



Conservative dentistry and endodontics

1. IMPRINT

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| Academic Year: | 2024/2025 |
| Faculty: | Medical and Dental Faculty |
| Field of Study: | English Division Dentistry |
| Leading Discipline | Medical science |
| Study Profile | General academic |
| Level of studies | Uniform MSc |
| Form of studies | Full time program |
| Type of module / course | Obligatory |
| Form of verification of learning outcomes | Completion |
| Educational Unit / Educational Units | 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 |
| Head of Educational Unit / Heads of Educational Units | Prof. Agnieszka Mielczarek PhD, DDS agnieszka.mielczarek@wum.edu.pl |
| Course coordinator | Prof. Agnieszka Mielczarek PhD, DDS agnieszka.mielczarek@wum.edu.pl |
| Person responsible for syllabus | Karolina Koronowska DDS karolina.koronowska@wum.edu.pl |

Teachers

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2. BASIC INFORMATION

| Year and semester of studies | IV year, VII and VIII semester | Number of ECTS credits | 8 |
|--|--------------------------------|--------------------------|---|
| FORMS OF CLASSES | Number of hours | ECTS credits calculation | |
| Contacting hours with academic teacher | | | |
| Lecture (L) | 10 | 0,4 | |
| Seminar (S) | 20 | 0,8 | |
| Practical classes (PC) | 140 | 5,6 | |
| Work placement (WP) | - | - | |

Unassisted student work

Preparation for classes and completions

70

2,7

3. COURSE OBJECTIVES

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| O1 | Acquisition and consolidation of knowledge and skills in dental teamwork, forming a proper relationship between doctor and patient. |
| O2 | Ability to diagnose and treat diseases of the hard dental tissues, dental pulp and periapical tissues. |
| O3 | Ability to pain control in dentistry. |
| O4 | Understanding the problems of dental treatment of pregnant women, patient with systemic diseases and elderly people. |

4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING ()

| Code and number of effect of learning in accordance with standards of learning | Effects in time |
|--|-----------------|
|--|-----------------|

Knowledge – Graduate* knows and understands:

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| F.W2. | principles of prophylactics and treatment of masticatory apparatus diseases 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. | procedure for pulp diseases and mineralised dental tissues and injuries to teeth and face bones; |
| F.W6. | knows the principles related to administration of local anaesthesia of masticatory organ tissues; |
| F.W7. | morphology of dental cavities and principles of endodontic treatment and instruments used in this treatment; |
| F.W8. | knows the procedures in case of periapical diseases; |
| F.W11. | indications and contraindications for cosmetic dentistry treatments; |
| F.W12. | causes of complications in the stomatognathic system diseases and the procedures for such complications; |
| F.W13. | basics of antibiotic therapy and antibiotic resistance; |
| F.W16. | principles of anaesthesia in dental procedures and basic pharmaceuticals; |

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| F.W19. | pathomechanism of oral disease impact on general health; | |
| F.W20. | pathomechanism of general disease or applied therapies impact on the oral cavity; | |
| F.W21. | prevention of oral disease; | |
| F.W22. | procedure for diseases of masticatory apparatus tissues, injuries to teeth and jaw bones; | |
| F.W23. | characteristics of dental care for patients with a general illness and the principles of cooperation with a medical doctor treating the underlying disease. | |
| C.W25. | composition, structure, bonding, properties, application and use of dental materials; | |
| E.W12. | principles of dental care for pregnant women; | |
| Skills– Graduate* is able to: | | |
| F.U7. | determine indications and contraindications for a specific dental procedure; | |
| F.U8. | treat acute and chronic, odontogenic and non-odontogenic inflammatory processes in soft tissues of the oral cavity, periodontium and jawbone; | |
| F.U9. | provide treatment in the event of general and local complications during and after dental procedures; | |
| F.U11. | keep current patient records, make referrals for dental and general medical examination or treatment; | |
| F.U15. | advise treatment of diseases of stomatognathic system tissues; | |
| F.U16. | use appropriate medications during and after the dental procedure to reduce pain and anxiety; | |
| C.U10. | use adhesive techniques; | |
| C.U11 | select restorative, prosthetic and bonding biomaterials based on the properties of the materials and clinical conditions; | |
| 5. ADDITIONAL EFFECTS OF LEARNING (NON-COMPULSORY) | | |
| Number of effect of learning | Effects of learning i time | |
| Knowledge – Graduate knows and understands: | | |
| W.1 | knows rules of surgery field magnification in dental procedures | |
| Skills– Graduate is able to: | | |
| - | - | |
| Social Competencies – Graduate is ready for: | | |
| - | - | |
| 6. CLASSES | | |
| Form of class | Class contents | Effects of Learning |
| Lectures | W.1. Pain in dental disorders and methods of its control Types of pain, differential diagnosis, methods of pain elimination, methods and techniques of anaesthesia, agents used in anaesthetics | F.W2., F.W16. |

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| | W.2. 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.3. Complications in endodontic treatment Methods of removal of broken root canal instruments, closing of coronal and root perforations - indications, prognosis, endodontic surgery | F.W7., F.W8., F.W12. |
| | W.4. Modern concepts for the restoration of hard dental tissues Direct and indirect restoration methods, indications, techniques, materials, monitoring, prognosis | F.W11., F.W12., F.W22., C.W25. |
| | W.5. Patient with a systemic disease in a dental office Current standards of management, indications and contraindications for treatment of patients with systemic disease, protective antibiotic therapy | F.W8., F.W13., F.W19., F.W20., F.W23. |
| Seminars | S.1. Endodontic instruments, working at magnification Use of endodontic microscope and dental loupes in dental practice, principles and techniques | F.W7. |
| | S.2. Verifying test (basics of endodontics) – course coordinator Verification of knowledge of the basics of endodontics before the start of practical classes Test - 35 questions, 60 % of the correct answers (21 points) Scale of marks: below 21 points - 2, 21-23 points - 3, 24-26 points - 3.5, 27-30 points - 4, 31-33 points - 4.5, 34-35 points - 5 | the effects specified in the syllabus for the third year of dental studies: C.W.23, E.W2., F.W2., F.W3., F.W.4., F.W5., F.W6., F.W7., F.W14., F.W21., F.W22., F.W23., G.W.18., G.W.34., F.U1., F.U2., F.U3., F.U4., F.U6., F.U7., F.U11., F.U14. |
| | S.3. Current concepts for biological methods of pulp treatment Mechanism, indications, methods, effectiveness, prognosis | F.W4., F.W5., F.W7. |
| | S.4. Immediate dental intervention Inflammation of the pulp and periapical tissues, injuries, treatment procedures | F.W5., F.W6., F.W7., F.W8., F.W12., F.W13., F.W16., F.W19., F.W22., E.W12. |
| | S.5. Difficulties in endodontic treatment Anatomical limitations, accessory canals, obliteration, dentinomas, drug treatment in endodontics | F.W7., F.W13., F.W22. |
| | S.6. Internal and external tooth resorption Etiology, classification, prevention, treatment | F.W4., F.W6., F.W7., F.W22. |
| | S.7. Re-endodontic treatment Indications, Prognosis, Clinical management, Instrumentation | F.W4., F.W6., F.W7., W13., F.W22, F.W23. |
| | S.8. Endodontic-periodontal lesions Classification of diseases affecting the marginal and apical periodontium, management and prognosis | F.W2., F.W3., F.W4., F.W21. |

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| <p>S.9. Discussion of clinical cases Discussion of selected clinical cases in order to prepare for practical usage of the knowledge gained in the seminars</p> | E.W12., F.W2., F.W3., F.W4., F.W5., F.W6., F.W7., F.W8., F.W12., F.W13., F.W16., F.W19., F.W21., F.W22., F.W23. |
| <p>S.10. Credit test from lectures and seminars – course coordinator A test consisting of 35 questions - 4 distractors, 1 correct answer. It is 60 % correct answers (21 points) The scale of the ratings: 21-23 points -3, 24-26 points -3.5, 27-30 points -4, 31-33 points 4.5, 34-35 points - 5</p> | E.W12., F.W2., F.W3., F.W4., F.W5., F.W6., F.W7., F.W8., F.W12., F.W13., F.W16., F.W19., F.W21., F.W22., F.W23. |
| <p>S.11. Application of adhesive systems in various clinical cases Total etch and self-etch systems - indications, advantages and disadvantages, selection of the optimal system for the clinical case</p> | F.W11., C.W25., |
| <p>S.12. Selection of the restoration material in conservative dentistry Characteristics and indications for the use of different restorative materials, principles for material selection, use of material characteristics for specific clinical cases</p> | F.W11. ,C.W25., |
| <p>S.13. The longevity of dental restorations Factors determining the durability of restorations: patient-related, material-related, physician-related, filling replacement and repair - qualification</p> | F.W2., C.W25. |
| <p>S.14. Extensive reconstructions of hard dental tissues after root canal treatment Current recommendations for pulp-free tooth restoration, biomechanical properties of root dentin</p> | F.W7., F.W22., C.W25. |
| <p>S.15. Prevention and dental treatment of pregnant women Principles of dental treatment of pregnant women, influence of progesterone and estrogen on oral tissues, modification of saliva composition, prescription of drugs</p> | F.W2., E.W12. |
| <p>S.16. Bleaching of vital and nonvital teeth Etiology of hyperpigmentation, home and dental office bleaching methods, preparations, indications and contraindications, limitations, complications, legal basis</p> | F.W11. |
| <p>S.17. Patient with a systemic disease in a dental office - clinical cases Treatment of a cardiac patient, diabetic patient, cancer patient, transplantation patient - patient preparation for treatment procedure, indications, contraindications, standards of treatment procedures</p> | F.W13. ,F.W19., F.W20., F.W23. |
| <p>S.18. Patient with cancer in dental office Oncological vigilance. Post-oncological treatment before, during and after therapy</p> | F.W3., F.W8., F.K13.,F.W19., F.W20., F.W21., F.W23. |
| <p>S.19. Patient with a viral infection in a dental office Treatment of a patient with HIV infection, hepatitis B and C, tuberculosis and herpes - patient preparation for treatment procedure, indications, contraindications, standards of treatment procedures</p> | F.W3., F.W19., F.W20., F.W23. |

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| | <p>S.20. Verifying test checking the knowledge gained in the seminars – course coordinator A test consisting of 35 questions - 4 distractors, 1 correct answer. It is 60 % correct answers (21 points). The scale of the ratings: 21-23 points -3, 24-26 points -3.5, 27-30 points -4, 31-33 points -4.5, 34-35 points - 5</p> | <p>C.W25., C.W25., E.W12., F.W2., F.W3., F.W4., F.W5., F.W6., F.W7., F.W8., F.W11., F.W12., F.W13., F.W16., F.W19., F.W21., F.W22., F.W23.</p> |
| Clinical Classes | <p>C- Working with 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> <p>Clinical classes topics*:</p> <p>C1. - C 5. Diagnosis and non-invasive treatment of initial caries. C6. - C24. Diagnosis and treatment of cavity caries using various restorative materials. C25. - C28. Diagnosis and treatment of root caries C29. - C38. Symptomatology, diagnosis and treatment of dental pulp diseases C39. - C43. Symptomatology, diagnosis and treatment of diseases of peri-root tissues C44. - C45. Teeth whitening C46. - C48. Injuries of permanent teeth - diagnosis, treatment management. C49. - C.52. Internal and external resorptions- diagnosis and treatment. C.53. - C.56. Planning dental treatment in a patient with systemic disease.</p> <p>*Procedures performed during individual clinical classes are adapted to the preventive and therapeutic needs of patients.</p> | <p>F.U7., F.U8., F.U9., F.U11., F.U15., F.U16., C.U10., C.U11.</p> |

7. LITERATURE

Obligatory

1. Sturdevant's Art and 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. Textbook of Endodontology, Bjørndal L., Kirkevang L-L., Whitworth J., 3rd Edition Wiley-Blackwell, 2018

Supplementary

1. Pickard's Guide to Minimally Invasive Operative Dentistry, Avit Banerjee A., Watson T.F., 10th Edition, Oxford University Press, 2015
2. Dental Caries: The Disease and its Clinical Management, Fejerskov O Nyvad B, Kidd E. 3rd Edition, Wiley-Blackwell, 2015
3. Pathways of the Pulp, Berman L.H., Hargreaves K.M., 12th edition, Elsevier, 2020,
4. Endodontics, principles and practice, Torabinejad M., Walton R.E., 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.W25., C.W25., F.W12., F.W2., F.W3., F.W4., F.W5., F.W6., F.W7., F.W8., F.W11., .W12., F.W13., .W16., F.W19., .W21., F.W22., .W23. | <p>To participate in clinical classes is possible after passing a test verifying the consolidation of knowledge of endodontics, acquired during the classes, conducted during the third year of study in the implementation of the subject of conservative dentistry and endodontics.</p> <p>A condition for passing the clinical classes is a positive assessment by the teacher conducting clinical classes, 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>A 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 conducting clinical classes.</p> <p>During the academic year, 2 absences from clinical classes, justified by a medical exemption, are allowed. Additional absences from clinical classes, 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. Any absence from the seminar must be justified by a medical exemption and requires a passing grade. The date and form of credit for seminars should be determined individually with the dental teacher.</p> | <p>Multiple-choice test quizzes: Entrance test, Verifying knowledge from lectures, Seminars: consist of 25 questions - 3 distractors and 1 correct answer. To pass, a minimum of 60% correct answers is required (15 points). Grading scale: 15-16 points: grade 3, 17-18 points: grade 3.5, 19-21 points: grade 4, 22-23 points: grade 4.5, 24-25 points: grade 5.</p> |

9. ADDITIONAL INFORMATION

- The knowledge conveyed in lectures and seminars includes new information and concepts and is assessed in quizzes and the final exam.
- 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 the test form. The second term of the colloquium - oral (or test) credit - at 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.
- It is required to report to classes on time, comply with sanitary requirements for procedures and personal protective equipment, do not use cell phones during classes.
- Student Scientific Circle at the Department of Conservative Dentistry, Medical University of Warsaw. Circle supervisor: Ewa Rusyan DDS, PhD - email: ewa.rusyan@wum.edu.pl.
- Contact: Department of Conservative Dentistry, Medical University of Warsaw, Binieckiego 6, 02-097 Warsaw. Tel.: 22 116 64 46. E-mail: sekretariat.zachowawcza@wum.edu.pl
- The supervisor of the course is Karolina Koronowska DDS – Karolina.koronowska@wum.edu.pl

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ATTENTION

The final 10 minutes of the last class of the block/semester/year should be allotted for students to fill out the Survey of Evaluation of Classes and Academic Teachers