COURSE UNIT (MODULE) DESCRIPTION

Course unit (module) title	Code
Preclinical prosthodontics I/II (from 2024)	

Academic staff	Core academic unit(s)
Coordinating person: Lecturer Rita Trumpaitė-Vanagienė, PhD Other contributors: Academic staff of the Institute of Dentistry	Institute of Dentistry, Faculty of Medicine, Vilnius University

Study cycle	Type of the course unit
Integrated studies	Compulsory

Mode of delivery	Semester or period when it is delivered	Language of instruction
Face-to-face	2 Year, 3 semester	English

Requisites	
Prerequisites: The student must have completed the following subjects: human anatomy, human histology, human physiology, human biology and the basics/fundamentals of genetics in dentistry, basics/fundamentals of microbiology; oral ecosystem, public and oral health, Latin language and professional language with terminology.	**Corequisites (if any):** It is recommended to study in parallel: basics/fundamentals of pathology, basics/fundamentals of professional communication and psychosomatics, psychiatry.

Number of ECTS credits allocated to the course unit	Total student's workload	Contact hours	Self-study hours
6	162	88	74

Purpose of the course unit		
Purpose. To develop the ability to demonstrate knowledge of dental clinical anatomy and its application in treatment processes. To develop the ability to perform procedures on phantom teeth or oral simulators while examining the stomatognathic system and carrying out fixed dental prosthodontic procedures. To develop the ability to organize one's work and learning, both contact and independent, by choosing appropriate strategies to complete tasks. To develop the ability to demonstrate understanding and knowledge of professional risk factors in prosthodontics and prevention of them. **Goal** – to develop the dental student's professionalism, autonomy, and the knowledge, skills, and competencies required to properly perform an examination of a healthy stomatognathic system; to develop the student's communication skills.		
Learning outcomes of the course unit	**Teaching and learning methods**	**Assessment methods**
• the components of the stomatognathic system, their functions, and principles of interaction; • the concepts of articulation and occlusion, their laws, the form and function of chewing surfaces, and the factors determining occlusal morphology;	Lectures, small-group seminars, independent study, consultations, and practical sessions in the	Preclinical practical tasks; oral presentation or written essay; tests (open-ended

• the methods for recording and reproducing jaw movement kinematics and the devices used for this purpose; • the techniques, materials, and tools for taking impressions in dentate patients; • the principles and stages of producing diagnostic and working models; • how to perform primary and functional patient examinations; • how to mount diagnostic models in a semi-adjustable articulator using facebow records and jaw relation registrations or positions; • the types of articulators; • digital methods for examining the stomatognathic system; • the general principles and tools for tooth preparation for fixed dental prostheses; • the types of fixed dental prostheses; • the types and fabrication methods of temporary fixed dental prostheses; • the principles, methods, and specifics of shade selection for fixed dental prostheses; • professional risk factors in prosthodontics and prevention of them.	phantom laboratory, with learning supported via the VU VMA and MS Teams platforms.	and multiple-choice questions).
Will be knowledgeable: • to follow hygiene standards related to the developed competencies; • to take impressions for the fabrication of diagnostic models; • to fabricate diagnostic models; • to use an arbitrary facebow; • to record jaw relations and positions manually; • to program a semi-adjustable articulator according to records of eccentric mandibular movements; • to properly prepare teeth for zirconia ceramic crowns; • to fabricate a temporary crown directly and temporarily cement it; • to properly perform an examination of a healthy stomatognathic system.		

Topics	Contact work hours							Time and tasks of self-study	
	Lectures	Consultations	Seminars	Practice	Laboratory work	Practical training	**Total contact hours**	**Self-study**	**Tasks**
1. Anatomy of the stomatognathic system. Main positions of the mandible, mandibular movements.	2			4			**6**	**6**	Tasks performed independently are coordinated and carried out according to the current topic. 1. Describe the stages of functional examination of the patient and evaluation criteria. 2. Draw Posselt diagrams in sagittal and frontal projections. 3. Draw angles characterizing Bennett movement. 4. On the provided image of
2. Jaw positions. Types of tooth contacts, principles of maximum intercuspation, principles of eccentric occlusion.	2			4			**6**	**4**	
3. Diagnostic models: purpose and manufacturing methods. Diagnostic alginate impressions.	2			4			**6**	**4**	

4. Articulator design. Types of articulators and their uses.	2			4			**6**	**6**	occlusal tooth surfaces, connect cusp contacts with antagonists using lines. 5. Draw the occlusal compass. 6. Using provided literature and scientific literature from Vilnius University databases, prepare a PowerPoint presentation or essay on related to course unit selected topic. 7. Analyze the capabilities of a fully adjustable articulator. 8. Study, read, and analyze literature on the assigned topic. 9. Present a PowerPoint presentation or essay related to course unit selected topic.
5. Jaw relationships and clinical methods of their determination. Relationship of jaw positions to occlusion. Recording mandibular positions.	2			4			**6**	**6**	
6. Purpose and use of the arbitrary facebow (ear-nose type). Mounting diagnostic models in a semi-adjustable articulator and its programming.	2		2	4			**8**	**4**	
7. Principles of stomatognathic system examination of the patient.	2			4			**6**	**6**	
8. Form and function of masticatory surfaces, factors determining occlusal morphology.	2			4			**6**	**6**	
9. Oral changes following tooth loss. Types of fixed dental prostheses.	2		2	4			**8**	**6**	
10. Fundamentals of tooth preparation for fixed dental prostheses, instruments. Mechanical and geometrical requirements for the tooth abutment. The biomechanics of fixed dental prosthesis retention on the abutment. Specifics of preparation for partial fixed dental prostheses (bridges).	2			4			**6**	**4**	
11. The impact of tooth preparation on dental tissues.	2			2			**4**	**6**	
12. Diagnostic wax-up. Intraoral modeling of the future dental prosthesis. Indices for tooth preparation and temporary fixed prostheses fabrication.	2		2	4			**8**	**4**	
13. Temporary fixed dental prostheses: requirements, types, manufacturing methods. Temporary cementation. Removal, repair of temporary prostheses.	2			4			**6**	**6**	
14. Shade selection for fixed dental prostheses.	2			4			**6**	**6**	
Total	**28**		**6**	**54**			**88**	**74**	

Assessment strategy	Weight (%)	Deadline	Assessment criteria
Cumulative assessment score (CA2) **(all components of the cumulative score must be passed above score 5)** **Obligatory attendance of seminars and practice**			
Test	60%	During semester	The tests consist of a set of questions, selected from open-ended questions, multiple choice questions, clinical situation, or definition. Open end question value equals 10 MCQs. The test is carried out during the semester in an auditorium written on paper or performed digitally using VU digital resources, at least 1 week after the lecture corresponding to the test questions. Students are introduced to the subject of written tests and lectures in advance. The overall test score is written by summing up the points of the individual questions and dividing it by the number of questions.

			The minimum passing score for each test is 5. A failed test is allowed to be retaken once during the semester. The grade for the test is the average of the first attempt and the second attempt. If this average is less than 5, but the second attempt is 5.0 or more; 5 points are written. The total score of the test is written at the end of the semester, summing up all the test scores performed and dividing it by the number.
Essay or presentation	10%		An essay or presentation is prepared on a given topic. Assessment criteria for presentation/essay: - clarity of ideas, quality of arguments (2 points); - structure of presentation/essay (2 points); - style and quality of scientific language (2 points); - quality (valid and reasonable) of conclusions (2 points); - visual quality of material presented (2 points). Minimal passing score – 5,0.
Assessment of practical work	30%		Assessment methods of practical work are based on evaluation of progression of preclinical and clinical tasks performance. Clinical or pre-clinical tasks are presented at the beginning of the semester based on study material. Minimal passing score – 5.

Accumulative assessment will constitute 25% of final assessment, which will be calculated by the formula:
FA=((CA1+CA2)/2+EX)/2 where:
FA- final assessment
CA1, CA2 - accumulative assessments from two semesters
EX - exam score

Author	Year of publication	Title	No of periodical or vol. of publication	Publication place and publisher or Internet link
Required reading				
S. Rosenstiel, M.F. Land, J. Fujimoto et al.	2015	Contemporary Fixed Prosthodontics. 5th ed.	03-81; 110-144 p.	St. Louis, Mosby
Okeson, Jeffrey P.	2003	Management of tempomandibular disorders and occlusion	1-127 p.	St. Louis, Mosby
M. Oliver Ahlers	2000	Simulation of occlusion in restorative dentistry	37-229 p.	Hamburg, DentaConcept
Literatures, seminars and study materials in the VU VMA system and/or VU MS Teams platform				
Recommended reading				
Herbert T. Shillingburg, Jr. Et al.	1977	Fundamentals of fixed prosthodontics. 3. ed.	11-73 p.	Chicago, Quintessence Pub.
Articles and books related to subject available through subscribed databases of Library of Vilnius University.				