Appendix
to Resolution No. 2186
of Senate of Wroclaw Medical University
of 1 July 2020

Syllabus for academic year: 2020/2021
Training cycle: Major oriented

Description of the course

Module/Course	**Restorative dentistry with endodontics**	Group of detailed education results	
		Group code F	Group name VI - Clinical sciences
Faculty	Faculty of Dentistry		
Major	Dentistry		
Unit realizing the subject	Conservative Dentistry with Endodontics Department, Medical University of Wroclaw		
Specialties	**Restorative dentistry with endodontics**		
Level of studies	Uniform magister studies **X** * 1st degree studies ☐ 2nd degree studies ☐ 3rd degree studies ☐ postgraduate studies ☐		
Form of studies	**X** full-time ☐ part-time		
Year of studies	V	Semester	**X** Winter **X** Summer
Type of course	**X** obligatory ☐ limited choice ☐ free choice / elective		
Course	**X** major ☐ basic		
Language of instruction	☐ Polish **X** English ☐ other		

* mark ☐ with an **X**

Number of hours

Form of education

Unit teaching the course	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)	Specialist Classes – magister studies (SCM)	Foreign language Course (FLC)	Physical Education obligatory (PE)	Vocational Practice (VP)	Self-Study (Student's own work)	E-learning (EL)
Winter Semester														
Direct (contact) education					75									

Online learning (synchronous)														
Distance learning (asynchronous)														
Summer Semester														
Direct (contact) education					75									
Online learning (synchronous)														
Online learning (asynchronous)														
TOTAL per year:														
Direct (contact) education					150									
Online learning (synchronous)														
Online learning (asynchronous)														

Educational objectives (max. 6 items)

G1. To familiarize students with the basic and specialized knowledge in the diagnosis and treatment of oral cavity diseases in adults.

G2.Preparing students to perform individual caries risk assessment, establishing the treatment plan and recommendations for the patient.

G3. Preparing students to perform restorative treatment of carious and non-carious hard dental tissues lesions as well as endodontic treatment.

G4. Familiarize students with the dental treatment implications in a patient with the systemic disease.

G5. Preparing students for active participation in health promotion.

Education result matrix for module/course in relation to verification methods of the intended education result and the type of class

Number of course education result	Number of major education result	Student who completes the module/course knows/is able to	Methods of verification of intended education results (forming and summarising)	Form of didactic class ***enter the abbreviation*
U01	**F.U.1**	To gather medical and dental history from the patient or his family	Clinical assessment observation (F)	CK
U02	**F.U.2**	To perform clinical examination and interpret the data	Clinical assessment observation (F)	CK
U03	**F.U.3**	To be able explain the patient`s ailments to set the optimal method of treatment confirmed by a conscious consent of a patient and give the prognosis of the treatment	Clinical assessment observation (F)	CK

U04	**F.U.7**	To be able to set indications and contraindications for the given dental procedure	Clinical assessment observation (F)	CK
U05	**F.U.8**	To present the disease risk assessment and select the optimal methods of oral disease prevention	Clinical assessment observation (F)	CK
U06	**F.U.18**	To perform treatment of dental caries , pulpal diseases and periapical diseases	Clinical assessment observation (F)	CK
U07	**F.U.13**	To use and perform the current documentation of the patient, referral for investigations or specialist for medical and dental treatment	Clinical assessment observation (F)	CK
K01	**K01**	To cooperate in the group of professionals, in the environment multicultural and multinational	Summarizing methods: - constant evaluation by teacher (surveying) Shaping methods: - observation of student's work - discussion during classes - opinions of colleagues	CK
K02	**K02**	To be able to creates rules of the professional comradeship and the cooperation with representatives of other health care professionals	Summarizing methods: - constant evaluation by teacher (surveying) Shaping methods: - observation of student's work - discussion during classes - opinions of colleagues	CK
K03	**K03**	To be active in oral health promotion	Summarizing methods: - constant evaluation by teacher (surveying) Shaping methods: - observation of student's work	CK

			- discussion during classes - opinions of colleagues	

** L - lecture; SE - seminar; AC – auditorium classes; MC – major classes (non-clinical); CC – clinical classes; LC – laboratory classes; SCM – specialist classes (magister studies); CSC – classes in simulated conditions; FLC – foreign language course; PCP practical classes with patient; PE – physical education (obligatory); VP – vocational practice; SS – self-study, EL – E-learning .

Please mark on scale 1-5 how the above effects place your classes in the following categories: communication of knowledge, skills or forming attitudes:
Knowledge: 5
Skills: 5
Social competences: 4

Student's amount of work (balance of ECTS points)		
Student's workload (class participation, activity, preparation, etc.)	Student Workload (h)	
	Winter	Summer
1. Contact hours:	75	75
2. Online learning hours (e-learning):		
3. Student's own work (self-study):	45	40
Total student's workload	110	115
ECTS points for module/course	3,5	3,5
Comments		

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)

Lectures

Seminars

Practical classes
Semester 9

Blocks of practical classes

1.CLASSES:
- attendance at 100% classes is mandatory; three late arrivals (up to 15 min) are treated as one absence;
- It is allowed to make up only one class from the schedule in the semester with another group after obtaining a written consent of your assistant;
- if classes or seminars will not take place due to an important reason (rector's hours or days, dean's days), the theoretical material must be completed on another agreed date.

A. THEORETICAL PART
- obligatory lecture in the field of endodontics, which will be held online on 30.10. at 18:00.
- at the beginning of each clinical class, there will be a 30 - minute written test in form of essay, so-called "Entry Test" from the topics listed in the table below (Tab. No1), (groups taking CAD / CAM classes also start the classes with an essay)
- 15-20 -minute preparation test for the diploma and LDEK exam will be conducted from the topics listed in the table No 2 according to the schedule presented in the same table.

Appendix
to Resolution No. 2186
of Senate of Wroclaw Medical University
of 1 July 2020

Tab No 1

Week	Class	TOPICS OF „ENTRY TESTS“ at the beginning of classes
1	1	Anatomy and morphology of pulp chambers and root canal systems - also possible other canal configurations.
	2	Hand and machine instruments used in modern endodontic treatment: ultrasounds, canal finders, C-pilots.
	3	Measurement of the working length of the canal in special clinical situations (curved canal, root resorption).
	4	Diagnostics and management of perforations
	5	Diagnosis and treatment of periapical tissue inflammation
2	6	Materials used in endodontics
	7	Rubberdam in endodontics
	8	Pain patient - management and "first aid"
	9	Iatrogenic causes of early complications - treatment management
	10	Iatrogenic causes of late complications (e.g. periapical lesions) and thier treatment

Tab No 2.

Appendix
to Resolution No. 2186
of Senate of Wroclaw Medical University
of 1 July 2020

No	DATE	STATIONARY CLASSES TOPICS WITH SCHEDULE OF TESTS
1	Each group at first class according the schedule	**Repetition of the knowledge acquired in the III and IV year *(determining admission to clinical classes)*** (tooth morphology, reversible and irreversible pulpopathies, classification, diagnostics, treatment: stages, instruments, techniques, rinsing agents, materials, complications).
2		**RESTORATIVE MATERIALS USED IN THE CONSERVATIVE TREATMENT OF TEETH (crown reconstruction)**
3		**TOOTH DEVELOPMENTAL ABNORMALITIES (etiology, classification, treatment)**
	Each group at 3rd class according the schedule	**Test from the topics 2 and 3**
4		**NON-CARIOUS LESIONS OF HARD DENTAL TISSUES (etiology, classification, treatment)**
5		**DENTAL HYPERSENSITIVITY (etiology, classification, treatment)**
	Each group at 5th class according the schedule	**Test from the topics 4 and 5**
6		**EPIDEMIOLOGY and PREVENTION OF CARIES, ETIOLOGY OF CARIES**
7		**PATHOLOGY OF CARIES, CLINICAL COURSE AND DIVISION**
	Each group at 6th class according the schedule	**Test from the topics 6 and 7**
8		**DIAGNOSTICS OF CARIES -** qualitative and quantitative methods of caries detection, latest methods of detecting early caries lesions, decisions making regarding non-invasive and operative procedures, prognosis.
	Each group at 7th class	**Test from the topic 8**

	according the schedule	
9		**CARIES TREATMENT OPTIONS –** Blacks's classification, Si/Sta, stages of cavity preparation, invasive and non-invasive methods of cavity preparation
	Each group at 9th class according the schedule	**Test from the topic 9**
10		**CARIES TREATMENT OPTIONS** – aesthetic reconstruction of hard dental tissues in anterior teeth: silicon index, layering techniques, celluloid matrix; aesthetic reconstruction of hard dental tissues in posterior teeth: layering techniques, methods of polymerization, indirect techniques of cavity restoration
	Each group at 10th class according the schedule	**Test from the topic 10**

No	DIGITAL DENTISTRY TOPICS
1	In-office CAD/CAM system, procedure protocol, scanner support, intraoral scanning, software, indirect reconstruction of extensive cavities. Conservative dental treatment of the patients.
2	In-office CAD/CAM system, procedure protocol, scanner support, intraoral scanning, design, milling, optimal preparation of tooth tissues, preparation tools, preparation of tooth surface and soft tissues for scanning. Conservative dental treatment of the patients.
3	In-office CAD/CAM system, milling, ceramics vs. composite (comparison of mechanical properties, advantages and disadvantages), technique of joining ceramics and composite with tooth tissues (step by step), optimal preparation of tooth tissue and restoration surface, reconstruction and prevention against fracture of endodontically treated teeth, endocrown vs. fiberglass. Conservative dental treatment of the patients.

B. PRACTICAL PART

For the implementation of the classes (endo part) it is necessary for each student to have:

- phantom model used in the 2nd year,
- four-root canals endodontic block (manufacturer VDW, catalog number: V040246000500)

Appendix
to Resolution No. 2186
of Senate of Wroclaw Medical University
of 1 July 2020

Variant A:

- students perform preventive and therapeutic treatments on adult patients in block classes according to the schedule
- students work in pairs (operator / assistant), 2 patients during one class

Variant B - without a patient

- In a situation where the student doesn't have a patient in the class, is not an assistant or on duty, he/she is obliged to prepare a written and/or practical clinical case prepared by the assistant - based on the textbook and/or using the 2nd year phantom model or endodontic blocks

VARIANT B DOESN'T CONSTITUTE THE BASIS FOR COMPLETING THE CLASSES.

This is an alternative to the inability to perform clinical procedures on a patient. (excluding the need to conduct classes in the on-line system)

Semester 10

1. Conservative dental treatment of the patients.
2. **CONS.:** Dental materials for cavity restoration. Adhesion to enamel and dentin. **ENDO.:** Reversible and irreversible pulpopathies. Stages of endodontic treatment. Conservative dental treatment of the patients. Introductory test from III rd and IV th year.
3. Conservative dental treatment of the patients.
CONS.: Modern materials used in esthetic restorative dentistry.
ENDO.: Anatomy and morphology of pulp chambers and root canal systems.
4. Conservative dental treatment of the patients.
5. Conservative dental treatment of the patients. **CONS.:** Polymerization shrinkage and clinical options to reduce its consequences. **ENDO.:** Diagnostics and division of pulp diseases. Instruments used in endodontic treatment, rubber dam.
6. Conservative dental treatment of the patients.
7. Conservative dental treatment of the patients.
CONS. : The concept of minimally operative dentistry and minimal invasive dentistry.
ENDO.: Measurement of the working length of the root canal:
a) the radiographic method (Ingle's method)
b) with the use of the endometer (advantages, disadvantages, the most common mistakes).
8. Conservative dental treatment of the patients.
9. Conservative dental treatment of the patients.
CONS.: Minimally invasive techniques of cavity preparation. The chemomechanical technique (Carisolv).
ENDO.: Chemical preparation of root canals, agents and their activity. Temporary dental materials for the root canal treatment.
10. Conservative dental treatment of the patients.
11. Conservative dental treatment of the patients.
CONS.: Esthetic reconstruction of lost dental tissues – conditions of optimum adhesion, selection of the reconstruction technique and the restorative material, finishing of dental restoration.
ENDO.: Mechanical root canal preparation – methods:
a) step-back
b) crown-down.
The use of ultrasounds.

12. Conservative dental treatment of the patients.
13. Conservative dental treatment of the patients.
CONS.: Secondary caries –replacement vs. repair of the restoration. Post-operative sensitivity (mechanism, therapeutic and preventive treatment).
ENDO.: Methods of filling the root canals, materials for root canal fillings.
14. Conservative dental treatment of the patients. **CREDIT ESSAY**
15. Conservative dental treatment of the patients. Clearing backlogs, semester credit.

Other

Basic literature (list according to importance, no more than 3 items)

1. Kidd E.A.M., Joyston-Bechal S.: *Essentials of dental caries*. 4rd ed. Oxford University Press, Oxford 2016
2. Banerjee A., Watson T.F.: *" Pickard's Guide to Minimally Invasive Operative Dentistry"*, 10th ed. Oxford University Press, Oxford 2015
3. Heymann H., Swift E. and alt: *Sturdevant's Art and Science of Operative Dentistry.* Elsevier 6th ed., 2013

Additional literature and other materials (no more than 3 items)

1. Tronstadt L.: *Clinical endodontics: a textbook*. 2rd ed. Georg Thieme Verlag, Stuttgart 2009
2. Torabinejad M., Walton R.E., *Endodontics, principles and practic* , 5th edition, Saunders Elsevier 2009
3. Ingle J.I., Bakland L.K.., Baumgartner J.C.: *Endodontics*, 6th ed. 2008

Didactic resources requirements (e.g. laboratory, multimedia projector, other…)

dental camera, multimedia projector, computer , local internet network, models

Preliminary conditions (minimum requirements to be met by the student before starting the module/course)

Conditions to receive credit for the course (specify the form and conditions of receiving credit for classes included in the module/course, admission terms to final theoretical or practical examination, its form and requirements to be med by the student to pass it and criteria for specific grades)

CONDITIONS FOR OBTAINING CREDIT OF THE SEMESTERS:
a. obtaining positive grades from tests in the winter and summer semester
b. obtaining positive grades from all "entry tests" in the winter and summer semester (their possible improvement or re-take will take place orally with the group assistant online on the BBB platform, after completing the clinical classes block)
c. performing obligatory practical procedures on patients in both, winter and summer semester:
- dental examination and filling in the examination card as well as hygienic and dietary instruction for each new patient -3x
- preparation and restoration of 15 cavities
- caries risk assessment on a patient - 3x
- 6 endodontically treated canals in teeth and blocks - including rotary preparation and warm gutta-percha obturation

(the basis for obtaining a credit are classes taking place only in variant A or mixed: variant A and supplementally variant B)
d. participation in a mandatory online lecture in the field of endodontics
e. positive completion of the final test, which will take place after the summer semester on the date agreed with the head of the year and will consist of 50 questions on the subject of classes in cariology and endodontics
3. THE FINAL EXAM:
The final exam consists of two parts - practical and theoretical (test of 100 multiple-choice questions). Both parts of the exam are treated equally, i.e. to pass the exam it is required to receive at least a satisfactory grade

(3,0) in each part of the exam, and admission to the second part of the exam (test) is conditional on passing the first part (practical).

Grade:	**Criteria** (only for courses/modules ending with an examination)
Very Good (5.0)	achievement of learning outcomes covering all relevant aspects
Good Plus (4.5)	achievement of learning outcomes covering all relevant aspects with some errors or inaccuracies
Good (4.0)	achievement of intended learning outcomes, with omitting some of the less important aspects
Satisfactory Plus (3.5)	achievement of intended learning outcomes, with omitting some important aspects or significant inaccuracies
Satisfactory (3.0)	achievement of intended learning outcomes, with omitting some important aspects or serious inaccuracies
	Criteria (only for courses/modules ending with e credit)
Credit	

Grade:	**Criteria** (examination evaluation criteria)
Very Good (5.0)	achievement of learning outcomes covering all relevant aspects
Good Plus (4.5)	achievement of learning outcomes covering all relevant aspects with some errors or inaccuracies
Good (4.0)	achievement of intended learning outcomes, with omitting some of the less important aspects
Satisfactory Plus (3.5)	achievement of intended learning outcomes, with omitting some important aspects or significant inaccuracies
Satisfactory (3.0)	achievement of intended learning outcomes, with omitting some important aspects or serious inaccuracies
Unit realizing the subject	Dept. Of Conservative Dentistry with Endodontics, Medical University of Wroclaw
Unit address	ul. Krakowska 26, 50-425 Wrocław
Telephone	Tel.: (71) 784 0361, fax (71)784 03621
E-Mail	stomzach@umed.wroc.pl

Person responsible for module	Prof Katarzyna Skośkiewicz-Malinowska, DDS,PhD
Coordinator	Prof Katarzyna Skośkiewicz-Malinowska, DDS,PhD
Telephone	Tel.: (71) 784 0361
E-Mail	katarzyna.skoskiewicz-malinowska@umed.wroc.pl

Appendix
to Resolution No. 2186
of Senate of Wroclaw Medical University
of 1 July 2020

List of persons conducting specific classes				
Full name	**Degree/scientific or professional title**	**Discipline**	**Performed profession**	**Form of classes**
Urszula Kaczmarek	Prof., DDS, PhD	Dentistry	dentist	lectures, seminars
Joanna Kobierska-Brzoza	DDS, PhD	Dentistry	dentist	classes
Kowalczyk-Zając Małgorzata	DDS, PhD	Dentistry	dentist	classes
Dagmara Piesiak-Pańczyszyn	DDS	Dentistry	dentist	classes
Agnieszka Czajczyńska-Waszkiewicz	DDS	Dentistry	dentist	classes
Natalia Jawor-Moczulska	DDS	Dentistry	dentist	classes
Marta Berdzik-Janecka	DDS	Dentistry	dentist	classes
Martina Gutbier	DDS	Dentistry	dentist	classes
Wojciech Grzebieluch	DDS, PhD	Dentistry	dentist	digital dentistry classes
Tomasz Staniowski	DDS, PhD	Dentistry	dentist	classes

Date of Syllabus development

16.09.2020.

Syllabus developed by

Agnieszka Czajczyńska-Waszkiewicz, DDS,PhD

Signature of Head of teaching unit

Prof. Katarzyna Skośkiewicz-Malinowska, DDS,PhD

Signature of Faculty Dean

Appendix
to Resolution No. 2186
of Senate of Wroclaw Medical University
of 1 July 2020

.....