

Odessa National Medical University
Faculty of Dentistry
Department of Orthodontics

Syllabus course
Modern technologies of non-removable orthodontics
treatment

Amount	104 hours; 3.5 credits
Semester, year of study	VI semesters; 3 year of study
Days, time, place	According to the schedule
Lecturer	Head of the Department Gorokhivsky Volodymyr Nestorovych, prof., Doctor of Medicine Associate Professor Suslova Oksana Viktorivna, Ph.D. Associate Professor Reizvykh Olga Eduardivna, Doctor of Medicine Associate Professor Denga Anastasia Eduardivna, Doctor of Medicine Assistant Kovalchuk Victoria Viktorivna, Ph.D. Assistant Kordonets Olena Leonidivna Assistant Stetsenko Dmytro Viktorovych Assistant Al-Serarate Mohammed Karim Assistant Karman Anastasia Arkadyevna Assistant Zheliznyak Natalia Anatoliyivna Assistant Kostenko Olga Viktorivna
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Workplace	University Dental Clinic ONMedU, department №1, Mechnikova st., 2B
Consultations	Thursday from 15:00 to 18:00, Saturday 9:00 to 15:00 each week

COMMUNICATIONS

Communication with students is carried out according to the schedule in the classroom. In the case of distance learning, communications can take place online according to the schedule on the Microsoft Teams platform, in some cases with prior notice - through ZOOM and in Viber-groups.

COURSE ANNOTATION

The aim of the course is to deepen students' knowledge of modern views on the theory of periodontal tissue reconstruction under the influence of orthodontic equipment, methods of treatment of anomalies of free-standing teeth, dentition and occlusion using modern fixed equipment, as well as prevention and elimination of treatment errors.

Course details:

- with human anatomy: features of antenatal and postnatal periods of development and formation of teeth, jaws, human face;
- with histology - histological structure of the hard tissues of the tooth, pulp and periodontium at different ages;
- with physiology - features of physiological processes occurring in periodontal tissues and the human body under the influence of orthodontic equipment;
- with chemistry - properties of chemical elements and bioorganic compounds used in dentistry;
- with physics - physical and mechanical properties of solids and liquids;
- with radiology - the ability to decipher X-rays (to determine the skeletal bone age, the degree of development of the jaws, the condition of the hard tissues of the periodontium);
- with propaedeutics of orthopedic dentistry - the main impression materials, their physical and chemical properties, technological processes of manufacturing individual orthodontic accessories;
- with orthodontics - etiology, pathogenesis, clinic, diagnosis, choice of treatment of dental anomalies and deformities.

Expected results:

As a result of studying the discipline, students must :

Know:

- growth and formation of jaw bones in the age aspect;
- the concept of the norm in orthodontics;
- have the basic and additional methods of diagnosis of patients with dental anomalies and deformities;

- clinical and biological bases of orthodontic treatment;
- features of the algorithm of action in the treatment of patients with braces;
- features of preparation of patients for treatment by fixed equipment;
- indications for complex methods of treatment of orthodontic patients;
- classification of orthodontic equipment, indications and contraindications to the use of devices of different mechanism of action;
- retention period, its duration and justification; types of retention devices;
- basic principles and methods of treatment of patients with dental anomalies and deformities.

Be able:

- analyze the results of examination of a patient with dental anomalies and deformities;
- to determine dental anomalies and deformations according to the classification;

Six keys to occlusion by Andrews.

- to determine the features of growth and development of the child in the antenatal and postnatal periods;
- have the basic and additional methods of diagnosis of patients with dental anomalies and deformities;
- to determine the clinical and biological basis of orthodontic treatment;
- to make an algorithm of action in the treatment of patients with braces;
- to characterize features of preparation of patients for treatment by fixed equipment;
- to determine the indications for complex methods of treatment of orthodontic patients;
- to determine the indications and contraindications to the use of devices of different mechanism of action;
- determine the retention period, its duration and justification; types of retention devices;

COURSE DESCRIPTION:

Forms and methods of teaching:

The course will be presented in the form of lectures (6 hours) and seminars (30 hours),

organization of independent work of students (68 hours).

Teaching takes place in the form of lectures, Power Point demonstrations and explanations, conversations, analysis of new information. During seminars the theoretical interrogation, the decision of test tasks, situational tasks is carried out. It is planned to hold consultations according to the schedule.

Course content:

Topic 1. Modern theories of bone remodeling under the influence of orthodontic equipment. Features of TMJ remodeling during orthodontic treatment.

Topic 2. Types of tooth movement. Forces according to AM Schwartz. The main periods of orthodontic treatment of patients.

Topic 3. Methods of examination of patients with AMS and deformities

Topic 4. Planning orthodontic treatment. Methods of treatment in orthodontics.

Topic 5. Hardware method of treatment. General characteristics of the method. Indications for use at different ages.

Topic 6. History of braces - techniques. Indications and contraindications for treatment and preparation of orthodontic patients using a brace system.

Topic 7. Components of braces - systems. Fixation methods. Characteristics of orthodontic arches, their types and applications.

Topic 8. Orthodontic accessories, characteristics and their use in the treatment of braces (ligatures, elastics, separators, springs, elastic chains).

Topic 9. Characteristics of orthodontic instruments, their functional purpose

Topic 10. Anchorage (support) in orthodontic treatment. See supports

Topic 11. Apparatus for rapid expansion of the palatal suture. Devices for distalization of teeth.

Topic 12. The concept of the retention period. Factors that ensure the stability of treatment results (aesthetic, functional, morphological). Removable and non-removable retention devices, their advantages and disadvantages. The concept of disease recurrence.

Topic 13. Complications in the treatment of fixed equipment. Violation of fixation of braces. Their analysis and methods of elimination.

List of recommended literature

1. Фліс П.С. Ортодонтія. Вінниця: «Нова книга», 2019. 308 с.
2. Фліс П.С., Леоненко Г.П., Філоненко В.В., Дорошенко Н.М. Під ред. Фліса П.С. «Orthodontics. Dentognathic Anomalies and Deformations». «Медицина», Київ 2015. 176 с.
3. Фліс П.С., Власенко А.З., Чупіна А.О. Технологія виготовлення ортодонтичних та ортопедичних конструкцій у дитячому віці». Київ: «Медицина», 2013. 256 с.
4. Сулова О. В., Стеценко Д. В., Кордонец Е. Л. Желизняк Н. А. Биометрические методы исследования в ортодонтии (учебно-методическое пособие). Одесса: Одесский национальный медицинский университет, 2018. 37 с.
5. Митчелл Л. Основы ортодонтии. 2017. 376 с.
6. Фліс П.С., Тріль С.І., Вознюк В.П. «Дитяче зубне протезування». Київ: «Медицина», 2011. 200 с.
7. Стефан Вільямс. Короткий посібник з телентгенографії. Під ред. проф. П.С. Фліса. Львів, 2006.
8. Куроедова В.Д., Ждан В.Н., Галич Л.Б. и др. Атлас ортодонтических аппаратов. Полтава: «Дивосвіт», 2011. 156 с.
9. Герасимов С. Н. Несъемная ортодонтическая техника. Санкт – Петербург, 2012. 65 с.

EVALUATION

Methods of current control

Current control is carried out on the basis of daily control of theoretical knowledge, practical skills in accordance with the specific objectives of each topic by oral examination, test computer control using a database of test and situational tasks in each practical lesson.

Forms and methods of final control

The form of final control is a differential test at the end of the 3rd year and an

exam at the end of the 4th, 5th year. At the exam, students take written test tasks and oral answers to theoretical questions, situational tasks.

Independent work of students

Students' independent work is regulated by the working curriculum and is performed by students independently outside the classroom. The following types of independent work of students are possible: preparation for practical classes and study of topics that are considered only in terms of independent student work, search and study of additional literature, writing essays, reports for presentations in practical classes, filling an album for independent work.

Evaluation criteria

The results of students' academic performance are presented in the form of assessment on the national scale, 200-point and ECTS scale and have standardized generalized criteria for assessing knowledge:

national scale:

- the grade "excellent" is given to the student who systematically worked during a semester, showed during examination various and deep knowledge of a program material, is able to successfully carry out tasks which are provided by the program, has mastered the maintenance of the basic and additional literature, has understood interrelation of separate sections of discipline. importance for the future profession, showed creative abilities in understanding and using educational material, showed the ability to independently update and replenish knowledge; level of competence - high (creative);

- a grade of "good" is given to a student who has shown full knowledge of the curriculum, successfully completes the tasks provided by the program, mastered the basic literature recommended by the program, showed a sufficient level of knowledge of the discipline and is able to independently update and update during further study and professional activity; level of competence - sufficient (constructive-variable);

- the grade "satisfactory" is given to the student who has shown knowledge of the basic educational program material in the volume necessary for the further training and

the subsequent work on a profession, copes with performance of the tasks provided by the program, has made separate mistakes in answers on examination and at performance of examination tasks, but has the necessary knowledge to overcome mistakes under the guidance of a researcher; level of competence - average (reproductive);

- the grade "unsatisfactory" is given to the student who did not show sufficient knowledge of the basic educational and program material, made fundamental mistakes in performance of the tasks provided by the program, cannot use the knowledge at the further training without the teacher's help, failed to master skills of independent work; level of competence - low (receptive-productive).

The final control in the form of tests is evaluated on a two-point scale:

- the grade "credited" is given to a student who has completed the curriculum of the discipline, has no academic debt; level of competence - high (creative);

- the grade "not credited" is given to a student who has not fulfilled the curriculum of the discipline, has an academic debt (average score below 3.0 and / or absences); level of competence - low (receptive-productive).

The multi-point scale characterizes the actual success of each student in mastering the discipline. Conversion of the traditional grade from the discipline to 200-point is performed by the information and computer center of the university program "Contingent" according to the formula:

average grade point average (current / discipline) x 40

national assessment	mark
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«5»	185-200
«4»	151-184
«3»	120-150

The ECTS rating scale evaluates the achievements of students in the discipline who study in one course of one specialty, in accordance with the points obtained by them, by ranking, namely:

Mark ECTS	Statistical indicator
«A»	best 10 % students
«B»	next 25 % students
«C»	next 30 % students
«D»	next 25 % students
«E»	last 10 % students

The ECTS scale establishes the student's belonging to the group of the best or worst among the reference group of classmates (faculty, specialty), ie his rating. When converting from a multi-point scale, as a rule, the limits of grades "A", "B", "C", "D", "E" do not coincide with the limits of grades "5", "4", "3" on the traditional scale. A grade of "A" on the ECTS scale cannot be equal to a grade of "excellent", and a grade of "B" - a grade of "good" and so on.

Students who receive grades "Fx" and "F" ("2") are not included in the list of ranked students. Such students automatically receive a score of "E" after re-assembly.

The grade "Fx" is given to students who have scored the minimum number of points for the current educational activity, but who have not been credited with the final control. Grade "F" is given to students who have attended all classes in the discipline, but did not score a grade point average (3.00) for current educational activities and are

not admitted to the final control.

COURSE POLICY

The student must acquire knowledge, perform all types of educational tasks, pass all types of educational control, attend all types and forms of classes provided for in the curriculum, avoiding omissions and delays.

Deadline and recompilation policy.

The student completes the missed practical lesson by interviewing the regular teacher (twice a week on Thursday and Saturday).

Academic Integrity Policy

Adherence to academic integrity by students involves independent performance of educational tasks, tasks of current and final control of learning outcomes.

Unacceptable in the educational activities of participants in the educational process is the use of family or work ties to obtain a positive and higher assessment in the implementation of any form of control of learning outcomes, the use of prohibited aids or technical means (cheat sheets, headphones, telephones, smartphones, etc.); passing of procedures of control of results of training by fictitious persons.

For violation of academic integrity, the applicant may be held subject to the following academic liability:

- reduction of assessment (exam, test, etc.);
- re-assessment (exam, test, etc.);
- appointment of additional control measures (additional individual tasks, tests, etc.);
- re-passing the relevant educational component of the educational program;
- deductions from the university.

Attendance and lateness policy.

Absence of a student at lectures or practical classes is noted in the journal of visits in the form of a mark "nb". The student must work off the practical classes for 2 weeks.

Mobile devices

The use of a smartphone, tablet or other device is allowed with the permission of the teacher.

Behavior in the audience. Work in the team (student group, staff of the department, employees of the clinical base of the department) is provided. The communication environment is friendly, creative, open to constructive criticism.