



## Orthodontics

<b>1. IMPRINT</b>	
<b>Academic Year</b>	2023/2024
<b>Faculty</b>	Faculty of Medicine and Dentistry
<b>Field of study</b>	English Dentistry Division
<b>Main scientific discipline</b>	Medical science
<b>Study Profile</b>	General academic
<b>Level of studies</b>	1 <sup>st</sup> level
<b>Form of studies</b>	Stationary
<b>Type of module / course</b>	Obligatory
<b>Form of verification of learning outcomes</b>	Exam
<b>Educational Unit</b>	Department of Orthodontics, Medical University of Warsaw ul. Binińskiego 6, 02-097 Warszawa, tel.: 22 116 64 54 e-mail: ortodoncja@wum.edu.pl

<b>Head of Educational Unit</b>	Prof. dr hab. n. med. Małgorzata Zadurska
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<b>Person responsible for syllabus</b>	Dr hab. n. med. Ewa Czochońska, e-mail: ewa.czochońska@wum.edu.pl
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<b>2. BASIC INFORMATION</b>			
<b>Year and semester of studies</b>	5 <sup>th</sup> year, 9 <sup>th</sup> and 10 <sup>th</sup> semester	<b>Number of ECTS credits</b>	6
<b>FORMS OF CLASSES</b>		<b>Number of hours</b>	<b>ECTS credits calculation</b>
<b>Contacting hours with academic teacher</b>			
Lecture (L)		-	-
Seminar (S)		10	0,34
Discussions (D)		80	3,23
e-learning (e-L)		5	0,17
Practical classes (PC)		-	-
Work placement (WP)		-	-
<b>Unassisted student's work</b>			
Preparation for classes and completions		50	2

<b>3. COURSE OBJECTIVES</b>	
C1	Consolidation of knowledge related to the recognition of malocclusion and dental anomalies.
C2	Consolidation of knowledge related to an examination and diagnostic methods in orthodontics.
C3	Consolidation of knowledge related to etiology and epidemiology of malocclusions.

C4	Consolidation of knowledge related to orthodontic prophylaxis.
C5	Consolidation of knowledge related to the management of medical documentation.
C6	Consolidation of knowledge related to anamnesis and clinical examination of a patient.
C7	Diagnosis of a malocclusion.
C8	Planning of orthodontic treatment.
C9	Learning the principles of a holistic approach in orthodontics.
C10	Management of dentofacial deformities.

#### 4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING

Code and number of effects of learning in accordance with standards of learning	Effects in time
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##### Knowledge – Graduate\* knows and understands:

C.W33.	basic clinical procedures of orthodontic prophylaxis
F.W1.	occlusal norms at different stages of individual development and deviations from the norms
F.W2.	principles of prophylactic and therapeutic procedures in diseases of the masticatory system at various stages of development
F.W4.	symptoms, course and management in selected diseases of the oral cavity, head and neck, considering age groups
F.W12.	causes of complications of the stomatognathic system diseases and the principles of management in case of such complications
F.W14.	methods of masticatory apparatus rehabilitation
F.W15.	therapeutic methods of pain reduction and relief and anxiety and stress reduction
F.W17.	principles of construction and application of removable and fixed orthodontic appliances
F.W18.	principles of radiological diagnostics
F.W19.	pathomechanism of oral disease impact on general health
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

##### Skills– Graduate\* is able to:

C.U16.	plan basic stages of preventive care in patients with orthodontic needs
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 the symptoms to the patient, determine the method of treatment confirmed by the patient's informed consent and prognosis
F.U4.	provide the patient or his family with information about poor prognosis
F.U6.	interpret results of additional tests and consultations
F.U7.	determine indications and contraindications for a specific dental procedure
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.U12.	define research issues in the field of dentistry
F.U13.	present selected medical issues verbally or in writing in a manner appropriate to the level of recipients
F.U15.	advise treatment of diseases of stomatognathic system tissues
F.U18.	diagnose, differentiate and classify malocclusions
F.U19.	provide help in case of damage to the orthodontic appliance
F.U20.	make simple orthodontic appliances
F.U21.	carry out treatment to prevent malocclusion during the period of primary and early mixed dentition
F.U23.	describe dental and panoramic radiographs
G.U15.	provide the patient with the necessary information on oral health awareness
G.U20.	work in accordance with the principles of ergonomic work organization
G.U26.	keep medical records

### 5. ADDITIONAL EFFECTS OF LEARNING *(non-compulsory)*

Number of effects of learning	Effects of learning in time
<b>Knowledge – Graduate knows and understands:</b>	
W1	
<b>Skills– Graduate is able to:</b>	

U1	
<b>Social Competencies – Graduate is ready for:</b>	
K1	

<b>6. CLASSES</b>		
<b>Form of class</b>	<b>Class contents</b>	<b>Effects of Learning</b>
Seminars	<p>S1 – Seminar 1 – Impacted teeth – treatment management. Definition of an impacted tooth, etiology, epidemiology and diagnosis of tooth impaction, methods of treatment of tooth impaction, possibilities of orthodontic and surgical treatment, complications.</p> <p>S2 – Seminar 2 – Interdisciplinary treatment of morphological malocclusions. Description of the main principles for treatment of morphological malocclusions, types and classification of skeletal malocclusions, factors of importance for treatment planning of skeletal malocclusions, aims and therapeutical possibilities of interdisciplinary treatment.</p> <p>S3 – Seminar 3 – Application of cephalometric diagnosis in orthodontic treatment. Summary of cephalometric analysis and presentation of WUM analysis. Application of the results of cephalometric analysis in planning and evaluation of orthodontic treatment.</p> <p>S4 – Seminar 4 – Orthodontic treatment in different age groups. Differentiation between age groups regarding planning of orthodontic treatment. Extraction versus non-extraction treatment. Interdisciplinary adult orthodontic treatment.</p>	<p>C.W33., F.W1., F.W3., F.W5., F.W14., F.W16., F.W18., F.W20., F.W21., F.W22.</p> <p>F.W1., F.W3., F.W5., F.W14., F.W16., F.W18., F.W20., F.W21., F.W22.</p> <p>F.W4., F.W18., F.U6., F.U11., F.U12., F.U15., F.U18., F.U23., G.U26.</p> <p>C.W33., F.W1., F.W2., F.W4., F.W17., F.W23., C.U16., F.U7., F.U15., F.U18., F.U21., G.U15.</p>
Exercises	<p>Excercises – 1 semester</p> <p>C1 – Entry colloquium in the scope of the 4th year program in orthodontics and discussion of the results. Presentation of principles of work during exercises in relation to sanitary and epidemiological regulations as well as occupational health and safety, the application of standards contained in the code of medical ethics, showing respect for the patient and his family, and understanding for ideological and cultural differences. Getting to know the orthodontic instruments.</p> <p>C2 – Principles of treatment in orthodontic patients and how to collect and keep orthodontic records, filling out an orthodontic chart: anamnesis. Getting to know the orthodontic instruments.</p> <p>C3 – Principles of treatment in orthodontic patients and how to collect and keep orthodontic records, filling out an orthodontic chart: clinical examination. Getting to know how to write a referral to other specialists.</p> <p>C4 – Principles of treatment in orthodontic patients and how to collect and keep orthodontic records, filling out an orthodontic chart: analysis of additional records.</p> <p>C5 – Principles of treatment in orthodontic patients and how to collect and keep orthodontic records, filling out an orthodontic chart: cephalometric analysis.</p>	<p>C.W33., F.W1., F.W3., F.W5., F.W14., F.W16., F.W18., F.W20., F.W21., C.U16., F.U1.-F.U4., F.U6.-F.U9., F.U11., F.U13.-F.U15., F.U18., F.U21.-F.U24., G.U39.</p> <p>F.W1., F.W3., F.W5., F.W14., F.W16., F.W18., F.W20., F.W22., F.U1., G.U39.</p> <p>F.W1., F.W3., F.W5., F.W14., F.W16., F.W18., F.W20., F.W22., F.U2., G.U39.</p> <p>F.W1., F.W3., F.W5., F.W14., F.W16., F.W18., F.W20., F.W22., F.U6., G.U39.</p> <p>F.W1., F.W3., F.W5., F.W14., F.W16., F.W18.,</p>

		F.W20., F.W22., F.U6., G.U39.
	C6 – Taking impressions for diagnostic models and making photographic documentation.	F.U6, F.U7., F.U13., G.U39.
	C7 – Taking impressions for diagnostic models and making photographic documentation, continued.	F.U6, F.U7., F.U13., G.U39.
	C8 – Registration and taking a construction bite.	F.U6, F.U7., F.U13., G.U39.
	C9– Registration and taking a construction bite. continued	F.U6, F.U7., F.U13., G.U39.
	C10 – Analysis of orthodontic documentation, describing goals and methods of orthodontic.	C.W33., F.W1., F.W3., F.W5., F.W14., F.W16., F.W18., F.W20., F.W21., F.W22., C.U16., F.U6., F.U7., F.U8., F.U9., F.U13., F.U18., F.U21., F.U24., G.U39.
	C11 – Analysis of orthodontic documentation, describing goals and methods of orthodontic, continued. – e-learning	C.W33., F.W1., F.W3., F.W5., F.W14., F.W16., F.W18., F.W20., F.W21., F.W22., C.U16., F.U6., F.U7., F.U8., F.U9., F.U13., F.U18., F.U21., F.U24., G.U39.
	C12 – Analysis of orthodontic documentation, describing goals and methods of orthodontic, continued. – e-learning	C.W33., F.W1., F.W3., F.W5., F.W14., F.W16., F.W18., F.W20., F.W21., F.W22., C.U16., F.U6., F.U7., F.U8., F.U9., F.U13., F.U18., F.U21., F.U24., G.U39.
	C13 – Presenting the orthodontic treatment plan to the patient and his guardians and obtaining informed consent for treatment.	C.U33., F.W1., F.W3., F.W5., F.W14., F.W16., F.W18., F.W20., F.W21., F.W22., C.U16., F.U3., F.U4., F.U6., F.U7., F.U8., F.U9., F.U11., F.U15., F.U18., F.U21., F.U24., G.U39.
	C14 – Principles of prescribing orders for a removable appliance or a thick-arch fixed appliance in an orthodontic laboratory.	F.W5., F.W16., F.W20., F.W21., F.W22., F.U9., F.U11., F.U18., F.U21., F.U23., G.U39.
	C15 – Delivery of a removable orthodontic appliance and instructions on how to use it.	F.W1., F.W3., F.W5., F.W14., F.W16., F.W18., F.W20., F.W21., F.W22., F.U3., F.U4., F.U6., F.U7., F.U8., F.U9., F.U11., F.U15., F.U18., F.U21., F.U23., F.U24., G.U39.
	Exercises – 2 semester	
	C1 – Delivery of removable orthodontic appliances and instructions on how to use them.	C.W33., F.W1., F.W3., F.W5., F.W14., F.W16.,

	<p>Hygienic recommendations for patients using orthodontic appliances.</p> <p>C2 – Principles of first aid in the event of damage to removable orthodontic appliances and description of the order to the orthodontic laboratory.</p> <p>C3 – Delivery of orthodontic appliances or conduction of treatment to prevent development of malocclusion during deciduous and mixed dentition.</p> <p>C4 – Delivery of orthodontic appliances or conduction of treatment to prevent development of malocclusion during mixed and permanent dentition</p> <p>C5 – Delivery of orthodontic appliances or conduction of treatment to prevent development of malocclusion during mixed and permanent dentition, continued.</p> <p>C6 – Principles of planning orthodontic treatment in cooperation with other specialists as a part of an interdisciplinary team.</p> <p>C7 – Planning orthodontic treatment in patients with malocclusions in the fronto-orbital plane.</p> <p>C8 – Planning orthodontic treatment in patients with malocclusions in the saggital plane.</p> <p>C9 – Planning orthodontic treatment in patients with malocclusions in the Frankfurt plane.</p> <p>C10 – Planning orthodontic treatment in patients with dental anomalies.</p> <p>C11 – Evaluation of orthodontic treatment outcomes in patients with deciduous and mixed dentition.</p>	<p>F.W18., F.W20., F.W21., F.W22., C.U16., F.U3., F.U4., F.U6., F.U7., F.U8., F.U9., F.U11., F.U15., F.U18., F.U21., F.U23., F.U24., G.U39.</p> <p>F.W14., F.U4., F.U15., F.U22., G.U39.</p> <p>C.W33., F.W1., F.W3., F.W5., F.W16., F.W20., F.W22., C.U16., F.U3., F.U4., F.U7., F.U8., F.U9., F.U13., F.U15., F.U18., F.U21., F.U23., F.U24., G.U39.</p> <p>C.W33., F.W1., F.W3., F.W5., F.W16., F.W20., F.W22., C.U16., F.U3., F.U4., F.U7., F.U8., F.U9., F.U13., F.U15., F.U18., F.U21., F.U23., F.U24., G.U39.</p> <p>C.W33., F.W1., F.W3., F.W5., F.W16., F.W20., F.W22., C.U16., F.U3., F.U4., F.U7., F.U8., F.U9., F.U13., F.U15., F.U18., F.U21., F.U23., F.U24., G.U39.</p> <p>F.W1., F.W3., F.W5., F.W14., F.W16., F.W18., F.W20., F.W21., F.U1.-F.U4., F.U6.-F.U9., F.U11., F.U13.-F.U15., F.U18., F.U21.-F.U24., G.U39.</p> <p>C.W33., F.W1., C.U16., F.U6., F.U21</p> <p>C.W33., F.W1., C.U16., F.U6., F.U21</p> <p>C.W33., F.W1., C.U16., F.U6., F.U21</p> <p>C.W33., F.W1., F.W21., C.U16., F.U1., F.U2., F.U6., F.U21.</p> <p>F.W5., F.W14., F.W20., F.U3., F.U4., F.U6., F.U8., F.U11., F.U15., F.U21., F.U22., G.U39.</p> <p>F.W5., F.W14., F.W20.,</p>
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	<p>C12 – Evaluation of orthodontic treatment outcomes in patients with late mixed dentition.</p> <p>C13 – Evaluation of orthodontic treatment outcomes in patients with permanent dentition.</p> <p>During classes the student treats patients, who are coming for appointments scheduled by an assistant.</p> <p>Once a week a review class is held, in which students deliver presentations on a prepared subject (diagnosis of malocclusion, methods of orthodontic treatment, orthodontic appliances, developmental deformities), after 2 or 3 subjects a written test is performed</p>	<p>F.U3., F.U4., F.U6., F.U8., F.U11., F.U15., F.U21., F.U22., G.U39.</p> <p>F.W5., F.W14., F.W20., F.U3., F.U4., F.U6., F.U8., F.U11., F.U15., F.U21., F.U22., G.U39.</p>
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## 7. LITERATURE

### Obligatory

1. Preclinical orthodontics. Zadurska M & Czochrowska E. Dział Wydawnictw Warszawskiego Uniwersytetu Medycznego 2016.
2. Zarys Ortodoncji Współczesnej. Red. Ireny Karłowskiej. PZWL 2016.
3. Ortopedia szczekowa. Red. Florentyna Łabiszewska-Jaruzelska. PZWL 1997.
4. Contemporary Orthodontics 5th edition, Vol. 1. Part 2 chapter 3,4,5; Part 3 chapter 6. Proffit WR, Fields HW, Sarver DM. Elsevier, 2009.
5. Materiały i techniki ortodontyczne pod red. Anny Komorowskiej. Polskie Towarzystwo Ortodontyczne, Lublin 2009.

### Supplementary

1. Handbook of orthodontics. 2<sup>nd</sup> edition. Cobourne M, DiBiase A, Elsevier 2015.
2. Wybrane choroby dziedziczne i wady rozwojowe w praktyce stomatologicznej pod red. Barbary Siemińskiej-Piekarczyk, Małgorzaty Zadurskiej. Med Tour Press International 2008.
3. Orthodontic Forum.

## 8. VERIFYING THE EFFECT OF LEARNING

Code of the course effect of learning	Ways of verifying the effect of learning	Completion criterion
<p>C.W33., F.W1., F.W2., F.W4., F.W12., F.W14., F.W15., F.W17., F.W18., F.W19., F.W22., F.W23., C.U16., F.U1., F.U2., F.U3., F.U4., F.U6., F.U7., F.U9., F.U11., F.U12., F.U13., F.U15., F.U18., F.U19., F.U20., F.U21., F.U23., G.U15., G.U20., G.U26.</p>	<p>S – oral examination of a student’s preparation for a seminar C - 1. entry colloquium (descriptive) Student can enter the clinics only after passing the entry test</p> <p>2. assessment of a student’s work at classes</p> <p>3. once a week a review class is held, where students deliver presentations on a prepared subject, after 2 or 3 subjects a written test is performed</p> <p>Student can start clinical exercises only after positive results from the entry colloquium.</p>	<p><b>Entry:</b> includes 8 open questions (2 points for each question): max. 16 points, min 9 points is necessary for the passing of exam. Required material of the orthodontics course from the 4<sup>th</sup> year and the material from 1 and 2 seminar from the 5<sup>th</sup> year F.K1., F.K3., F.K5., F.S6., F.S11. In case of unjustified absence or failing at the first attempt it is necessary to take a written examination as in the first attempt – the same criteria of passing as for the first attempt.</p>

		<p><b>Credit for classes</b> is based on attendance and active participation, preparing at least one multimedia presentation within the review class, passing a written review test (8 descriptive questions, 2 points for each) – 0-25 points decreases the final grade for classes by 0.5, 26-53 points – credit, 54-64 points increases the final grade for classes by 0.5</p> <p><b>Practical exam</b> includes evaluation of practical skills including orthodontic diagnosis, orthodontic evaluation, methods of orthodontic treatment, treatment planning and orthodontic appliances. It is organized as 5-7 stations. Max. 15 points can be obtained at each station, exam is passed at 61%.</p> <p><b>written exam</b> (multiple-choice test), 100 single- and multiple choice questions.</p> <p><b>The final grade</b> is a weighted average of 3 grades: 25% grade for classes, 25% grade for practical exam, 50% grade for the multiple-choice test.</p> <p>The grades are:  4,76 - 5,0 very good (5)  4,26 - 4,75 good plus (4,5)  3,76 – 4,25 good (4)  3,26 – 3,75 acceptable plus (3,5)  2,76 – 3,25 acceptable (3)  2,25 – failed (2)</p> <p><b>The type of exam on-line/stationary depends on the current epidemiological situation.</b></p>
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## 9. ADDITIONAL INFORMATION

1. Attendance at all seminars and exercises is mandatory. In the case of an excused absence, the date and form of credit must be arranged with the teacher.
2. Student reports to classes in protective clothes including changing of shoes and with ID including information: student, year, first name, surname. Bags must be put on shelves in clinical rooms.
3. Non-compliance to safety regulations at work and oral hygiene is not allowed.
4. Please be on time to attend classes. Delay of more than 15 minutes will be treated as absence.
5. Using of mobile telephones is prohibited during classes and in clinical rooms.
6. The link to the department's website is: <http://ortodoncja.wum.edu.pl>
7. Coordinator of the 5<sup>th</sup> year EDD is: Dr hab. n. med. Ewa Czochołowska, e-mail: [eczochowska@wum.edu.pl](mailto:eczochowska@wum.edu.pl)

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**ATTENTION**

The final 10 minutes of the last class in the block/semester/year should be allocated to students'  
Survey of Evaluation of Classes and Academic Teachers