



## Conservative dentistry and endodontics

<b>1. IMPRINT</b>	
<b>Academic year</b>	2023/2024
<b>Department</b>	Conservative Dentistry
<b>Field of study</b>	English Dentistry Division
<b>Main scientific discipline</b>	Medical sciences
<b>Study Profile</b>	General academic
<b>Level of studies</b>	Uniform MSc
<b>Form of studies</b>	Full time program
<b>Type of module / course</b>	Obligatory
<b>Form of verification of learning outcomes</b>	Completion
<b>Educational Unit / Educational Units</b>	<p>Department of Conservative Dentistry Medical University of Warsaw Binieckiego str 6, 02-097 Warsaw, tel.: +48 22 116 64 46 e-mail: sekretariat.zachowawcza@wum.edu.pl</p> <p>Department of Dental Microbiology Medical University of Warsaw Banacha str 1a, 02- 097 Warsaw, tel.: +48 22 599 17 77 e-mail: zms1@wum.edu.pl</p>
<b>Head of Educational Unit / Heads of Educational Units</b>	<p>Department of Conservative Dentistry Prof. Agnieszka Mielczarek PhD, DDS agnieszka.mielczarek@wum.edu.pl</p> <p>Department of Dental Microbiology Prof. Ewa podsiadły MD, PhD, edyta.podsiadly@wum.edu.pl</p>
<b>Course coordinator</b>	Prof. Agnieszka Mielczarek PhD, DDS agnieszka.mielczarek@wum.edu.pl
<b>Person responsible for syllabus</b>	Katarzyna Król-Barej, DDS katarzyna.krol@wum.edu.pl Magdalena Sikora MD, PhD magdalena.sikora@wum.edu.pl

<b>Teachers</b>	<p>Department of Conservative Dentistry:                  prof. Agnieszka Mielczarek DDS, PhD - agnieszka.mielczarek @wum.edu.pl                  Ewa Iwanicka-Grzegorek DDS, PhD - ewa.iwanicka-grzegorek@wum.edu.pl                  Marcin Aluchna DDS, PhD - marcin.aluchna@wum.edu.pl                  Anieli Brodzikowska DDS, PhD – aniola.brodzikowka@wum.edu.pl                  Joanna Rudnicka DDS, PhD - joanna.rudnicka@wum.edu.pl                  Ewa Rusyan DDS, PhD – ewa.rusyan@wum.edu.pl                  Milena Marcinkowska-Ziemak DDS, PhD – milena.marcinkowska-ziemak@wum.edu.pl                  Zdzisław Annusewicz DDS - zdzislaw.annusewicz@wum.edu.pl                  Anna Haładaj DDS - anna.haladyj@wum.edu.pl                  Juliusz Kosewski DDS – Juliusz.kosewski@wum.edu.pl                  Katarzyna Król DDS - katarzyna.krol-barej@wum.edu.pl                  Anna Kwiatkowska DDS – anna.kwiatkowska@wum.edu.pl                  Anna Niedziela-Hejmej DDS – anna.niedziela-hejmej@wum.edu.pl                  Iwona Raczycka DDS – iwona.raczycka@wum.edu.pl                  Magdalena Sobecka-Frankiewicz DDS – magdalena.sobecka-frankiewicz@wum.edu.pl                  Jarosław Witecki DDS - jaroslaw.witecki@wum.edu.pl                  Marcin Zawadzinski DDS – marcin.zawadzinski@wum.edu.pl                  Aneta Zduniak DDS – aneta.zduniak@wum.edu.pl                  Przemysław Zwierz DDS – przemyslaw.zwierz@wum.edu.pl                  Konrad Michałowski DDS – konrad.michalowski@wum.edu.pl                  Sylwia Kozikowska DDS – sylwia.kozikowska@wum.edu.pl                  lek. dent. Katarzyna Więcek DDS – katarzyna.wiecek@wum.edu.pl</p> <p>Department of Dental Microbiology:                  Edyta Podsiadły MD, PhD - edyta.podsiadly@wum.edu.pl                  Halina Marchel MD, PhD - halina.marchel@wum.edu.pl                  Beata Sulik-Tyszka MD, PhD - beata.sulik-tyszka@wum.edu.pl                  Magdalena Sikora MD, PhD - magdalena.sikora@wum.edu.pl                  Dariusz Bańka MSC- dariusz.banka@wum.edu.pl</p>
-----------------	---

## 2. BASIC INFORMATION

<b>Year and semester of studies</b>	III year, V and VI semesters	<b>Number of ECTS credits</b>	9
<b>FORMS OF CLASSES</b>		<b>Number of hours</b>	<b>ECTS credits calculation</b>
<b>Contacting hours with academic teacher</b>			
lecture (L)	26*	1	
seminar (S)	25**	1	
Practical classes (C)	105	4	
e-learning (e-L)	-	-	
Practical classes (PC)	-	-	
Work practise (WP)	-	-	
<b>Unassisted student's work</b>			
Preparation for classes and completions	75	3	
		*On line – eWUM Platform ** Contact classes	

<b>3. COURSE OBJECTIVES</b>	
O1	Organization of dental workplace, basics of ergonomics
O2	Performing an extraoral and intraoral examination of a dental patient
O3	Prophylaxis, diagnosis and treatment of carious and non- carious lesions of dental tissues
O4	Learning basic endodontic concepts
O5	Communication with dental patient
<b>4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING</b>	
<b>Code and number of effect of learning in accordance with standards of learning</b>	<b>Effects in time</b>
<b>Knowledge – Graduate* knows and understands:</b>	
F.W2.	principles of prophylactics and treatment of masticatory system disorders at different stages of development
F.W3.	viral, bacterial and fungal flora of the oral cavity and its importance
F.W4	symptoms, course and management of specific diseases of the oral cavity, head and neck in different age groups
F.W5.	procedures for pulp diseases, mineralized dental tissues and injuries to teeth and facial bones
F.W6.	procedure for periapical tissue diseases
F.W7.	morphology of dental cavities, principles of endodontic treatment and instruments used in this treatment
F.W14.	masticatory system rehabilitation
F.W21.	prevention of oral diseases
F.W22.	procedures for diseases of masticatory system tissues, injuries to teeth and jaw bones
C.W23.	dental office equipment and instruments used in dental procedures
G.W18.	principles of ergonomic organisation of work in a dental office and conducting dental procedures
<b>Skills– Graduate* is able to:</b>	
F.U1.	conduct a medical interview with the patient or their family
F.U2.	conduct a dental physical examination of the patient
F.U3.	explain the symptoms to the patient, determine the method of treatment confirmed by the patient and informed consent
F.U6.	interpret results of additional tests and consultations
F.U7.	determine indications and contraindications for a specific dental procedure
F.U11.	keep current patient records, make referrals for dental and medical treatment and testing
F.U14.	assess the risk of dental decay using bacteriological and saliva tests

5. ADDITIONAL EFFECTS OF LEARNING		
Number of effects of learning	Effects of learning in time	
Knowledge – Graduate knows and understands:		
-	-	
Skills– Graduate is able to:		
-	-	
Social Competencies – Graduate is ready for:		
-	-	
6. CLASSES		
Form of class	Class contents	Effects of Learning
Lectures	W.1. The role of saliva in maintaining oral homeostasis <i>The role of individual components of saliva in maintaining oral health, salivary secretory disorders- methods of treatment, saliva as a diagnostic medium</i>	E.W2., F.W3., F.W4., F.W19., F.W20.,
	W.2. Current concepts of pathomechanism and control of carious disease <i>Cariou lesion and carious disease, dynamics of de- and remineralization processes, biological and socioeconomic factors of caries aetiology, methods of carious process control, active and arrested carious lesions</i>	F.W2., FW3., F.W4.
	W.3. Epidemiology and prevention of dental caries <i>The role of epidemiological studies in health policy development, oral health monitoring, indicators, home, and professional caries prevention in different groups of the adult population</i>	F.W2., F.W21.
	W.4. Caries diagnosis <i>Review and effectiveness of diagnostic methods, processes used in the detection of caries lesions, methods of caries risk assessment, choice of therapeutic management</i>	F.W4.
	W.5. Treatment of caries - non-invasive and restorative methods <i>Initial caries, remineralization process, products, indications for restorative treatment, MID principles for the treatment of carious lesions, current concept of cavitated caries treatment</i>	F.W4., F.W5., F.W14., F.W22.
	W.6. Caries disease in elderly population <i>Specification of the development, progression, prevention, diagnosis, and treatment of the caries process</i>	F.W2., F.W4., F.W21., F.W23.
	W.7. Non-cariou lesions <i>Etiology, diagnostics, BEWE index, therapy</i>	F.W5., F.W22.
	W.8. Materials used in modern dentistry <i>Features, indications, advantages, and disadvantages of restorative, biologically active, base and liner materials</i>	F.W4., F.W5.
	W.9. Diseases of the dentine-pulp complex and periradicular tissues <i>Etiology, symptomatology, classification, differential diagnosis</i>	F.W5., F.W6.
	W.10. Basics of endodontic treatment <i>Diagnosis and indications for root canal treatment, assessment and preparation of the treatment area, working under magnification</i>	F.W6., F.W7.

	W.11. Methods of root canal preparation <i>Phases of root canal treatment, preparation of the treatment field, bio-mechanical root canal preparation, recommended sequence of flushing agents' application, manual and mechanical preparation methods - disadvantages, advantages, indications</i>	F.W5., F.W6., F.W7.
	W.12. Filling of the tooth root canal system <i>Filling methods, indications, materials, systems available, advantages and disadvantages</i>	F.W7.
	W. 13. Credit test - course coordinator <i>Verification of the knowledge gained during the lectures</i> <i>25 questions, 3 distractors, 1 correct answer. Obtaining a minimum of 60% of the correct answers (15 questions) is obligatory to pass the test</i>	E.W2., F.W3., F.W4., F.W6., F.W7., F.W14., F.W19., F.W20., F.W21., F.W22., F.W23.
Seminars	S.1. Introduction to the clinical classes conducted in the Department of Conservative Dentistry, discussion of work regulations in the Department and at the UCS, presentation of the conditions for passing the course, and the use of equipment	C.W23.
	S.2. Initial test – course coordinator <i>A colloquium testing students' preparation for the start of clinical classes, based on the knowledge gained during the second year of studies - 25 questions, 3 distractors, 1 correct answer. Obtaining a minimum of 60% of the correct answers (15 questions) is obligatory to pass the test.</i>	Effects specified in the INTEGRATED PRECLINICAL LEARNING module (2 year of the study)
	S.3. The basics of ergonomics in a dental team <i>Dental team, ergonomics of 4 and 6 hand work position, working in magnification, isolation of the treatment area, working with rubber-dam</i>	G.W18.
	S.4. Phases of caries development in enamel and dentine <i>Features of initial caries, microscopic structure of the caries limited to enamel, infected and noninfected dentine, microscopic structure of the caries located in dentine</i>	F.W4.
	S.5. Classification of carious lesions <i>Classification of carious lesions according Black, Mount and Hume as modified by Lasfargues, Kaleka and Louis, ICDAS II Classification, ICCMS, active and arrested caries</i>	F.W4.
	S.6. Caries risk assessment <i>Risk factors, Cariogram, Cambra, (ICCMS™)</i>	F.W4.
	S.7. Prophylactic recommendations for caries in adult patients of different age groups <i>Prevention dedicated to young adults, senior patients, description of prophylactic indications</i>	F.W2., F.W21.
	S.8. Non-invasive treatment of caries <i>Initial caries, plaque control, methods to stop the progress of the carious process, remineralization of carious lesions - methods, agents, infiltration of carious lesions, fissure sealants in caries therapy</i>	F.W4.
	S.9. The MID concept in caries treatment <i>Options for minimally invasive caries treatment - techniques, systems, indications, contraindications, advantages and disadvantages</i>	F.W14.
	S.10. Principles of proximal surfaces restoration <i>Importance of correct proximal surface reconstruction for the functioning of the dental system, types of matrix systems, moulds and systems for the reconstruction of proximal surfaces</i>	F.W14.
	S.11. Modern methods of deep caries treatment <i>Aim of restorative therapy, current views on elimination of carious tissues, selective and non-selective methods of elimination of carious dentin, the role of adhesion in restorative treatment</i>	F.W4., F.W14, F.W22.
	S.12. Oral halitosis <i>Etiology, classification, epidemiology, treatment</i>	F.W3., F.W4.

<p>S.13. Credit test- organized by the course coordinator  <i>The test includes knowledge presented at the seminars - 25 questions, 3 distractors, 1 correct answer. Obtaining a minimum of 60% of the correct answers (15 questions) is obligatory to pass the test.</i>  <i>A student who fails the course test is eligible for a retake. The second term is organized as written or oral form.</i>  <i>If a student fails the 1st and 2nd term, then the final chance will be an oral test with the Head of the department at a prearranged time.</i></p>	F.W2., F.W3., F.W4., F.W14., F.W21. F.W22., G.W18.
<p>S.14. Dentin hypersensitivity  <i>Etiopathogenesis, mechanism, prevention, treatment</i></p>	F.W2., F.W4.
<p>S.15. Basics of adhesive restorations of tooth tissues  <i>Aims of tooth restoration, preparation principles, restoration of tooth surface integrity, restoration of function and aesthetics, preservation of healthy dental pulp, clinical aspects of cavity filling with adhesive materials, methods of compensating polymerization shrinkage</i></p>	F.W4.
<p>S.16. Glassionomers and their modifications in dental practice  <i>Chemical structure, division, modification, range of effect of fluoride ions contained in the GIC, advantages and disadvantages</i></p>	F.W4.
<p>S.17. Overview of dental composite materials, indications, protocol of treatment  <i>Division: Compomers, giomers, ormocers, composites, compobonds. Indications, advantages and disadvantages, protocols, application techniques of above stated materials</i></p>	F.W4.
<p>S.18. Pathology of the dental pulp  <i>Symptomatological-therapeutical classification of pulp inflammations, classification of pulp diseases according various classification, reversible and irreversible pulpitis</i></p>	F.W5.
<p>S.19. Pathology of periapical tissues  <i>Factors causing inflammation of periapical tissues, classification, diagnosis, treatment, discussion of clinical cases</i></p>	F.W6.
<p>S.20. Morphology of dental pulp chambers in terms of endodontic procedures.  <i>Location of the trepanation point in different groups of teeth. Anatomy of the pulp and dentin complex. Location of canal orifices, lateral and accessory canals.</i></p>	F.W7.
<p>S.21. Biomechanical preparation of the canal system  <i>Aims of biomechanical canal preparation, elimination of canal biofilm, working methods and techniques</i></p>	F.W5., F.W7.
<p>S.22. Root canal filling methods and techniques  <i>Influence of proper canal system obstruction on the prognosis of treatment, control methods, indications for revision of canal treatment</i></p>	F.W5., F.W6., F.W7.
<p>S.23. Discussion about clinical cases. Part 1.  <i>Presentation of cases with a detailed discussion of the disease history, differential diagnosis, treatment plan proposal, therapeutic procedure, and prognosis</i></p>	C.W23., E.W2., F.W2., F.W3., F.W4., F.W5., F.W6., F.W7., F.W14., F.W19., F.W20., F.W21., F.W22., F.W23., G.W18.
<p>S.24. Discussion about clinical cases. Part 2.  <i>Presentation of cases with a detailed discussion of the disease history, differential diagnosis, treatment plan proposal, therapeutic procedure and prognosis</i></p>	C.W23., E.W2., F.W2., F.W3., F.W4., F.W5., F.W6., F.W7., F.W14., F.W19., F.W20., F.W21., F.W22., F.W23., G.W18.
<p>S.25. Verifying credit test - organized by the course coordinator  <i>The test includes the knowledge presented at the seminars - 25 questions, 3 distractors, 1 correct answer. Obtaining a minimum of 60% of the correct answers (15 questions) is obligatory to pass the test.</i>  <i>A student who fails the course is eligible for a retake. The second term is organized in written or oral form.</i>  <i>If a student fails the 1st and 2nd term, then the final chance will be an oral test with the head of the department at a prearranged time.</i></p>	C.W23., E.W2., F.W2., F.W3., F.W4., F.W5., F.W6., F.W7., F.W14., F.W19., F.W20., F.W21., F.W22., F.W23., G.W18.

<b>Practical classes</b>	Conservative Dentistry Department	
	<p>C- Working in a dental team, according to the principles of ergonomics, subjective and physical examination of the patient, assessment of the risk of caries and establishing a treatment plan, performing prophylactic procedures in hard dental tissues, diagnosis and treatment of caries and non-carious lesions, keeping medical records.</p> <p>Topics of practical classes *</p> <p>C1. Principles of work in the Department of Conservative Dentistry, maintenance of current patient records in the KS-Somed program, application of updates.</p> <p>C2. - C3. Performing prophylactic and therapeutic procedures in simulation conditions.</p> <p>C4.- C8. Physical examination of the oral cavity including potentially malignant conditions, communication with the dental patient.</p> <p>C9. - C 20. Planning and execution of preventive and therapeutic procedures in healthy patients burdened with systemic disease.</p> <p>C21. - C30. Planning and performing preventive and therapeutic procedures in senior patients.</p> <p>* Procedures performed during individual exercises are adapted to the preventive and therapeutic needs of patients participating in clinical classes.</p>	<p>C.W.23, E.W2., F.W2., F.W3., F.W4., F.W5., F.W6., F.W7., F.W14., F.W.19.,F.W20., F.W21., F.W22., F.W23., G.W18., F.U1., F.U2., F.U3., F.U4., F.U6., F.U7., F.U11., F.U14.</p>
	Department of Dental Microbiology	
	<p>C- Microbiological diagnosis in the aspects of cariology, endodontics and systemic dental infections, interpretation of results.</p>	<p>F.W3.,F.W6., F.U14.</p>
<b>7. LITERATURE</b>		
<b>Obligatory</b>		
<ol style="list-style-type: none"> <li>1. Sturdevant&amp;#39;s Art&amp; Science of Operative Dentistry, 7th edition, Roberson T.M., Heymann H.O., Swift E.J., Mosby, St.Louis 2018,</li> <li>2. Essentials of Dental Caries. Fourth Edition Edwina Kidd and Ole Fejerskov, Oxford University Press, Oxford 2016</li> <li>3. Clinical endodontics: a textbook. Tronstadt L., 3rd edition, Georg Thieme Verlag, 2009</li> <li>4. Burczyńska A, Dziewit Ł, Decewicz P, Strużycka I, Wróblewska M. Application of Metagenomic Analyses in Dentistry as a Novel Strategy Enabling Complex Insight into Microbial Diversity of the Oral Cavity. Polish Journal of Microbiology. 2017;66(1):9-15. DOI: <a href="https://doi.org/10.5604/17331331.1234988">https://doi.org/10.5604/17331331.1234988</a>: <a href="https://www.exeley.com/polish_journal_of_microbiology/doi/10.5604/17331331.1234988">https://www.exeley.com/polish_journal_of_microbiology/doi/10.5604/17331331.1234988</a></li> <li>5. Madhu KS, Sylvia M. Review of microbiology of endodontics and molecular identification of microorganisms from endodontic infections. J Otolaryngol ENT Res. 2018;10(6):417–420. DOI:10.15406/joentr.2018.10.00394 <a href="https://medcraveonline.com/JOENTR/review-of-microbiology-of-endodontics-and-molecular-identification-of-microorganisms-from-endodontoc-infections">https://medcraveonline.com/JOENTR/review-of-microbiology-of-endodontics-and-molecular-identification-of-microorganisms-from-endodontoc-infections</a></li> </ol>		
<b>Supplementary</b>		
<ol style="list-style-type: none"> <li>1. Pickard&amp;#39;s Guide to Minimally Invasive Operative Dentistry 10th Edition by Avit Banerjee (Author), Timothy F. Watson (Author), Oxford University Press, 2015</li> <li>2. Ole Fejerskov (Editor), Bente Nyvad (Editor), Edwina Kidd (Editor) Dental Caries: The Disease and its Clinical Management, 3rd Edition, Wiley-Blackwell 2015</li> <li>3. Cohen S., Hargreaves K.M., Pathways of the Pulp, 10th edition, Mosby Elsevier 2011,</li> <li>4. Torabinejad M., Walton R.E., Endodontics, principles and practice, 5th edition, Saunders Elsevier 2009</li> </ol>		
<b>8. VERIFYING THE EFFECT OF LEARNING</b>		
Code of the course effect of learning	Ways of verifying the effect of learning	Completion criterion

<p>C.W23, E.W2., F.W2., F.W3., F.W4., F.W5., F.W6., F.W7., F.W14., F.W19.,F.W20.,F.W21., F.W22., F.W23., G.W.18., F.U1., F.U2., F.U3., F.U4., F.U6., F.U7., F.U11., F.U14.</p>	<p>Entering clinical classes is possible after passing the entrance test, verifying the consolidation of knowledge acquired during the pre-clinical classes, conducted in the second year of study as part of the implementation of the module: integrated pre-clinical teaching.</p> <p>The condition for passing the clinical classes is a positive evaluation of the clinical teacher, confirming the acquisition of the ability to perform specific procedures, reliable maintenance of medical records, and a proper attitude towards the patient and medical staff.</p> <p>The condition for passing lectures and seminars is attendance at lectures, active participation in seminars, passing colloquia in the field of knowledge presented at lectures and seminars.</p> <p>Credit for the course is given on the basis of active participation in seminars, passing the colloquium in the field of knowledge presented at lectures and seminars, as well as after receiving a positive evaluation from the teacher who conducts clinical classes.</p> <p>Attendance at lectures, seminars and exercises is mandatory.</p> <p>During the academic year, 2 absences from exercises justified by a medical exemption are allowed. Additional absences from exercises, confirmed by a medical exemption, require making up the classes. The date and form of credit for the exercises should be determined individually with the teacher of the class.</p>	<p>Multiple-choice quizzes (entrance, verifying knowledge from lectures and seminars) consist of 25 questions - 3 distractors and 1 correct answer.</p> <p>Passing requires 60% correct answers (15 points).</p> <p>Grading scale:  15-16 points - 3  17-18 points - 3.5  19-21 points - 4  22-23 points - 4.5  24-25 points - 5</p>
--	--	--

**9. ADDITIONAL INFORMATION (INFORMATION ESSENTIAL FOR THE COURSE INSTRUCTOR THAT ARE NOT INCLUDED IN THE OTHER PART OF THE COURSE SYLLABUS E.G. IF THE COURSE IS RELATED TO SCIENTIFIC RESEARCH, DETAILED DESCRIPTION OF, INFORMATION ABOUT THE SCIENCE CLUB)**

1. The knowledge conveyed in lectures and seminars includes new information and concepts and is assessed in quizzes and the final exam.
2. In order to complete the course, it is necessary to pass the clinical classes, pass the colloquium of seminars and lectures. The first term of the colloquium is in test form. The second term of the colloquium - oral (or written) credit - with the teaching assistant. In case of failure to pass the 1st and 2nd terms- the final, 3rd way of verifying knowledge is an oral colloquium at the head of the Department, by prior arrangement. A negative result of the colloquium will result in failure of the course.
3. The supervisor of the course is Anna Kwiatkowska DDS - [anna.kwiatkowska@wum.edu.pl](mailto:anna.kwiatkowska@wum.edu.pl)
4. It is required to report to classes on time, comply with sanitary requirements for procedures and personal protective equipment, and disallowed to use cell phones during classes.
5. Student Scientific Circle at the Department of Conservative Dentistry, Medical University of Warsaw. Circle supervisor: Dr. n. med. Ewa Rusyan - email: [ewa.rusyan@wum.edu.pl](mailto:ewa.rusyan@wum.edu.pl).
6. Contact: Department of Conservative Dentistry, Medical University of Warsaw, Binięckiego 6, 02-097 Warsaw. Tel.: 22 116 64 46. E-mail: [sekretariat.zachowawcza@wum.edu.pl](mailto:sekretariat.zachowawcza@wum.edu.pl).

*Property rights, including copyright, to the syllabus belong to WUM (Medical University of Warsaw). The syllabus may be used for educational purposes related to studies conducted at WUM. The use of the syllabus for other purposes requires the consent of WUM.*

**ATTENTION**

**The final 10 minutes of the last class in a block/semester/year should be dedicated to students filling out the Course and Academic Teacher Evaluation Surveys.**