplete. The terminology is incompletely used. The material is partially presented. The student masters the main literature on an insufficient level. A few major errors can be detected.

**1 point** - Student's answer is not complete. The terminology is not used or is used in a wrong way. The answer is mainly erroneous. The topic is presented in a fragmented fashion.

**0 points** - The answer does not correspond to the question or it is not presented at all.

The course (module) is considered as passed if the student has **at least 51 points** during one semester.

Maximum course assessment score is 100 points. The student's assessment system includes:

a) five types of positive assessment:

(A) Excellent – 91-100 points.

(B) Very good – 81-90 points.

(C) Good – 71-80 points.

(D) Satisfactory – 61-70 points.

(E) Acceptable – 51-60 points.

(FX) Student could not pass examination – 41-50 point that means that the student is required to work more for passing the exam, and that she/he is entitled to retake exam only once after individual work;

(F) Failed to pass – 40 points and lower that means that the work done by the student is not sufficient and she/he has to retake the course.

After the results of final exams are available, students with FX assessment have a right to retake an exam during an additional exam week in the same semester.

	An interval between a final and a corresponding additional exam must be at least 5 days after the results of a final exam become available.
<b>The core literature</b>	Handbook of orthodontics 2ND edition – Martyn Cobourne, Andrew DiBiase, 2016 Elsevier Ltd All rights reserved.
<b>The auxiliary literature</b>	<p>Proffit, William R., Henry W. Fields, and David M. Sarver. Contemporary Orthodontics. St. Louis, Mo: Elsevier/Mosby, 2013.</p> <p>Lee W. Graber, Katherine W.L. Vig, Greg J. Huang, Padhraig S. Fleming.</p> <p>Orthodontics Current Principles and Techniques, seven edition St. Louis, Missouri Mo: Elsevier/Mosby, 2023. (related chapters)</p>

### Learning Outcomes

NQF*	COURSE LEARNING OUTCOMES	PROG. LO	Lecture	Seminar	Teaching in simulation environment	Teaching in clinical environment	Midterm ex.	Final exam	ASSES. METH.
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<b>KNOWLEDGE AND AWARENESS</b>	The student:	6.1							<b>MCQ</b>
	1. Demonstrates knowledge of the basics of craniofacial development								
	2. Comprehends reasons that lead to orthodontic anomalies								
	3. Shows knowledge about cleft lip and palate								
	4. Shows knowledge about presurgical orthodontics								

<b>SKILL</b>	The student:	8.1							
	1. Recognizes the deviations from the normal in dentoskeletal structures	8.2							
	2. Performs radiographic and clinical evaluation of growth and development	9.1							
	3. Differentiates the abnormality /aberration in the growth process in dental, skeletal and soft tissues of the craniofacial region and discusses their clinical implications.	9.4							

  

<b>RESPONSIBILITY AND AUTONOMY</b>	Student:	11.1							
	1. has the ability to analyze information	11.3							
	2. has the ability to solve the problems								

### Supplement 1

### Learning Course Content

DAYS №	Topics	Lecture (hrs)	Seminar (hrs)	TSE (hrs)	TCE (hrs)
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I	Basic concepts of growth and development	2			
II	The Factors that affect growth and development, the concept of normality  <b>Seminar:</b> Comparison of different growth theories in orthodontics  <b>Verbal Quiz I</b>	2	2		

III	<p>Methods in the examination of growth and development</p> <p><b>Seminar:</b> Radiographic and clinical evaluation of growth and development</p> <p><b>TCE:</b> Radiographic and clinical evaluation of growth and development</p> <p><b>CBL:</b> The Factors that affect growth and development</p>	2	2		4
IV	<p>Growth and development of bone tissue</p> <p><b>Seminar:</b> Growth spurts</p> <p><b>Testing I</b></p>	3	2		
V	<p>Piezoelectric</p> <p><b>Seminar:</b> Piezoelectric effects on growth</p> <p><b>Verbal Quiz II</b></p>	2	2		
VI	<p>Prenatal craniofacial development in terms of orthodontics (I)</p> <p><b>Seminar:</b> Stages of prenatal craniofacial growth</p>	2	2		
VII	<b>Midterm Exam (1 hour)</b>	1			
VIII	<p>Prenatal craniofacial development in view of orthodontics (II)</p> <p><b>Seminar:</b> Stages of prenatal craniofacial growth</p>	2	2		
IX	<p>Prenatal dentoskeletal development in view of orthodontics (I)</p> <p><b>Seminar:</b> Stages of prenatal dentoskeletal growth</p> <p><b>Verbal Quiz III</b></p>	2	2		
X	<p>Prenatal dentoskeletal development in view of orthodontics (II)</p> <p><b>Seminar:</b> Stages of prenatal dentoskeletal growth</p> <p><b>CBL:</b> Prenatal craniofacial development</p>	2	2		



XI	Postnatal growth and development of mandible and maxilla <b>Seminar:</b> Growth sites of maxilla and mandible	2	2		
XII	Changes in facial topography following growth and development <b>Seminar:</b> Effects of growth and development on facial morphology <b>Verbal Quiz IV</b>	2	2		
XIII	Dental agenesis, treatment principles of impacted teeth <b>Seminar:</b> Treatment options of impacted canines <b>TCE:</b> Clinical observation of treatment strategies of impacted teeth	1	2		4
XIV	Orthognathic surgery <b>Seminar:</b> Presurgical orthodontic therapy <b>TCE:</b> Clinical observation of orthognathic surgery patients	1	1		3
XV	Lip and palate Cleft <b>Seminar:</b> Nasolabial molding <b>TCE:</b> Clinical Observation of Cleft lip patient	1	1		
XVI	Upper Airway, Cranial Morphology, and Sleep Apnea <b>Testing</b>	1			

XVII	Final Exam (2 hour)	2			
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