



Syllabus for academic year: 2021/2022													
Training cycle: 2020/2021-2024/2025													
Description of the course													
Course	Preclinical endodontic								Group of detailed education results				
									Group code	Group name			
									C	Preclinical sciences			
Faculty	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:													
..... (Unit realizing the course)													
Direct (contact) education		15		60									
Distance learning													
educational objectives (max. 6 items) C1. Providing the student with knowledge and skills in the field of root canal (endodontic) treatment of teeth on a model and exercise blocks C2. Acquiring the skills of root canal (endodontic) treatment C3. Acquiring the ability to rebuild teeth after endodontic treatment													
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	Form of didactic class <i>*enter the abbreviation</i>				



		intended education results	
C.W23	Recognizes and describes the instruments used in endodontics	Short questions	SE,MC
C.W25	Describes the properties and clinical application of materials and drugs used in endodontic treatment	Multi Choice Questions	SE, MC
C.W28	Explains the processes: stages of endodontic treatment, endodontic access, working length, chemomechanical preparation and obturation of the root canal	Short questions	SE, MC
C.U9	Perform endodontic treatment and reconstruct the missing mineralized tissues in a phantom tooth	Multi Choice Questions	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:	75
2. Number of hours of distance learning:	
3. Number of hours of student's own work:	50
4. Number of hours of directed self-study	
Total student's workload	125
ECTS points for course	4,5

Content of classes: (please enter topic words of specific classes divided into their didactic form and remember how it is translated to intended educational effects)

Seminars 5x 3hours (3x 45minutes)

1. Introduction to endodontics: endodontium - pulp-dentin complex, morphology of dental cavities. The etiology and classification of pulp diseases
2. Pulp diseases treatment methods: biological treatment - types - indirect cover, - direct cover; in vivo methods of endodontic treatment: amputation and extirpation; endodontic tools and their clinical application; , materials used in endodontics: canal irrigation, root canal filling, drugs used between visits, application method and indications anesthesia in endodontics - types; aseptic and antiseptic treatment, cross-infection, risks for the doctor and patient.
3. Stages of endodontic treatment: endodontic access, canal length measurement
4. Stages of endodontic treatment: chemo-mechanical preparation of the canal and preparation techniques - conventional, step-back, step (crown) -down), preparation of canals with NiTi rotary tools (step down)
5. Stages of root canal treatment - rinsing and drying the canal; root canal filling (techniques - conventional, with a single pin, lateral condensation, apical condensation). Systems used for tight filling of root canals. Complications related to endodontic treatment. Strategies in endodontic treatment - treatment per visit - single-stage, multi-stage treatment

Classes:

Classes 1.

Theoretical part:

1. Methods of biological treatment.
 - A. intermediate cover
 - B. direct cover
 - C. partial amputation
 - D. total amputation

2. Pediatric preclinical endodontics - formocresol method
3. Proceeding according to procedures, preparing a set of tools and materials.

Practical part:

1. Tooth treatment by direct covering with final tooth restoration (Ca (OH) 2, GI, composite)
2. Treatment of a milk tooth with the formocresol method

Classes 2.

Theoretical part:

1. Morphology of dental cavities
2. Endodontic access in individual anatomical groups of teeth
3. Complications related to endodontic access, chamber preparation and canal openings
4. Enlargement in endodontics (microscope).

Practical part:

1. Preparation of endodontic access, preparation of the chamber and canal openings in 5 natural teeth
2. Working in magnification using a microscope.

Classes 3.

Theoretical part:

1. Rubber dam in endodontics
2. Whitening - preparation of the treatment area (optragate, liquid cofferdam)

Practical part:

1. A rubber dam is placed on a single tooth using three methods.
2. The use of a rubber dam on 6 front teeth with thread (without clamps).
3. The use of a rubber dam on 3 posterior teeth.
4. Isolation of the whitening treatment area.

Classes 4.

Theoretical part:

1. Working tooth length:
 - A. Methods of determination and the importance of its determination in endodontic treatment, the reference point.
 - B. Rules for using the endometer.
 - C. Methods of radiological length measurement.
2. Endodontic tools (types, sizes according to ISO, taper)

Practical part:

1. Unblocking the canal and measuring the canal length - 1 x block
2. Unblocking the 5 canals of natural teeth and measurement of canal length
3. Calculating the diameter of the tool at different points on the basis of its size and taper
4. Performing of temporary fillings.

Classes 5

Theoretical part:

1. Methods of developing root canals:
 - A. the conventional method
 - B. step-back method
2. Chemomechanical preparation of the root canal
 - A. Irrigating agents: sodium hypochlorite, citric acid, EDTA
3. Methods of root canal filling:
 - A. Single cone



B. Side cold condensation

Practical part:

1. Preparation of the block using the traditional technique, selection of the main cone, filling with the single cone method
2. Development of the block using the step-back technique, selection of the main stud, filling with the side condensation technique

Classes 6

Theoretical part:

1. Chemomechanical preparation of the root canal:
 - A. step down technique
 - B. development with machine tools - general principles
2. Thermal methods of root canal filling:
 - A. vertical condensation
 - B. liquid wave technique (CWT)

Practical part:

1. Preparation of the block using the step down technique, selection of the main cone, filling using the side condensation method
2. Preparation of the block using the step down technique with hand or machine tools and filling the canal with the liquid wave technique (CWT)

Classes 7

Theoretical part:

1. Sealants:
 - A. types
 - B. properties
2. Selection of the filling method depending on the cross-section, width and conicity of the channel

Practical part:

- 1 Working on natural teeth:
 - A. development of 3 canals using the traditional method and filling with a single cone method

Classes 8

Theoretical part:

1. Irrigating agents and preparations facilitating the preparation of the root canal
 - A. Sodium hypochlorite, citric acid, chlorhexidine, isopropyl alcohol, EDTA
 - B. Lubricants

Practical part:

1. Working on natural teeth:
 - A. development of 3 channels using the step-back method and filling them with the side condensation technique

Classes 9

Theoretical part:

1. Thermoplastic techniques for filling the canal

Practical part

1. Work on the teeth:
 - A. development of 3 channels by step down method with manual or machine tools
 - B. filling the canals with the selected technique (side condensation, thermoplastic methods)

Classes 10



Theoretical part:

1. Single visit treatment:

A. indications

B. bidding

Practical part:

Working on natural teeth:

A. single-visit treatment of 1 channel:

-trepanation, amputation, chamber preparatio

- unblocking the canal, determining the working length

-chemomechanical preparation of the canal

- channel filling

-tooth reconstruction

Classes 11

Theoretical part:

1. Indications for repeated root canal treatment

2. Chemicals and reendo tools

3. Disinfecting pads - preparations based on calcium hydroxide

Practical part:

1. Repeat root canal treatment

A. work on a block - removal of the filling from the canal, preparation, application of a calcium hydroxide dressing

B. work on natural teeth - removal of the filling from 3 canals, preparation and application of a calcium hydroxide dressing

Classes 12

Theoretical part:

1. Double visit treatment - indications

2. Complications after endodontic treatment - early, late

Practical part:

1. Repeat root canal treatment - continued

A. work on a block - removal of temporary material, preparation and filling of the canal

3. work on natural teeth - removal of temporary material from the canals, preparation and filling of the canals

Classes 13

Theoretical part:

1. Tooth reconstruction after root canal treatment

2. Fillings of inlay -onlay, overlay, endocrown

a. indications and contraindications

b. materials used

c. preparation

d. methods of execution - direct and indirect

d. post cementation, stages

Practical part:

1. Development of the cavity and scanning with Computer Aided Design and Computer-Aided Manufacturing (Cad Cam)

Classes 14

<p>Theoretical part: Pediatric preclinical endodontics - treatment of immature permanent teeth, specificity, limitations, methods and materials</p> <p>Practical part: Credit course. Tooth reconstruction after root canal treatment</p> <p>Classes 15 Credit course</p>
<p>Basic literature (list according to importance, no more than 3 items) 1. Tronstadt L.: Clinical endodontics. 2nd edition. Georg Thieme Verlag, Stuttgart 2009</p> <p>Additional literature and other materials (no more than 3 items) 1. Ingle J.I.: Endodontics. Text and CD-ROM for Macintosh and Windows. Decker B.C. 2008.</p>
<p>Preliminary conditions: (minimum requirements to be met by the student before starting the course) Completion of subjects: Dental ergonomics, Dental modeling in the 1st year, preclinical dentistry from 1 semester of 2 year.</p>
<p>Conditions to receive credit for the course: (specify the form and conditions of receiving credit for classes included in the course, admission terms to final theoretical or practical examination, its form and requirements to be met by the student to pass it and criteria for specific grades) Admission to pass is based on the performance of specific procedures (i.e. the preparation and filling of the canals of 5 teeth and 3 blocks) and oral (tests, discussion, presentation) and testing knowledge. The subject of preclinical endodontics is included in the exam in Preclinical Dentistry for the second year</p>

	Criteria for courses ending with a credit³
Credit	Multi choice questions test passed > or = 60% correct answers failed < 60% of correct answers

Unit realizing the course:	Department of Pedodontics and Preclinical conservative dentistry
Unit address:	ul. Krakowska 26, 50-425 Wrocław, Class 325
Telephone:	(71)7840362
E-Mail:	stomzach@umed.wroc.pl

Person responsible for the course:	prof. Maciej Dobrzyński, PhD
Telephone:	(71)7840362
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List of persons conducting specific classes:				
Name and surname	Degree/scientific or professional title	Discipline	Performed profession	Form of classes
Michał Biały	PhD	Medical science	Dentist, specialist in dental prosthetics	Non-clinical classes, Seminars



Date of Syllabus development

15.09.2021

Syllabus developed by

Michał Biały

Uniwersytet Medyczny we Wrocławiu

Dean's signature

LEKARSKO-STOMATOLOGICZNY
DZIEKAN

prof. dr hab. Marcin Mikulewicz

.....

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

Uniwersytet Medyczny we Wrocławiu
Wydział Lekarsko-Stomatologiczny
KATEDRA I ZAKŁAD
STOMATOLOGII DZIECIECĄ
I STOMATOLOGII PRZEDKLINICZNEJ
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