DEN 2002 Dental Anatomy & Occlusion (preclinical odontology)

Course title	Code	Semester	Type of course	Course structure and volume (hours)			ECTS
Dental Anatomy & Occlusion (preclinical odontology)	DEN2002	III	Mandatory	LECTURE	17	120	4
				Seminar	10		
				Teaching in Stimulatory environment (TSE)	42		
				Teaching in the clinical environment (TCE)			
				Practical Lecture			
				Midterm EX.	1		
				FINAL EX.	2		
				INDEP. WORK	48		

Faculty, the educational program, and level of education	School of Dental Medicine One cycle (5-years duration) Higher Educational program "Dentistry"
Faculty Member	**Emir Yuzbasioglu,DDS,PhD; Professor** **Email:** emir.yuzbasioglu@bauinternational.edu.ge Nino Tebidze, DMD,PhD, Associate Professor, e-mail: nino.tebidze@bauinternational.edu.ge, mob.: 574 08 90 90 Hatije Palta, invited lecturer, e-mail: hatije.palta@bauinternational.edu.ge Personal one-to-one consultation can be arranged at an agreed-upon date and time.
Duration	15 weeks
Prerequisite	MED1005-1008
Aim	The aim of the course is to evaluate the anatomical and physiological features of permanent teeth and to apply basic modeling skills. This course provides information about the oral cavity, morphology and anatomy of permanent teeth, inter-arch and inter-dental relations, replicating the anatomy of permanent teeth for future application of dental and prosthetic materials, temporomandibular joint anatomy-function, and occlusion.

Methods of Teaching/Learning	Interactive lectures; Seminars; TSE

Assessment System and Criteria	The knowledge of the student is evaluated by 100 point-based evaluation system out of which 40 score is allocated for the current activity, 20 point for mid-term exam and 40 points for the final exam. Student's Knowledge Assessment: 1. Current Activity Assessment (40 points) **a.** TSE(7 sessions, 4 points each) – 28 points **b.** Verbal presentation (6 sessions, 2 points each) – 12 points **2. Midterm – MCQ** (20 points) 3. **Final exam - MCQ** (20 Points) and **DOPS** (20 points) **1. Current Activity Assessment (40 points)** a. **TSE - Method description:** **Student has to perform following practical assignments:** **modeling permanent teeth with the dental vax according to its physiological and anatomical features.** **TSE assessment criteria** (4 points) ○ Performs manipulations/procedures fully and without mistakes - 4 points; ○ ○ Performs manipulations/procedures partially and without mistakes –3 points; ○ Performs manipulations/procedures partially with mistakes – 2 points ○ Performs some steps of manipulations/procedures with lots of mistakes – 1 point. ○ Cannot perform manipulations - 0 points **b. Evaluations of ongoing verbal presentations:** Demonstration of knowledge of theoretical topics, discussion over specific issues in the form of narration, or answering questions. ○ 2 Points: The student is well prepared, thoroughly proficient in syllabus material. The answers to the questions are correct, justified, and reasoned. The student is thoughtful and well versed in the problem area. ○ 1 Points: The student knows only part of the syllabus topic, the answers to the questions are correct but incomplete/unreasonable. ○ 0 Points: The student is completely unprepared. Does not have a syllabus topic, cannot answer any questions. **2. Midterm exam - MCQ - 20 points.** Each MCQ question is assessed by 0.4 points. For a positive result, the student must correctly answer at least 50% of the total number of questions. **3. Final Exam - 40 points**

Final exam prerequisites: the total number of points from all other assessment components, namely, the midterm exam and current activity must be at least 30 points.

Final Exam is conducted in two parts:

- **1st Part: Test-based for**m (MCQ -50 tests with 0.4 point) for each question-20 points;

Each MCQ question is assessed by 0.4 points. For a positive result, the student must correctly answer at least 50% of the total number of questions.

- **2nd Part: DOPS (2*10)**=20 points

DOPs - Method description:
Student has to perform following practical assignment:
Modeling mandibular permanent teeth with the dental vax according to its physiological and anatomical features;-10 points
Modeling maxillary permanent teeth with the dental vax according to its physiological and anatomical features;- 10 points

(DOPS) assessment criteria

- Performs manipulations/procedures fully and without mistakes - 9-10 points;
- Performs manipulations/procedures fully and with some mistakes – 7-8 points;
- Performs manipulations/procedures partially and without mistakes – 5-6 points;
- Performs manipulations/procedures partially with mistakes – 3-4 points
- Performs some steps of manipulations/procedures with lots of mistakes – 1-2 point.
- Cannot perform manipulation-0 points

Final exam - DOPS - For a positive result, student should gain 50% (5 points) of each practical (DOPS) task to pass the exam.

The final exam is considered as passed if the student has at least 21 points (minimal competence limit). The course (module) is considered as passed if the student has at least 51 points during one semester.

The maximum course assessment score is 100 points. The student's assessment system includes 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 the 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 the exam only once after individual work;

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

The point of the makeup exam is not added to the point of the final exam. The point of the makeup exam is the point of the final assessment and is reflected in the final assessment of the educational component of the educational program.

In accordance with the point of the makeup exam, the final assessment of the educational component, in case of 0-50 points, the students receive F-0 assessment.

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

The core literature	• Wheeler's Dental Anatomy, Physiology and Occlusion, 11th Edition, Saunder, 2020, (Compulsory) • Management of Temporomandibular Disorders and Occlusion, 8th Edition, Mosby, 2019
The auxiliary literature	Woelfel's Dental Anatomy: Its Relevance to Dentistry, Rickne C. Scheid, Gabriela Weiss 3D Interactive Tooth Atlas, Brown and Herbranson Imaging Wheeler's Atlas of tooth Form , Major M. Ash

Learning Outcomes

NQF*	COURSE LEARNING OUTCOMES	PROG. LO	Lecture	Seminar	Teaching in a simulation environment	Teaching in the clinical environment	Practical Lecture	Midterm ex.	Final exam	ASSES. METH.
KNOWLEDGE AND AWARENESS	At the end of this course the student: 1.Describes anatomical, histological and morphological features of teeth. 1.1.Defines the general dental morphological issues. 1.2.Explains the part, structure,and contents of teeth. 1.3.Interprets the function of anterior and posterior teeth in the masticatory system. 2.Explains the dental formula, numbering concept, and numbering systems. 2.1.Describes the different numbering system. 2.2.Summarizes the dental arch and dentition concepts. 2.3.Describes the permanent and deciduous dentition patterns and times of eruption. 3.Describes the mechanism of the human masticatory system. 3.1.Defines the temporomandibular joint 3.2.Explain the parts, structures and function of the temporomandibular joint. 3.3.Summarizes the mandibular movement, axis and plane of mandibular movement. 4.Describes physiological considerations for stabilization of dental arches. 4.1.Define the embrasures and explain the function of labial, palatinal, incisal, gingival embrasures. 4.2.Define the tooth contact interactions. 4.3.Interpret the functions of elements of physiological tooth form.	6.2	X					X	X	MCQ verbal presentation
SKILL	1.Applies the basic dental manipulative skills. 2.Recognizes the dental laboratory materials. 3.Uses the dental laboratory materials. 4.Simulates the models of permanent teeth in proper dimensions by using dental wax and similar laboratory materials. 5.Distinguishes the occlusion types between themselves and explains the differences. 6. Distinguishes the anterior and posterior teeth between themselves. 7.Illustrates the differences between permanent and deciduous dentitions. 8. Defines the anatomical and morphological features of teeth and recognizes the general dental morphological issues.	6.6			X					DOPS TSE

Learning Course Content

Week №	Topics	Lecture (hrs)	Seminar (hrs)	TSE (hrs)	TCE (hrs)	Practical Lecture
I	Introduction to dental anatomy and terminology Hard and Soft Tissues of the tooth	2				
II	Dental formula, notation systems, tissues and structures of teeth, anatomical crown morphology (depressions & elevations) Verbal presentation	1	2			
III	Anatomical and morphological features of the permanent maxillary incisors TSE	1		6		
IV	Anatomical and morphological features of the permanent mandibular incisors TSE	1		6		
V	Anatomical and morphological features of the permanent canines (maxillary and mandibular) TSE	1		6		
VI	Anatomical and morphological features of the permanent maxillary premolars	1		6		
VII-VIII	MIDTERM EXAM	1				
IX	Anatomical and morphological features of the permanent mandibular premolars TSE	1		6		

X-XI	Anatomical and morphological features of the permanent maxillary molars TSE	1		6		
XII	Anatomical and morphological features of the permanent mandibular molars TSE	1		6		
XIII-XIV	Deciduous dentition; Anatomical and morphological features of deciduous teeth, Morphological features of pulp - Permanent and deciduous teeth Verbal presentation: Dental anomalies	2	2			
XV	Functional anatomy and biomechanics of the masticatory system Verbal presentation	1	2			
XVI	Alignment and occlusion of the dentition Verbal presentation	1	2			
XVI-XVII	Mandibular movements Optimum functional occlusion, Determinants of occlusal morphology verbal presentation	3	2			
XVIII-XXII	FINAL EXAM	2				