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| **Syllabus for academic year 2019/2020** |
| **Description of the course** |
| **Module/Course** | **Restorative dentistry with endodontics** | **Group of detailed education results**  |
| **Group code F** | **Group name** **VI- Clinical sciences,****major-oriented** |
| **Faculty** | Faculty of Dentistry |
| **Major**  | Dentistry |
| **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**  | III | **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** |
| Conservative and Pediatric Dentistry Department |  | **30** |  |  | **75** |  |  |  |  |  |  |  |  |  |
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| **Summer Semester** |
| Conservative and Pediatric Dentistry Department | **15** | **18** |  |  | **75** |  |  |  |  |  |  |  |  |  |
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| **TOTAL per year:** |
|  | **15** | **48** |  |  | **150** |  |  |  |  |  |  |  |  |  |
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| **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* |
|  **W01** | **F.W.3** | To define the communication way with a patient and motivation | Oral response (F), test (P) | L, CK |
|  **W02** | **F.W.3** | To explain the principles of preventive-treatment procedures in oral diseases  | Oral response (F), test (P) | L, SE, CK |
| **W03** | **F.W.7**  | To define the management principles in diseases of hard dental tissues of carious and non-carious origin  | Oral response (F), test (P)  | SE, CK |
| **W04** | **F.W.7** | To describe the principles of minimally invasive treatment  | Oral response (F), test (P) | SE,WY,CK |
| **W05** | **F.W.9** | Knows the indications for cariologic re-treatment | Oral response (F), test (P) | SE,CK |
| **W06** | **F.W.13** | To define the indications and contraindications for aesthetic dentistry procedures  | Oral response (F), test (P) | SE,WY,CK |
| **W07** | **F.W. 13** | To perform aesthetic reconstruction of hard dental tissues | Oral response (F), test (P) | SE,WY,CK |
| **U01** |  **F.U1.** | To gather medical and dental history from the patient | Clinical assessment observation(F) | SE,CK |
| **U02** |  **F.U2.** | To perform clinical examination and interpret the data | Clinical assessment observation(F) | SE,CK |
| **U03** |  **F.U3** | 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.U7.**  | To be able to set indications and contraindications for the given dental procedure | Clinical assessment observation(F) | L, CK |
| **U05** |  **F.U8.** | To present the disease risk assessment and select the optimal methods of oral disease prevention  | Clinical assessment observation(F) | SE,CK |
| **U06** |  **F.U13.**  | 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** | **K 01** | 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 | SE,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- discussion during classes- opinions of colleagues | SE,CK |
| \*\* 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: 5Skills: 5Social competences: 4 |
| **Student's amount of work (balance of ECTS points)** |
| **Student's workload** (class participation, activity, preparation, etc.) | **Student Workload (h)** | **Summer** **apprenticeship (h)** |
| **Winter** | **Summer** |
| 1. Contact hours: | 105 | 108 | 15 |
| 2. Student's own work (self-study): Individual preparation for theoretical and practical classes (preparing of a project, documentation, case description, etc.). Individual preparation for credit tests/colloquia. Individual preparation for final exam/credit. | 15 | 15 | 0 |
| Total student's workload | 120 | 123 | 15 |
| **ECTS points for module/course** | 4 | 4 | 0,5 |
| 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** **Semester 6**

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| **No.** |  **Lecture topic** |
| 1. | Developmental teeth abnormalities (number, size, shape, tissues structure, color, ethiology, pathomechanism, clinical and radiological symptoms and signs, differentiation, therapeutic procedures) part 1 |
| 2. | Developmental teeth abnormalities (number, size, shape, tissues structure, color, ethiology, pathomechanism, clinical and radiological symptoms and signs, differentiation, therapeutic procedures) part 2 |
| 3. |  Teeth discoloration (staining),- etiology, mechanism, clinical signs and symptoms, therapeutic procedures, prevention) |
| 4. | 1.Patient motivation for pro healthy actions.2. Individual - at home and professional caries preventive procedures. 3. The role of fluoride in oral health promotion; modern concepts of fluoride cariostatic actions (2 hours). |
| 5. | Dentin hypersensitivity – ethiopathomechanism, clinical symptoms, treatment, efficacy. |
| 6. | Oral health promotion – models o health promotion ( health care, health education, prevention) the WHO basic methods of oral health surveys, oral health indices - DMFT, SiC, CPI and others, global goals of oral health proposed by the WHO/FDI; global data of the WHO, regional epidemiological data, comparison of caries epidemiological situation between countries . |
| 7. |  Modern concepts and strategies of dental caries prevention. Caries risk assessment and prognosis of carious lesions development. Practical use of Cariogram - the interactive computer programme for evaluation of caries risk assessment and individually designed preventive measures. |

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| **Seminars****Semester 5**Designed students are obliged to prepare presentation (orally and in electronic form) . The presentation on CD should be deposited for assessment by tutor after the seminar.The competence of scheduled material will be verified in the form of test or essay at the end of each seminar and during the classes.

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| **No.** |  **Seminar topic** |
| 1. | 1.Oral clinical examination – teeth (caries, developmental and acquired abnormalities, non-carious dental defects), periodontal tissues (healthy and pathological changes of periodontal tissues), oral mucosa, salivary glands. 2. Investigations. Indices of dental caries, hygiene, dental plaque and periodontal tissues condition.3. Dental plaque, calculus – detection, removal. 4.Oral hygiene instruction, dietetic instruction5.Review of patient form  |
| 2. | 1.Classification of carious lesions according to Black and modern classifications2. Phases of cavity preparation according to Black and contemporary approach to particular stages of preparation3.Clinical problems: repair or replacement of a restoration, secondary caries, fracture of the tooth or a restoration, post treatment hypersensitivity |
| 3. | 1 Rules of cavity preparations for adhesive and non-adhesive restoration2. Methods of filing the cavity with various restorative materials (amalgam, GI composites)3. Layering technique of restoration- types, advantages and disadvantages4.Preventive restorative treatment ( PRR A and B), slot preparation, tunnel preparation, sandwich technique  5.Instruments used in restorative treatment: diagnostic instruments, instrument for preparation the tooth , placement and finishing the restoration, isolation of operative area, rubberdam , injections, matrices |
| 4. | 1.Restorative dental materials –phosphate cements, polycarboxylate cements, conventional and light-cured glass ionomer cements, cermets, compomers, composites (standard, packable and flow), giomers, amalgams; fissures sealants (composites and glass ionomers). - composition, properties, advantages and disadvantages, indications 2. Modern adhesive systems (IV-VII generation).3.Types of light-curing units and polymerization techniques.  |
| 5. | 1. Quality and quantity methods of early carious lesion detection. 2. Diagnosis of early carious lesion , making decision on invasive or non-invasive treatment.3. Diagnosis of caries in regard of localization the lesion |
| 6. | 1. Natural history of a caries and its determinants2.Clinical and microscopic appearance of a caries3. Caries of a crown and root  |
| 7. | 1. Non-conventional methods of cavity preparations CMCR- chemomechanical caries removal, ART- atraumatic restorative treatment, air abrasion technique, kinetic cavity preparation -KCP, sonic system, laser ozone therapy |
| 8. | Non-carious defects of hard tissue, definition of abrasion, erosion, abfraction etiopatomechanism, prevalence, clinical appearance, treatment and prevention |
| 9. | 1.Modern concepts of caries prevention. Prevention and control of caries progression. the concept of preventive treatment (non-invasive)Preventive and therapeutic treatment in elderly patients 3. Root caries development, clinical appearance, therapeutic and preventive treatment |
| 10. | 1.Esthetic reconstruction of lost hard tissue (cavity preparation, circumstances for optimal adhesion , selection of technique and material, finishing of the restoration2.Composite veeners.3.Reinforcment the retention of the restorations.4.Dicoloration of the teeth: etiology and treatment5. Bleaching of vital and non vital teeth( types techniques)6.Problems and complication of bleaching vital and non –vital teeth |

**Semester 6**

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| **No.** |  **Seminar topic** |
| 1. | 1.Morphology of the teeth in aspect of endodontic treatment. Classification of the root canal configurations 2.Endodontium- structure, function, therapeutic implications.3. Etiology and pathophysiology of the pulp and periapical tissues diseases. |
| 2. | Pulp diseases - etiology, patomechanism, classification - reversible and irreversible pulpopathies, symptoms, signs, differential diagnosis, diagnostic methods.  |
| 3. | Treatment of reversible pulpitis – methods of vital pulp treatment, indications and contraindications, prognosis, sequels; odontropic agents (calcium hydroxide, MTA, Biodentine, adhesive systems), healing of the pulp, treatment procedures, prognosis, complications. |
| 4. | Treatment of irreversible pulpitis. Root canal treatment stages (endodontic access, working length. |
| 5. | Chemo-mechanical preparation of the root canals.  |
| 6. | Obturation of the root canals: techniques , materials, effectiveness. |

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| **Practical classes****Semester 5**1. Introduction to clinical classes. Review of the regulation and credit requirements.

2. Repetition-of the knowledge acquired during the third and fourth semester. Clinical examination of the patient. Medical and dental history, extraoral and intraoral examination (students examine themselves ). Dental health forms. 3. Clinical examination of the patient.4. Clinical examination of the patient. Essay from seminars:1&25. Intraoral radiograms ( isometry, plain angle, bitewing technique, digital radiography .Conservative dental treatment of the patients. 6. Interpretation of intraoral radiograms. **Test from seminar 1-4.** Conservative dental treatment of the patients. 7. Interpretation of intraoral radiograms. Conservative dental treatment of the patients. 8. Conservative dental treatment of the patients.9. Conservative dental treatment of the patients.10. **Test from seminars 5-9.** Conservative dental treatment of the patients.11. Conservative dental treatment of the patients.12. Conservative dental treatment of the patients. 13. TEST for completing the course. Conservative dental treatment of the patients.14. Conservative dental treatment of the patients.15. Make up of backlogs. Credit of subject (winter semester). **Semester 6**1. Introduction to clinical classes. Review of the regulation and credit requirements. Conservative dental treatment of the patients.2. Repetition-of the knowledge acquired during the third and fourth semester. Clinical examination of the patient. Medical and dental history, extraoral and intraoral examination (students examine themselves ). Dental health forms. 3. Developmental teeth abnormalities regarding shape, number, position, morphology- etiology, diagnostic, differentiation, management .Conservative dental treatment of the patients Test4. Developmental teeth abnormalities regarding structure of the hard tissue -etiology, diagnostic, differentiation, management. Test. Clinical examination of the patient. 5. Conservative dental treatment of the patients. 6. Conservative dental treatment of the patients. 7. Teeth discoloration (staining)- etiology, mechanism, clinical signs and symptoms, therapeutic procedures, prevention). Test. Conservative dental treatment of the patients. 8. Conservative dental treatment of the patients.9. Dentin hypersensitivity – etiopathomechanism, clinical symptoms, treatment, efficacy. Test. Conservative dental treatment of the patients.10. Oral health promotion – models o health promotion ( health care, health education, prevention) the WHO basic methods of oral health surveys, oral health indices - DMFT, SiC, CPI and others, global goals of oral health proposed by the WHO/FDI; global data of the WHO, regional epidemiological data, comparison of caries epidemiological situation between countries Test. Conservative dental treatment of the patients.11. Modern concepts and strategies of dental caries prevention. Caries risk assessment and prognosis of carious lesions development. Practical use of Cariogram- the interactive computer program for evaluation of caries risk assessment and individually designed preventive measures. Conservative dental treatment of the patients.12. FINAL TEST for completing the course. Conservative dental treatment of the patients. 13. Conservative dental treatment of the patients.14. Conservative dental treatment of the patients.15. Make up of backlogs. Credit of subject (winter semester).  |
| **Basic literature** (list according to importance, no more than 3 items)1. Kidd E.A.M., Joyston-Bechal S.: Essentials of dental caries. 3rd ed. Oxford University Press, Oxford 2005.
2. Kidd E.A.M., Smith B.G.N., Watson T.F.: Pickard’s manual of operative dentistry. 8th ed. (repr.). Oxford University Press, Oxford 2011.
3. Tronstadt L.: Clinical endodontics: a textbook. 2nd ed. Georg Thieme Verlag, Stuttgart 2009.
4. Ingle J.I., Bakland L.K., Baumagartner J.C.: Endodontics . 6Th ed. 2008.

**Additional literature and other materials** (no more than 3 items)1. Cohen S., Hargreaves K.M.: Pathways of the pulp. 10th ed. Mosby Elsevier 2011.
2. Roberson T.M., Heymann H.O., Swift Jr. E.J. (ed.): Sturdevant’s art and science of operative dentistry. 5th ed. Elsevier Mosby, St. Louis 2006.
3. Summitt J.B. [et al.] (ed.): Fundamentals of operative dentistry: a contemporary approach. 3rd ed. Quintessence Publ., Chicago 2006.
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| **Didactic resources requirements** (e.g. laboratory, multimedia projector, other…)dental camera, multimedia projector, computer , models |
| **Preliminary conditions** (minimum requirements to be met by the student before starting the module/course)Student is admitted to 3rd year classes after successful completion of the final preclinical exam summarizing knowledge of the subject from the 2 nd year. |
| **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)Forms of completing the course: Credit form: theoretical knowledge and practical skills.**Credit conditions**:1. students have a right to be absent on 10% practical classes- which is 1 class in the semester (absence on more than 10% classes should be worked out with the tutor in the last week of the semester - acc. to the Study regulation)2 .theoretical knowledge should be credited with positive mark with the tutor3. practical skills should be credited positively with the tutor4. implementation of clinical procedures5. absence in the seminar - the crediting of the material termly 2 weeks**Treatment procedures on 3rd year (both semesters ):*** 20 cavities preparations and restorations
* endodontic treatment of 1 tooth
* completing the patients form for each new patient
* interpretation of the 8 radiograms (carietic and endodontic lesions), digital radiography analysis - 1 radiogram
* hygienic & dietetic instruction (presentation) 5 and at each new patient
* assisting – 2
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| **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 |
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| **Name and address of module/course teaching unit, contact: telephone and e-mail address**Dept. Of Conservative Dentistry and Pedodontics, Medical University of Wroclawul. Krakowska 26, WrocławTel.: (71) 784 0361, fax (71)784 03621 stomzach@umed.wroc.pl**Coordinator / Person responsible for module/course, contact: telephone and e-mail address**Prof. Urszula Kaczmarek, DDSTel.: (71) 784 0361 **urszula.kaczmarek@umed.wroc.pl****List of persons conducting specific classes: full name, degree/scientific or professional title, discipline, performed profession, form of classes**.Research and didactic workers employed in the Chair and Department of Conservative Dentistry and Pedodontics, with respective professional and research competences in the fields mentioned previously. Prof. Urszula Kaczmarek, DDS, PhD Dentistry, dentist - lectures, seminarsJoanna Kobierska-Brzoza, PhD Dentistry, dentist seminars, classesDagmara Piesiak-Pańczyszyn, BDS Dentistry, dentist seminars, classesAgnieszka Czajczyńska-Waszkiewicz,BDS Dentistry, dentist seminars, classesMarta Berdzik-Janecka, BDS Dentistry, dentist seminars, classesAgnieszka Urbańska, BDS Dentistry, dentist seminars, classesIwona Przywitowska,BDS Dentistry, dentist seminars, classesKowalczyk-Zając Małgorzata, PhD Dentistry, dentist classesTomasz Staniowski, PhD Dentistry, dentist seminarsNatalia Jawor, BDS Dentistry, dentist seminarsAndżelika Szymonajtis-Magiera, BDS Dentistry, dentist seminars

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| **Date of Syllabus development**  | **Syllabus developed by**  |
| 20.06.2019 |  Agnieszka Czajczyńska-Waszkiewicz, BDS |
| **Signature of Head of teaching unit** |
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**Signature of Faculty Dean**  |
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