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Syllabus for academic year 2021/2022 Education cycle: 2018/2019-2022/2023													
Description of the course													
Subject name	Paediatric Dentistry and Preventive Dentistry						Group of specific learning outcomes						
							Group class (code of the group) F			Group name Directional clinical sciences (Practical)			
Faculty	Faculty of dentistry												
Field of studies	Dentistry												
Level of studies	X Uniform magister studies												
Form of studies	X full-time X part-time												
Year of studies	IV					Semester	X winter X summer						
Type of course	X obligatory												
Language	X English												
Number of hours													
Form of education													
	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)	Foreign language Course (FLC)	Physical Education obligatory (PE)	Vocational Practice (VP)	Self-Study (Student's own work)	E-learning (EL)
<b>Winter Semester:</b>													
Dept. of Paediatric Dentistry and Preclinical Dentistry													
Direct Education <sup>1</sup>		21			60								
Remote Education <sup>2</sup>													
<b>Summer Semester:</b>													
Dept. of Paediatric Dentistry and Preclinical Dentistry													
Direct education		21			60								
Remote education													
<b>Total per year:</b>													
Dept. of Paediatric Dentistry and Preclinical													

<b>Dentistry</b>													
<b>Direct contact education</b>		<b>42</b>			<b>120</b>								
<b>Distance education</b>													
<b>Educational objectives</b>													
<p><b>C1.</b> To familiarize students with the basic and specialized knowledge in the diagnosis and treatment of oral cavity diseases in children and adolescents.</p> <p><b>C2.</b> Preparing students to perform individual caries risk assessment, establishing the treatment plan and recommendations for young patients.</p> <p><b>C3.</b> Preparing students to perform restorative treatment of carious and non-carious hard dental tissue lesions as well as endodontic treatment of patients in the developmental age.</p> <p><b>C4.</b> To familiarize students with the implications of dental treatment in a patient with systemic diseases.</p> <p><b>C5.</b> Preparing students for active participation in oral health promotion and formulation of preventive programmes.</p> <p><b>C6.</b> Preparing students for management of dental anxiety and fear of a patient in developmental age.</p>													
<b>Learning outcomes for the subject in relation to the methods of verifying the intended learning outcomes and the form of carrying out the classes</b>													
Number of detailed learning effect	Student who completes the course knows/is able to					Methods of verification of intended education results (forming and summarising)			Form of didactic class **				
F.W2.	Knows and describes the principles of prophylactic and therapeutic procedures in diseases of the masticatory system at different stages of the development					Obtaining formulation marks in each practical class and passing the MCQ summary test (S)			SE,CC				
F.W4.	Knows and describes the symptoms, course and procedures in specific diseases of the oral cavity, head and neck, taking into account age groups;												
F.W5.	Knows the rules of conduct in the case of diseases of the pulp, mineralized tissues of teeth and injuries of teeth and bones of the face;								SE,CC				
F.W6.	Knows the rules of conduct in the case of diseases of the periapical tissues;								SE,CC				
F.W7.	Knows the morphology of the pulp of teeth, the principles of endodontic treatment and instruments used in this treatment;								SE,CC				
F.W12.	Knows the causes of complications of the stomatognathic system diseases and the rules of conduct in the event of such complications;								SE,CC				
F.W20.	Knows the pathomechanism of the impact of general diseases or applied therapies in the oral cavity;								SE,CC				
F.U1.	Performs a medical interview with the patient or their family;								Realization of given task and completion of procedures			CC	
F.U2.	Performs a dental physical examination of the patient;					Realization of given task and completion of procedures			CC				

F.U3.	Applies the ability to explain the essence of the patient's symptoms, determines the treatment method by confirmed and conscious consent of the patient's and prognosis of the treatment;	Realization of given task and completion of procedures	CC
F.U6.	Can interpret the results of additional tests and consultations;	Realization of given task and completion of procedures	CC
F.U7.	Can determine indications and contraindications to perform a specific procedure dental;	Realization of given task and completion of procedures	SE,CC
F.U11.	Applies the ability to keep current patient records, issue a referral for additional tests or specialized dental and general medical treatment;	Realization of given task and completion of procedures	CC,VC
K01	Cooperates in a group of professionals, critically evaluates their own and co-workers' actions while respecting the differences in worldview and culture	<u>Summarizing methods:</u> - constant evaluation by the teacher (observation)  <u>Shaping methods:</u> - observation of student's work	SE,CC
K02	Forms opinions on various aspects of professional activity and seeking expert advice in case of difficulties in solving problems on their own	<u>Summarizing methods:</u> - constant evaluation by the teacher (observation)  <u>Shaping methods:</u> - observation of student's work	SE,CC

L - lecture; SE - seminar; AC – auditorium classes; MC – major classes (non-clinical); CC – clinical classes; LC – laboratory classes; 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.

#### Student's amount of work (balance of ECTS points)

Student's workload (class participation, activity, preparation, etc.)	Student Workload
1. Hours in direct contact:	162
2. Hours of distance learning:	-
3. Student's own work (self-study):	48
4. Guided self-study hours:	-
Total student's workload:	210
<b>ECTS points for the course:</b>	<b>7</b>

**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)

**Seminars - Winter Semester (7x 3h)**

### Seminar 1

- Communication with a patient of developmental age (verbal and non-verbal; doctor-parent-child triad)
- Methods of adapting a child to dental treatment: behavioural, non-pharmacological, communication techniques (presence vs. absence of parents), protective (stabilization and immobilization) and pharmacological techniques (sedation, general anesthesia)
- Child's behaviour in the dental office in terms of individual development, factors influencing behaviour - dental anxiety of mother and child, classification of child's behaviour in a dental office

### Seminar 2

- Development of deciduous and permanent teeth (phases and time of eruption; resorption of deciduous teeth, mechanism of eruption, periods of eruption; phases of root development (apexogenesis)
- Eruption disorders (local, general, site and time of eruption)
  - Anatomy and histology of deciduous teeth and immature permanent teeth (differences in the structure of deciduous and permanent teeth, therapeutic aspect)

### Seminar 3

- Dental caries in primary dentition - early childhood caries (ECC), epidemiology, definition, classification, main etiological and disposition factors; determining the risk of dental caries)
- Preventive procedures, specifics of cavity preparation, materials for restoration of the deciduous teeth, reconstruction of the anterior and lateral milk teeth, factors determining the selection of the restorative material in the aspect of advancement of carious lesion and age of the patient, atraumatic reconstructive treatment (ART, IRT technique), consequences of untreated caries

### Seminar 4

- Dental caries in immature permanent teeth; factors determining the development of caries on the occlusal surfaces of permanent teeth, diagnosis, assessment of the advancement of carious changes in terms of the choice of therapeutic treatment
- Protection against caries of erupting first molars; sealing pits and fissures - indications and contraindications, choice of material. Minimally invasive treatment: preventive restoration - PRR type 1 (extended sealing) and type 2 (preventive restoration), cavity preparation, restoration materials; selection of the cavity preparation method and restorative material in terms of the advancement of the lesion

### Seminar 5

- The child's first visit to the dentist's office, time and course of the visit
- Pro-health education of a pregnant woman.
- Motivation to pro-health attitudes of mother and child

### Seminar 6

- Caries prevention in children (prenatal, perinatal, postnatal).
- Transmission of cariogenic bacteria, the window of infectivity.
- Cariogenicity of carbohydrates.

### Seminar 7

- Oral hygiene - toothpastes, mouthrinses - composition, properties, types, brushes and indications, brushing techniques, cleaning the tongue, cleaning the interdental spaces, checking the effectiveness of brushing.
- Fluoride prophylaxis- professional and home.

### **Seminars - Summer Semester (7x 3h):**

#### Seminar 1

- Diseases of the pulp of primary teeth: etiopathogenesis, symptomatology, classifications, diagnostics. Medicaments and materials in endodontic treatment of primary teeth. Complications during and after treatment, prognosis.

#### Seminar 2

- Pulp diseases of immature permanent teeth: etiopathogenesis, symptomatology, classification, diagnosis, treatment and prognosis
- Treatment – medicaments and materials used in endodontic treatment
- Complications during and after treatment
- Apexification and apexogenesis

#### Seminar 3

- Post-traumatic tooth injuries: etiology, epidemiology, classifications, interview, additional examinations. Protocol of dealing with traumatic injuries.

- Injuries of deciduous teeth: frequency of injuries, etiology, symptoms, diagnosis, therapeutic protocol to be followed, prognosis, follow-up visits, complications - impact of injuries on permanent tooth buds. Prevention of traumatic tooth injuries

#### Seminar 4

- Injuries of permanent teeth: frequency of injuries, etiology, symptoms, examinations, therapeutic protocol to be followed, prognosis, complications after dental injuries: presentation of the therapeutic management of clinical cases. Prevention of traumatic tooth injuries

- Autotransplantation - patient and tooth selection, prognosis.

- Radiology regarding traumatic injuries.

#### Seminar 5

- Injury prevention, risk factors and risk groups (standard and individual splints)

- Differentiation of injuries: accidental and intentional (abused child), protocol in the case of suspected child abuse.

#### Seminar 6

- Prosthetic treatment during the developmental age

1) Diagnosis and qualification of the patient for treatment

2) Prosthetic treatment aged 0-6 years

3) Prosthetic treatment aged 6-12 years

4) Prosthetic treatment aged 12-18 years

5) Interdisciplinary treatment

6) Implant prosthetic treatment

#### Seminar 7

- Periodontal and gingival diseases in developmental age, clinical examination, assessment of the condition of periodontium and hygiene (indicators: BPE - basic periodontal examination, GI- gingival index, PI - plaque index, API – apoximal plaque index, GOI – gingival overgrowth index, additional examinations; radiological), treatment procedures, prognosis.

### **Practical Classes – Winter Semester (15x4h):**

#### Practical Class 1 – Discussion of topic I

- Communication with a patient of developmental age (verbal and non-verbal; doctor-parent-child triad)

- Methods of adapting a child to dental treatment: behavioural, non-pharmacological, communication techniques (presence vs. absence of parents), protective (stabilization and immobilization) and pharmacological techniques (sedation, general anaesthesia).

- Child's behaviour in the dental office in terms of individual development, factors influencing behaviour - dental anxiety of mother and child, classification of child's behaviour in a dental office

- Discussion of the patient's card with particular emphasis on oral cavity indicators.

- Performing clinical procedures.

#### Practical Class 2 – Discussion of topic II

- Development of deciduous and permanent teeth (phases and time of eruption; resorption of deciduous teeth, mechanism of eruption, periods of eruption; phases of root development (apexogenesis)

- Eruption disorders (local, general, site and time of eruption).

- Anatomy and histology of deciduous teeth and immature permanent teeth (differences in the structure of deciduous and permanent teeth, therapeutic aspect).

- Performing clinical procedures.

#### Practical Class 3

- Credit test from topic I and II – 10 questions.

- Performing clinical procedures.

#### Practical Class 4 – Discussion of topic III

- Dental caries in primary dentition - early childhood caries (ECC), epidemiology, definition, classification, main etiological and disposition factors; determining the risk of dental caries)

- Preventive procedures, specifics of cavity preparation, materials for restoration of the deciduous teeth, reconstruction of the anterior and lateral milk teeth, factors determining the selection of the restorative material in the aspect of advancement of carious lesion and age of the patient, atraumatic reconstructive treatment (ART, IRT technique), consequences of untreated caries.

- Performing clinical procedures.

#### Practical Class 5 – Discussion of topic IV.

- Dental caries in immature permanent teeth; factors determining the development of caries on the occlusal surfaces of permanent teeth, diagnosis, assessment of the advancement of carious changes in terms of the choice of therapeutic treatment.
- Protection against caries of erupting first molars; sealing pits and fissures - indications and contraindications, choice of material. Minimally invasive treatment: preventive restoration - PRR type 1 (extended sealing) and type 2 (preventive restoration), cavity preparation, restoration materials; selection of the cavity preparation method and restorative material in terms of the advancement of the lesion.
- Performing clinical procedures.

#### Practical class 6.

- Credit test from topic III and IV – 10 questions.
- Performing clinical procedures.

#### Practical class 7 – Discussion of topic V

- The child's first visit to the dentist's office, time and course of the visit
- Pro-health education of a pregnant woman.
- Motivation to pro-health attitudes of mother and child.
- Performing clinical procedures.

#### Practical Class 8 – Discussion of topic VI

- Caries prevention in children: (primary primary, primary, secondary, tertiary).
- Transmission of cariogenic bacteria, infectivity windows.
- Carcinogenicity of carbohydrates.
- Performing clinical procedures.

#### Practical Class 9 – Discussion of topic VII

- Oral hygiene in children and adolescents - toothpastes, rinses, brushes, auxiliaries.
- Performing clinical procedures.

#### Practical Class 10 – Discussion of topic VIII

- Caries risk assessment, definition, estimation methods (CAMBRA, CRA, Cariogram), oral hygiene indicators, examination of the parameters of saliva with the help of tests.
- Performing clinical procedures.

#### Practical Class 11

- Credit test from topic V to VIII – 10 questions.
- Performing clinical procedures.

#### Practical Class 12 – Discussion of topic IX

- The importance of fluoride in caries prophylaxis: cariostatic mechanisms of fluoride action, methods of fluoridation, fluoride compounds used. Fluoride toxicology: toxic doses, fluorosis, safety of fluoride compounds.
- Performing clinical procedures.

#### Practical Class 13 – Discussion of topic X

- Fluoride prevention methods of dental caries (arginine, probiotics, calcium-sodium phosphosilicate, complex of phosphopeptide caseinate and amorphous phosphate calcium, xylitol, chlorhexidine)
- Performing clinical procedures.

#### Practical Class 14

- Credit test from topic IX to X– 10 questions.
- Performing clinical procedures.

#### Practical Class 15

- Final crediting test of the 7<sup>th</sup> semester from topic I to X – 20 questions
- Performing clinical procedures.

### **Practical Classes – Summer Semester (15x4h):**

#### Practical Class 1 – Discussion of topic I

- Diseases of the pulp of primary teeth: etiopathogenesis, symptomatology, classifications, diagnostics, treatment.
- Performing clinical procedures.

#### Practical Class 2 – Discussion of topic II

- Treatment - Medicaments and materials in endodontic treatment of primary teeth
- Complications during and after treatment, prognosis.

- Performing clinical procedures.

Practical Class 3 – Discussion of topic III

- Pulp diseases of immature permanent teeth: etiopathogenesis, symptomatology, classification, diagnosis, treatment and prognosis

- Treatment – medicaments and materials used in endodontic treatment

- Complications during and after treatment

- Performing clinical procedures.

Practical Class 4 – Discussion of topic IV

- Apexification and apexogenesis

- Performing clinical procedures.

Practical Class 5

- Credit test from topic I to IV – 10 questions.

- Performing clinical procedures.

Practical Class 6 – Discussion of topic V

- Post-traumatic tooth injuries: etiology, epidemiology, classifications, interview, clinical extra-oral and intra-oral examinations, radiological examinations.

- Protocol of dealing with traumatic injuries.

- Performing clinical procedures.

Practical Class 7 – Discussion of topic VI

- Injuries of deciduous teeth: types of injuries, interview, clinical and radiological examination, therapeutic protocol to be followed in particular injuries, prognosis, follow-up visits.

- Performing clinical procedures.

Practical Class 8 – Discussion of topic VII

- Injuries of permanent teeth: types of injuries, interview, clinical and radiological examination, therapeutic protocol to be followed in particular injuries, prognosis, follow-up visits.

- Performing clinical procedures.

Practical Class 9 – Discussion of topic VIII

- Consequences and prevention of traumatic injuries.

- Performing clinical procedures.

Practical Class 10

- Credit test from topic V to VIII – 10 questions.

- Performing clinical procedures.

Practical Class 11 – Discussion of topic IX

- Periodontal and gingival diseases in developmental age, clinical examination, assessment of the condition of periodontium and hygiene (indicators: BPE - basic periodontal examination, GI- gingival index, PI - plaque index, API – aproximal plaque index, GOI – gingival overgrowth index, additional examinations; radiological), treatment procedures, prognosis.

- Performing clinical procedures.

Practical Class 12

- Credit test from topic IX – 10 questions.

- Performing clinical procedures.

Practical Class 13 – Discussion of topic X

- Dental radiology in paediatric dentistry: general information, types of X-rays used in the diagnosis and treatment of children, radiological interpretation of X-rays in developmental age. Radiological image at various stages of masticatory organ development.

- Principles of radiological protection in the developmental age.

- Performing clinical procedures.

Practical Class 14

- Credit test from topic X – 10 questions.

- Performing clinical procedures.

Practical Class 15

- Final crediting test of the 8<sup>th</sup> semester from topic I to X – 20 questions

- Performing clinical procedures.

Basic literature:

1. Cameron A.C., Widmer R.P.: Handbook of pediatric dentistry. 3rd ed. Mosby, St. Louis 2013

2. Koch G., Poulsen S.: Pediatric dentistry: a clinical approach. Blackwell Munksgaard, Iowa 2009
3. Welbury R.R., Duggal M.S., Hosey M.T.: Pediatric dentistry. 3rd ed. Oxford University Press, Oxford 2005

Additional literature and other materials:

1. Andreasen J.O., Bakland L.K., Flores M.T., Andreasen F.M.: Traumatic dental injuries. Manual. 2011
2. Scully C., Welbury R.: A color atlas of orofacial health and disease in children and adolescents: diagnosis and management. 2001
3. McDonald R.E., Avery D.R., Dean J.A.: Dentistry for the child and adolescent. Elsevier 2011

#### Preliminary conditions

Student is admitted to 4th year classes after successful completion of the final test summarizing knowledge of the restorative dentistry subject from the 3rd year.

#### Conditions to receive credit for the course

##### CONDITIONS TO RECEIVE CREDIT FOR EACH SEMESTER

1. Obtaining credit for the seminar topics in the winter and summer semester
2. Obtaining positive grades from oral discussions in the winter and summer semester
3. Obtaining a positive test result (at least 61% of correct answers) in the practical classes and seminars: semester credit tests in the winter and summer semester consisting of 20 questions
4. Performing obligatory practical procedures for patients in the winter and summer semester including:
  - I. Restoring 15 cavities in deciduous and permanent immature teeth, including:
    - One surface restorations – 8
    - Two surface restorations – 4
    - Three and more surface restorations – 3
  - II. Endodontic treatment of 3 teeth (4 canals) primary and immature permanent teeth.
  - III. Medical history of each new patient
  - IV. Interpretation of at least 2 radiographs
  - V. Hygienic and dietary instruction for each first-time patient
  - VI. Control of preventive recommendations
5. Assessment takes place in direct contact with a teacher. In justified cases, the Rector's decision may take place remotely.

Grade:	Criteria for passing the semester test - MCQ test - 20 questions (11 verksator + 4 distractors)
Credit	>12
No Credit	<11

Name of department of the course:	Dept. of Paediatric Dentistry and Preclinical Dentistry
Address of the department:	Wrocław, Krakowska 26
Telephone number:	(71) 7840362
E-mail:	<a href="mailto:stomdzieci@umed.wroc.pl">stomdzieci@umed.wroc.pl</a>

Person responsible for the subject:	Dr hab.n.med. Maciej Dobrzyński, prof.UMW
Telephone number:	(71) 7840362
E-mail:	<a href="mailto:maciej.dobrzynski@umed.wroc.pl">maciej.dobrzynski@umed.wroc.pl</a>

List of persons conducting classes:

Name and Surname:	Degree/scientific or professional title:	Discipline:	Performed profession:	Form of classes:
Urszula Kaczmarek	PhD, DDS, Prof	Medical science	Academic teacher/dentist/prof	L



Maciej Dobrzyński	PhD, DDS, Prof. UMW	Medical science	Academic teacher/dentist	L, CC
Małgorzata Kowalczyk-Zajac	PhD, DDS		Academic teacher/dentist	CC
Dagmara Piesiak-Pańczyszyn	DDS		Academic teacher/dentist	CC, SE
Marta Berdzik-Janecka	DDS		Academic teacher/dentist	CC, SE
Martina Gutbier	DDS		Academic teacher/dentist	CC, SE

**Date of Syllabus development**

02.09.2021

**Syllabus developed by**

Martina Gutbier

**Signature of the Head of the teaching unit:**

**Signature of Faculty Dean**

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prof. dr hab. Marcin Mikulewicz

Uniwersytet Medyczny we Wrocławiu  
WYDZIAŁ  
STOMATOLOGICZNY  
DZIECIĘCY

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Uniwersytet Medyczny we Wrocławiu  
Wydział Lekarsko-Stomatologiczny  
KATEDRA / ZAKŁAD  
STOMATOLOGII DZIECIĘCEJ  
I STOMATOLOGII PRZEDKLINICZNEJ  
kierownik

dr hab. n. med. Maciej Dobrzyński, profesor uczelni

