



Conservative dentistry and endodontics

1. IMPRINT	
Academic Year	2022/2023
Department	Conservative Dentistry
Field of study	English Dentistry Division
Main scientific discipline <i>(in accord with appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019)</i>	Medical sciences
Study Profile <i>(general academic / practical)</i>	General academic
Level of studies <i>(1st level / 2nd level / uniform MSc)</i>	Uniform MSc
Form of studies	Full time program
Type of module / course <i>(obligatory / non-compulsory)</i>	Obligatory
Form of verification of learning outcomes <i>(exam / completion)</i>	Completion
Educational Unit / Educational Units <i>(and address / addresses of unit / units)</i>	Department of Conservative Dentistry Medical University of Warsaw Blinieckiego str 6, 02-097 Warsaw, tel.: +48 22 116 64 46 e-mail: sekretariat.zachowawcza@wum.edu.pl 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
Head of Educational Unit / Heads of Educational Units	Prof. Agnieszka Mielczarek PhD, DDS agnieszka.mielczarek@wum.edu.pl Prof. Marta Wróblewska MD, PhD, DTM&H PhD marta.wroblewska@wum.edu.pl
Course coordinator <i>(title, First Name, Last Name, contact)</i>	Prof. Agnieszka Mielczarek PhD, DDS, agnieszka.mielczarek@wum.edu.pl
Person responsible for syllabus <i>(First name, Last Name and contact for the person to whom any objections concerning syllabus should be reported)</i>	Katarzyna Król-Barej, DDS, katarzyna.krol@wum.edu.pl

Teachers	prof. Agnieszka Mielczarek PhD, DDS, agnieszka.mielczarek@wum.edu.pl dr n. med. Joanna Rudnicka- joanna.rudnicka@wum.edu.pl dr n. med. Ewa Rusyan- erusyan@wum.edu.pl lek. dent. Anna Haładyj- anna.haladyj@wum.edu.pl lek. dent. Juliusz Kosewski - jkosewski@wum.edu.pl lek. dent. Katarzyna Król- Barej - katarzyna.krol@wum.edu.pl lek. dent. A. Kwiatkowska- akwiatkowska@wum.edu.pl lek. dent Konrad Michałowski- kkmichalowski@wum.edu.pl lek. dent. Magdalena Sobecka-Frankiewicz – m.s.frankiewicz@wum.edu.pl lek. dent. Aneta Zduniak- azduniak@wum.edu.pl lek. dent. Przemysław Zwierz- pzwierz@wum.edu.pl			
2. BASIC INFORMATION				
Year and semester of studies	III year, V and VI semesters		Number of ECTS credits	9
FORMS OF CLASSES		Number of hours	ECTS credits calculation	
Contacting hours with academic teacher				
Lecture (L)		26 (e-learning)	1	
Seminar (S)		25 (contact classes/e- learning)	1	
Practical classes (C)		105	4	
Unassisted student's work				
Preparation for classes and completions		75	3	
3. COURSE OBJECTIVES				
O1	Organization of dental worksite, 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			
4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING (concerns fields of study regulated by the Regulation of Minister of Science and Higher Education from 26 of July 2019; does not apply to other fields of study)				
Code and number of effect of learning in accordance with standards of learning (in accordance with appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019)	Effects in time			
Knowledge – Graduate* knows and understands:				
E.W2.	basic methods of medical examination and the role of additional tests in the diagnosis, monitoring, prognosis and prevention of organ and systemic disorders, with particular emphasis on their impact on the tissues of the oral cavity			
F.W2.	principles of prophylactic and therapeutic procedures in diseases of the masticatory system at various stages of development			
F.W3.	viral, bacterial and fungal flora of the oral cavity and its importance			

F.W4.	symptoms, course and management in selected diseases of the oral cavity, head and neck, considering age groups	
F.W5.	principles of management in the case of diseases of the pulp and mineralized dental tissues as well as dental and face injuries	
F.W6.	principles of management in the case of diseases of the periapical tissues	
F.W7.	morphology of dental cavities and principles of endodontic treatment and instruments used for this treatment	
F.W14.	methods of rehabilitation of the masticatory apparatus	
F.W21.	prophylaxis of oral diseases	
F.W22.	principles of management in the case of diseases of the tissues of the masticatory organ and dental, jaw and facial injuries	
C.W23.	dental office equipment and instruments used in dental procedures	
G.W18.	principles of ergonomic organization of work in a dental office and conducting dental procedures	
G.W34.	rules for keeping, storing and sharing medical records and personal data protection	
Skills– Graduate* is able to:		
F.U1.	conduct a medical interview with the patient or his family	
F.U2.	conduct a dental physical examination of the patient	
F.U3.	explain to the patient the essence of his ailments, establish the treatment method confirmed by the patient's informed consent and the prognosis	
F.U4.	provide the patient or his family with information about unfavorable prognosis	
F.U6.	interpret the results of additional tests and consultations	
F.U7.	determine indications and contraindications for a specific dental procedure	
F.U11.	keep current patient records, prescribe referrals for tests or for a specialized dental and medical treatment	
F.U14.	assess the risk of caries using bacteriological tests and saliva tests	
* In appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019 „graduate”, not student is mentioned.		
5. ADDITIONAL EFFECTS OF LEARNING (non-compulsory)		
Number of effect of learning	Effects of learning i time	
Knowledge – Graduate knows and understands:		
W.01	-	
Skills– Graduate is able to:		
U.01	-	
Social Competencies – Graduate is ready for:		
K.01	-	

6. CLASSES		
Form of class	Class contents	Effects of Learning
LECTURES	W.1. Patient examination and maintenance of medical records in terms of conservative dentistry Collective and individual documentation, internal and external documentation, paper and electronic documentation, patient consent, sharing of medical records, storage periods, legal basis, physical and subjective patient examination, use of additional examinations in dental diagnostics	E.W2., G.W34.
	W.2. Current concepts of pathomechanism and controlling of carious disease Carious 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	F.W2., F.W3., F.W4.
	W.3. Epidemiology and prevention of dental caries 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	F.W2., F.W21.
	W.4. Caries diagnosis Review and effectiveness of diagnostic methods, phenomena used in the detection of caries lesions, methods of caries risk assessment, choice of therapeutic management	F.W4.
	W.5. Treatment of caries - non-invasive and restorative methods Initial caries, remineralization phenomenon, products, indications for restorative treatment, MID principles for the treatment of carious lesions, current concept of cavitated caries treatment	F.W4., F.W5., F.W14., F.W22.
	W.6. Non-carious lesions Etiology, diagnostics, BEWE index, therapy	F.W5., F.W22.
	W.7. Materials used in modern dentistry Base and liner materials, restorative materials, biologically active materials, features, indications, advantages and disadvantages	F.W4., F.W5.
	W.8. Diseases of the dentin-pulp complex and periapical tissues Etiology, symptomatology, classification, differential diagnosis	F.W5., F.W6.
	W.9. Permanent tooth injuries in adult patients Classification of permanent teeth injuries; causes, diagnosis and management of the patient after the injury; assessment of prognosis; possible short-term and long-term complications; differentiation in management of dental injuries in young people and geriatric patients	F.W22.
	W.10. Basics of endodontic treatment Diagnostics and indications for root canal treatment, evaluation and preparation of the surgical field, working at magnification	F.W6., F.W7.
W.11. Root canal preparation methods 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	F.W5., F.W6., F.W7.	
W.12. Filling of the tooth root canal system Filling methods, indications, materials, systems available, advantages and disadvantages	F.W7.	
W. 13. Credit test Verification of the knowledge gained during the lectures – course coordinator	All of the above	
	S.1. Introduction to the clinical classes conducted in the Department of Conservative Dentistry, discussion of the rules of work in the Department and at the UCS, presentation of the conditions for passing the course, the use of equipment	C.W23.

SEMINARS	<p>S.2. Initial test – course coordinator A colloquium testing students preparation for the start of clinical classes, based on the knowledge gained during the second year of studies - it has a test form - 25 questions, 4 distractors, 1 correct answer. Obtaining a minimum of 60% of the correct answers (15 questions) is obligatory to pass the test.</p>	Effects specified in the INTEGRATED PRECLINICAL LEARNING module (2 year of the study)
	<p>S.3. The basics of ergonomics in a dental team Dental team, ergonomics of 4 and 6 hand work position, working in magnification, isolation of the treatment area, working with rubber-dam</p>	G.W18.
	<p>S.4. Phases of development of caries in enamel and dentine Features of initial caries, microscopic structure of the caries focus limited to enamel, infected and noninfected dentine, microscopic structure of the caries focus located in dentine</p>	F.W4.
	<p>S.5. Classification of carious lesions Classification of carious lesions according Black, Mount and Hume as modified by Lasfargues, Kaleka and Louis, ICDAS II Classification, ICCMS, active and arrested caries</p>	F.W4.
	<p>S.6. Caries risk assessment Risk factors, Cariogram, Cambra, (ICCMS™)</p>	F.W4.
	<p>S.7. Prophylactic recommendations for caries in adult patients of different age groups Prevention dedicated to young adults, senior patients, development of prophylactic indications</p>	F.W2., F.W21.
	<p>S.8. Non-invasive treatment of caries 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</p>	F.W4.
	<p>S.9. The MID concept in caries treatment Options for minimally invasive caries treatment - techniques, systems, indications, contraindications, advantages and disadvantages</p>	F.W7.
	<p>S.10. Principles of proximal surfaces restoration - the importance of correct proximal surfaces reconstruction for the functioning of the dental system, types of matrix systems, moulds and systems for the reconstruction of proximal surfaces</p>	F.W14.
	<p>S.11. Modern methods of deep caries treatment 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</p>	F.W4., F.W14., F.W22.
	<p>S.12. Oral halitosis Etiology, classification, epidemiology, treatment</p>	F.W3., F.W4.
	<p>S.13. Verifying credit test- organized by the course coordinator 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. A student who fails the course test can sit a retake. The second term is organized in written or oral form. If a student fails the 1st and 2nd term, then the final chance would be an oral test with the head of the department at a prearranged time.</p>	All of the above
	<p>S.14. Dentin hypersensitivity Etiopathogenesis, mechanism, prevention, treatment</p>	F.W2., F.W4.
<p>S.15. Modern guidelines for the use of amalgams Legal conditions, indications, classification, advantages and disadvantages</p>	F.W4.	
<p>S.16. Basics of adhesive restorations of tooth tissues Aims of tooth restoration, preparation principles, restoration of tooth surface integrity, restoration of function and aesthetics, preservation of healthy, living dental pulp, clinical aspects of cavity filling with adhesive materials, methods of compensating polymerization shrinkage</p>	F.W4.	

	<p>S.17. Glassionomers and their modifications in dental practice Chemical structure, division, modification, range of effect of fluoride ions contained in the GIC, advantages and disadvantages</p>	F.W4.
	<p>S.18. Overview of dental composite materials, indications, protocol of treatment Division: Compomers, giomers, ormocers, composites, compobonds, indications, advantages and disadvantages, protocols, application techniques</p>	F.W4.
	<p>S.19. Pathology of the dental pulp symptomatological-therapeutical classification of pulp inflammations, classification of pulp diseases according various classification, reversible and irreversible pulpitis</p>	F.W5.
	<p>S.20. Pathology of periapical tissues Factors causing inflammation of periapical tissues, classification, diagnosis, treatment, discussion of clinical cases</p>	F.W6.
	<p>S.21. Biomechanical preparation of the canal system Aims of biomechanical canal preparation, elimination of canal biofilm, working methods and techniques</p>	F.W5., F.W7.
	<p>S.22. Root canal filling methods and techniques The influence of proper canal system obstruction on the prognosis of treatment, control methods, indications for revision of canal treatment</p>	F.W5., F.W6., F.W7.
	<p>S.23. Discussion about clinical cases. Part 1. Presentation of cases with a detailed discussion of the disease history, differential diagnosis, treatment plan proposal, therapeutic procedure and prognosis</p>	All of the above
	<p>S.24. Discussion about clinical cases. Part 2. Presentation of cases with a detailed discussion of the disease history, differential diagnosis, treatment plan proposal, therapeutic procedure and prognosis</p>	All of the above
	<p>S.25. Verifying credit test - organized by the course coordinator 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. A student who fails the course test can sit a retake. The second term is organized in written or oral form. If a student fails the 1st and 2nd term, then the final chance would be an oral test with the head of the department at a prearranged time.</p>	All of the above
Practical classes	Conservative Dentistry Department	
	<p>C- Working in the 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>	F.U1., F.U2., F.U3 F.U4., F.U6. F.U7 F.U11., F.U14., E.W2., F.W2., F.W3., F.W4., F.W5., F.W6., F.W7., F.W14., F.W21., F.W22., C.W23., G.W18., G.W34.
	Department of Dental Microbiology	
	<p>C- Metagenomic studies in endodontics. Microbiological diagnosis of systemic odontogenic infections and interpretation of the results.</p>	F.W3., F.U6., F.U14.
7. LITERATURE		
Obligatory		

1. Sturdevant's Art&Science of Operative Dentistry, 7th edition, Roberson T.M., Heymann H.O., Swift E.J., Mosby, St.Louis 2018,
2. Essentials of Dental Caries. Fourth Edition Edwina Kidd and Ole Fejerskov, Oxford University Press, Oxford 2016
3. Clinical endodontics: a textbook. Tronstadt L., 3rd edition, Georg Thieme Verlag, 2009
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: <https://doi.org/10.5604/17331331.1234988>:
https://www.exeley.com/polish_journal_of_microbiology/doi/10.5604/17331331.1234988
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
<https://medcraveonline.com/JOENTR/review-of-microbiology-of-endodontics-and-molecular-identification-of-microorganisms-fromendodontic-infections.html>

Supplementary

1. Pickard's Guide to Minimally Invasive Operative Dentistry 10th Edition by Avit Banerjee (Author), Timothy F. Watson (Author), Oxford University Press, 2015
2. Ole Fejerskov (Editor), Bente Nyvad (Editor), Edwina Kidd (Editor) Dental Caries: The Disease and its Clinical Management, 3rd Edition, Wiley-Blackwell 2015
3. Cohen S., Hargreaves K.M., Pathways of the Pulp, 10th edition, Mosby Elsevier 2011,
4. Torabinejad M., Walton R.E., Endodontics, principles and practice, 5th edition, Saunders Elsevier 2009

8. VERIFYING THE EFFECT OF LEARNING

Code of the course effect of learning	Ways of verifying the effect of learning	Completion criterion
C.W23, E.W2, F.W2, F.W3, F.W4, F.W5, F.W6, F.W7, F.W14, F.W21, F.W22, G.W18, G.W34	<ul style="list-style-type: none"> • 100% attendance at the seminars is required. In the event of absence, the date and form of crediting the seminar should be agreed individually with the assistant conducting clinical classes. • Introductory test - checking the preparation for starting clinical classes, based on the knowledge gained in the second year of studies in the INTEGRATED PRECLINICAL LEARNING module. • Test on the content presented at lectures and seminars is conducted at the end of each semester • All tests consist of 25 questions- 3 distractors, 1 correct answer. A student who fails the course test can sit a retake test. The form of the second test (whether oral or written) is determined by the course coordinator. A student who fails the second retake needs to pass an oral exam with the head of the department. 	<p>Obtaining a minimum of 60% of correct answers (15 questions) passes the preliminary test and the test of knowledge presented at lectures and seminars</p> <p>Test grading scale: 15-16 points - 3.0 17-18 points - 3.5 19-21 points - 4.0 22-23 points - 4.5 24-25 points - 5.0</p> <p>The condition for passing the course is active participation in seminars, passing an introductory test, and colloquiums in the field of knowledge presented at lectures and seminars.</p>

<p>F.U1, F.U2, F.U3, F.U4, F.U6, F.U7, F.U11, F.U14</p>	<ul style="list-style-type: none"> • Admission to clinical classes - after passing the entry test confirming the mastery of knowledge acquired in preclinical classes conducted during the second year of the study. • Two absences from classes during the academic year are allowed. Additional absences require documenting the reason and making up the classes and the term accepted by the Head of Department and teacher leading clinical classes. 	<p>The condition for passing the credit is a positive assessment of the teacher conducting clinical classes, confirming the acquisition of the ability to perform specific procedures, reliable keeping of medical records, and the appropriate attitude towards the patient and medical staff.</p>
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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 presented at lectures and seminars takes into account new information and concepts and is enforced during final tests and the diploma examination.
2. The tutor of the year is doctor Anna Kwiatkowska
3. It is required to report to classes on time, to comply with sanitary requirements regarding procedures and personal protective equipment, and not to use mobile phones during classes.
4. Student Research Group at the Department of Conservative Dentistry of the Medical University of Warsaw
SKN supervisor - Ewa Rusyan, MD, PhD, e - mail: erusyan@wum.edu.pl
5. Contact: Department of Conservative Dentistry of the Medical University of Warsaw, ul. Binięckiego 6, 02-097 Warsaw, phone: 22 116 64 46,
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