



Syllabus for academic year: 2021/2022													
Training cycle: 2020-2025													
Description of the course													
Course	Prosthetic materials							Group of detailed education results					
								Group code	Group name				
								C	Preclinical sciences				
Faculty	Faculty of Dentistry												
Major	Dentistry												
Level of studies	X uniform magister studies												
Form of studies	X full-time												
Year of studies	II						Semester:	X summer					
Type of course	X obligatory												
Language of study	X English												
Number of hours													
Form of education													
	Lectures (L)	Seminars (SE)	Auditorium classes (AC)	Major Classes – not clinical (MC)	Clinical Classes (CC)	Laboratory Classes (LC)	Classes in Simulated Conditions (CSC)	Practical Classes with Patient (PCP)	Foreign language Course (FLC)	Physical Education (PE)	Vocational Practice (VP)	Directed Self-Study (DSS)	E-learning (EL)
Summer semester:													
Department of Experimental Dentistry													
Direct (contact) education		9		46									
Distance learning	5												
Educational objectives (max. 6 items)													
C1. Introduce the students to prosthetic materials and their properties.													
C2. Introduce the students to prosthetic material processing technologies.													
Education result for course in relation to verification methods of the intended education result and the type of class:													
Number of detailed education result	Student who completes the course knows/is able to						Methods of verification of intended education results			Form of didactic class <i>*enter the abbreviation</i>			
C.W24.	Knows the definition and classification of dental materials and consumables;						Oral response (F), Quizzes (F),			L,SE,MC			
C.W25.	Defines the composition, structure, bonding, properties, purpose and use of dental materials;						Written examination (S);			L,SE,MC			



C.W26.	Knows surface properties of dental hard tissues and dental biomaterials;		SE,MC
C.W29.	Knows the mechanisms of degradation (corrosion) of dental biomaterials in the oral cavity and their effects on biological properties of these materials;		L,SE,MC
C.U11.	Is able to select reconstructive, prosthetic and bonding biomaterials based on their properties and clinical conditions;	Practical tasks (F);	MC
K.S5.	Is able to recognize his own limitations, self-assess educational deficits and needs;	Evaluation of students' attitude during classes.	L,SE,MC
K.S7.	Is able to use objective sources of information;		
K.S9.	Is able to cooperate in students' group.		SE,MC

* L- lecture; SE- seminar; AC- auditorium classes; MC- major classes (non-clinical); CC- clinical classes; LC- laboratory classes; CSC- classes in simulated conditions; PCP- practical classes with patient; FLC- foreign language course; PE- physical education; VP- vocational practice; DSS- directed self-study; EL- E-learning

Student's amount of work (balance of ECTS points):

Student's workload (class participation, activity, preparation, etc.)	Student Workload
1. Number of hours of direct contact:	55
2. Number of hours of distance learning:	5
3. Number of hours of student's own work:	30
4. Number of hours of directed self-study	0
Total student's workload	90
ECTS points for course	4,5

Content of classes:

Lectures

1. General classes of Dental Materials. Physico-mechanical Properties of Dental Materials. Biocompatibility of Dental materials.
2. Impression Materials.
3. Acrylic Denture Base Resins.
4. Dental Ceramics.
5. Dental alloys and investments. Joining techniques of ceramic covering of the alloy surfaces.

Seminars

1. Thermoplastics materials.
2. Materials for digital dentistry.
3. Composites.

Classes

1. Organization of classes. General acknowledging of dental laboratory equipment and organization of dental laboratory.
2. Gypsum products and isolating materials: Performance of gypsum cubes of two kinds of gypsum (dim. 3x3x3cm and 1,5x1,5x1,5cm), trimming.
3. Flexible dental impression materials - part I: Taking the impressions of full-arch phantoms, making the gypsum model, trimming.
4. Flexible impression materials - part II, rigid impression materials: Low viscosity-high viscosity impression with silicone materials.
5. Dental waxes: Performance of model wax cube (dim. 1x1x1cm) for acrylic base resins polymerization.



6. Acrylic denture base resins – heat-curing: Initial polymerization of acrylic resins, placing acrylic resin in the mold of flask, compressing and placing flask in the polymerization frame, short – time polymerization.
7. Acrylic denture base resins – self-curing (part I): Performance of self-curing acrylic resin baseplate on the edentulous maxillary or mandibular models.
8. Acrylic denture base resins – self-curing (part II): Performing of repair of broken acrylic baseplate.
9. Finishing and polishing of all acrylic student’s manual works.
10. Dental alloys, thermoplastic and composite materials used in dentistry: Demonstration of making occlusal splint base from Erkodur, casting a die from a low-melting alloy.
11. Make up classes.
12. Final test.

Basic literature

1. Powers J.M., Sakaguchi R.L.: Craig's Restorative Dental Materials, 12th Edition, Mosby Elsevier, 2006.
2. Powers J.M., Wataha J.C.: Dental Materials, Properties and Manipulation, 10th edition, Mosby 2012.

Additional literature and other materials

1. Gladwin M., Bagby M.: Clinical Aspects of Dental Materials Theory, Practice and Cases ISBN – 2nd ed., Philadelphia: Lippincott Williams & Wilkins, 2009.
2. Anusavice K.J., Phillips' Science of Dental Materials, 11th Ed. Saunders, 2003.

Preliminary conditions:

Credit for the previous courses: *Dental modeling* and *Ergonomics* (1st year), *Physiology of the Masticatory System*, *Preclinical restorative dentistry* (2nd year).

Conditions to receive credit for the course:

Pass of the manual training and final test (multiple choice test, 20 questions, 60% to pass) – at the end of semester, summarizing assessment.

The credit is performed in a direct contact with a teacher. In justified cases, by the rector's decision, it may take place on-line.

The credit for the course is a part of the exam from the Preclinical Dentistry after 4th semester. This exam is aimed at verification of the student's knowledge and skills acquired during 6 major courses during the first two years of study in the field of Dentistry at the Wrocław Medical University: (Dental modeling, Prosthetic materials, Physiology of the Masticatory System, Preclinical restorative dentistry, Preclinical endodontics, Ergonomics). The exam consists of two parts: practical (Objective Structured Clinical Examination (OSCE), 10 practical tasks) and theoretical (MCQ test, 100 questions). Passing of a practical part (OSCE) is a prerequisite for being admitted to take a test.

	Criteria for courses ending with a credit
Credit	Pass manual training and final test (multiple choice test, 20 questions, 60% to pass) – at the end of semester, summarizing assessment. The credit for the course is a part of the exam from the Preclinical Dentistry.

Grade:	Criteria for exam (Exam from the Preclinical Dentistry after 4th semester)
Very Good (5.0)	1) ≥7 of 10 practical tasks passed and 2) ≥93% correct answers during MCQ test
Good Above (4.5)	1) ≥7 of 10 practical tasks passed and 2) ≥85% correct answers during MCQ test



Good (4.0)	1) ≥ 7 of 10 practical tasks passed and 2) $\geq 77\%$ correct answers during MCQ test
Satisfactory Plus (3.5)	1) ≥ 7 of 10 practical tasks passed and 2) $\geq 69\%$ correct answers during MCQ test
Satisfactory (3.0)	1) ≥ 7 of 10 practical tasks passed and 2) $\geq 61\%$ correct answers during MCQ test

Unit realizing the course:	Faculty of Dentistry, Department of Experimental Dentistry
Unit address:	ul. Krakowska 26, 50-425 Wrocław
Telephone:	71 784 02 91
E-Mail:	stom.dosw@umed.wroc.pl

Person responsible for the course:	Prof. dr hab. n. med. Mieszko Więckiewicz
Telephone:	71 784 02 91
E-Mail:	stom.dosw@umed.wroc.pl

List of persons conducting specific classes:

Name and surname	Degree/scientific or professional title	Discipline	Performed profession	Form of classes
Mieszko Więckiewicz	Prof. dr hab. n. med.	Medical science	dentist	MC
Wojciech Florjański	Dr	Medical science	dentist	MC
Andrzej Małysa	Dent.	Medical science	dentist	SE, L

Date of Syllabus development

05.07.2021 r.

Syllabus developed by

Dr n. med. Wojciech Florjański
Dr inż. Joanna Weźgowiec

Signature of Head(s) of teaching unit(s)

Prof. dr hab. Mieszko Więckiewicz

Dean's signature

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