Federal State Autonomous Educational Institution of Higher Education

**I.M. Sechenov First Moscow State Medical University**

**Ministry of Health of the Russian Federation**

**(Sechenov University)**

“Approved”

Academic council of FSAEI HE

I.M. Sechenov First Moscow

State Medical University

(Sechenov University)

“\_\_\_\_\_” of \_\_\_\_\_\_\_\_\_\_\_ 20\_\_\_

Protocol №\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

SYLLABUS OF THE ELECTIVE

\_\_\_ METHODS OF CORRECTION OF ESTHETIC PARAMETERS OF THE TEETH \_\_\_\_\_\_\_\_\_

\_ Basic professional educational program of higher education – specialty program

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_31.05.03 Dentistry \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2020-2021 year of admission

Discipline complexity \_\_\_\_\_\_\_\_ 2.0 \_\_\_\_\_\_\_\_\_ credit units

**1. Goals and objectives of mastering the elective course "Methods of correction of esthetic parameters of the teeth"**

**Purpose:** medical training of a specialist, having deep theoretical knowledge and skills on the modern correction methods of aesthetic parameters of the teeth and being able to provide dental care to the patients with esthetic complaints.

**Objectives of the discipline (to know, to be able to, to demonstrate):**

- mastering advanced diagnostic methods for making and clarifying the diagnosis of discoloration, change of the tooth crown shape and size.

- mastering the basic knowledge on the indications for conservative dental treatment of patients in case of disorders of the aesthetic parameters of the teeth. (color, transparency, size, shape, etc.).

- mastering the planning of therapeutic treatment for patients with diseases of hard tooth tissues;

 **-** formation of students' skills of an interdisciplinary approach in the aesthetic teeth restoration.

- mastering basic skills in aesthetic teeth restoration.

***As a result of mastering the discipline, the student must:***

***Know:***

* the causes of disorders of the aesthetic parameters of the teeth.;
* the criteria for choice of diagnostic methods;
* advanced techniques of treatment in patients with disorders of the aesthetic parameters of the teeth.;
* the indications and contraindications for the use of various treatment methods;

***To be able to:***

* make a diagnosis based on the results of basic and additional methods of examination;
* create a treatment plan for patients with disorders of the aesthetic parameters of the teeth. (size, shape, transparency, color, etc.);
* perform external and intracoronal bleaching methods for the treatment of various discolorations;
* perform an aesthetic restoration of the anterior and posterior teeth using modern resin composite materials.

***Demonstrate the following skills:***

- examination of a dental patient;

- non-invasive caries treatment (remineralizing therapy, infiltration);

- caries and non-carious lesions management;

- vital and non-vital bleaching;

- tooth restoration after endodontic treatment;

**2. Place of the Discipline in the structure of University Educational Program**

2.1. The Discipline is a part of Educational Unit С.3.18 Dentistry

2.2. To study the discipline, following knowledge and skills formed by previous disciplines / practices are necessary:

*- Human anatomy – head and neck anatomy*

*(discipline/practice)*

Knowledge: *anatomical, physiological, age- and gender-associated features of human organism, human body development and growth;*

Competences: *use educational and scientific literature for professional goals;*

Skills: *palpation of main bone structures, mussels and lymph nodes, description topography of human organs, vascular and nerve trunks;*

*-Histology, embryology, cytology – oral cavity histology*

*(discipline/practice)*

Knowledge: *cells’, tissues’ and organs’ structure, physiology and development; cells and tissues examination methods and techniques;*

Competences: *use educational and scientific literature for professional goals; use of laboratory equipment;*

Skills: *analyze histological and physiological condition of human cells, tissues and structures, assess results of cytological and histological studies;*

*-Operative dentistry*

*(discipline/practice)*

Knowledge: *basic methods of dental patient examination; dental instruments for examination, dental deposits removal, cavity preparation and filling and for endodontics; bases of cavities preparation, basis of endodontics;*

Competences: *use educational and scientific literature for professional goals; use of dental instrumentation and equipment;*

Skills: *carious cavity preparation and filling, root canal instrumentation and filling;*

 2.3. Mastering the discipline is necessary for knowledge, abilities and skills, formed by following disciplines:

*- post-graduate course of restorative dentistry*

*(discipline/practice)*

Knowledge: *etiology, pathogenesis, treatment and prevention of main oral diseases;*

Competences: *use educational and scientific literature for professional goals;*

Skills: *modern treatment methods of caries, non-carious lesions, endodontic diseases, periodontal diseases and oral mucosa diseases*

**3. Demands for results of mastering the discipline**

 The goal of mastering the discipline is formation of following professional competences (PC):

|  |  |  |  |
| --- | --- | --- | --- |
| № | Code of PC | Content of PC | As the result of mastering the discipline students must: |
| Know | Be competent | Have skills | Assessment tools\* |
|  | PC-5 | Readiness for collection and analysis of patient complaints, data his/her history, examination results, laboratory, instrumental, post-mortem and other studies in order to recognize the condition or the presence or absence of dental disease  | Basic and additional examination methods | Collect and interpret data from questioning, examination, lab-test and instrumental examination and bioptic material  | Basic and additional examination methods | Questioning, test |
|  | PC-6 | Ability to determine the patients’ basic pathological conditions, symptoms, syndromes, dental diseases, clinical entities, in accordance with the International Statistical Classification of Diseases and problems related to health (ICD).    | Pathological conditions, symptoms, syndromes, dental diseases, International Statistical Classification of Diseases and problems related to health (ICD). | Detect in patients main pathological conditions, symptoms, syndromes, dental diseases, using knowledge of medical, biological and clinical disciplines and confirm the diagnosis in ICD codes. | Main diagnostic procedures for detecting pathological conditions, symptoms, syndromes, dental diseases.  | Questioning, test |
|  | PC-8 | Ability to determine the treatment plan for patients with different dental diseases. | Basic principles and methods in dental diseases treatment. | Determine the complex treatment plan, prescribe medications, asses current treatment efficacy and safety.  | Dental diseases treatment methods. | Questioning |
|  | PC-9 | Willingness to treat dental diseases in outpatient and inpatient conditions.  | Basic methods of dental diseases treatment.  | Perform dental disease treatment. | Treatment methods of caries and non-carious lesions, endodontic diseases treatment technique  | Questioning |

*\*Assessment tools: written tests (multiple choice questions, modified essay questions, short/structured essay questions); practical tests (objective structured practical examinations, oral tests, clinical tests, questioning, log books.*

**4. Discipline sections.**

|  |  |  |  |
| --- | --- | --- | --- |
| № | Competence | Section of the discipline | Content  |
| 1 | PC-5,6,8,9 | Methods of correction of aesthetic parameters of the teeth  | Color, shape and size of natural teeth in normal conditions. The nomenclature and classification of change of the color, size and shape of the teeth.The causes of disorders of the aesthetic parameters of the teeth.. Modern methods of diagnosis and correction of aesthetic parameters of the teeth. Teeth discoloration: classification, etiology and clinical manifestations. Modern methods of treatment of dental discoloration. Bleaching techniques: chemicals, composition and mechanism of action. Procedure, indications and contraindications for teeth whitening. Methods of intracoronal whitening: indications, contraindications and possible complications.Contemporary resin materials: composition, classification and indications for use. Features of aesthetic restoration of the anterior teeth. Features of the aesthetic restoration of the posterior teeth. Translucency, opacity, shade, fluorescence of composite resins. Indications, contraindications, limitations of composite restorations.Restoration of teeth and dentitions using prosthetic treatment methods. Veneers and onlays: methods of fabrication, indications and contraindications for use. Direct and indirect method of veneers fabrication. Comparison of conservative and prosthetic methods in the correction of aesthetic parameters of the teeth; criteria for the treatment method choice, indications, contraindications and limitations.Features of the teeth restorations in endodontically treated teeth. The use of posts and post-and-cores when restoring the anatomical shape of the teeth.  An interdisciplinary approach to the correction of aesthetic parameters of the teeth. The role of the general dentist, prosthodontist, orthodontist and general practitioner in the treatment and correction of aesthetic parameters of the teeth.  |

**5. Distribution of discipline labor intensity and academic work in semesters.**

|  |  |  |
| --- | --- | --- |
| Academic works | Labor intensity | Labor intensity (academic hours) in semester |
| credits  | academic hours |
| 5 | 6 | 7 | 8 | 9 | 10 |
| Classroom work | 2,0 |  |  |  |  | 36 |  |  |
|  Lectures (L) |  |  |  |  |  | 4 |  |  |
|  Lab works (LW) |  |  |  |  |  |  |  |  |
|  Practical classes (PC) |  |  |  |  |  |  |  |  |
|  Clinical classes (CC) |  |  |  |  |  | 32 |  |  |
|  Seminars (S) |  |  |  |  |  |  |  |  |
| Self-study (S-S) |  |  |  |  |  | 20 |  |  |
| Intermediate attestation |  |  |  |  |  | 4 |  |  |
| **Total**  | 2,0 |  |  |  |  | 60 |  |  |

 5.1. Discipline sections, academic works and current assessment tools

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| № | semester | Discipline sections | Academic works (academic hours) | Assessment tools |
|  |  |  | L | LW | PC | CC | S | SS | Total |  |
| 1 | 8 | Methods of correction of aesthetic parameters of the teeth  | 4 | - | - | 32 | - | 20 | 56 | Questioning, tests. |
| 2 | 8 | Intermediate attestation | 4 |  |  |  |  |  |  | Interview |
|  |  | Total | 8 | - | - | 32 |  | 20 | 60 |  |

 5.2. Distribution of lectures in semesters

|  |  |  |
| --- | --- | --- |
| № | Themes of the lectures | Academic hours |
|  |  | Semesters |
|  |  | 5 | 6 | 7 | 8 | 9 | 10 |
| 1 | Causes of disorders of the aesthetic parameters of the teeth. |  |  |  | 1 |  |  |
| 2 | Comparison of composite and ceramic restorations.  |  |  |  | 1 |  |  |
| 3 | The restoration of teeth with significant crown destruction. |  |  |  | 2 |  |  |

 5.3. Distribution of lab work in semesters

|  |  |  |
| --- | --- | --- |
| п/№ | Theme of the lab work | Academic hours |
|  |  | Semester | Semester |
|  | **Not conducted** |  |  |
|  |  |  |  |
|  |  |  |  |
|  | Total (- AH) |  |  |

 5.4. Distribution of practical classes in semesters

|  |  |  |
| --- | --- | --- |
| п/№ | Themes of practical classes | Academic hours |
|  |  | semester | semester |
|  | **Not conducted** |  |  |
|  |  |  |  |
|  |  |  |  |
|  | Total (- AH) |  |  |

 5.5. Distribution of clinical classes in semesters

|  |  |  |
| --- | --- | --- |
| п/№ | Themes of clinical classes | Academic hours |
|  |  | Semester  |
|  |  | 5 | 6 | 7 | 8 | 9 | 10 |
| 1 | Optical properties of hard dental tissues and composite materials. |  |  |  | 2 |  |  |
| 2 | Biomechanical properties of hard dental tissues, composite materials and ceramics. |  |  |  | 2 |  |  |
| 3 | The restoration of anterior teeth with composite materials. |  |  |  | 8 |  |  |
| 4 | The restoration of posterior teeth with composite materials. |  |  |  | 6 |  |  |
| 5 | Dental bleaching techniques for the treatment of teeth discoloration. |  |  |  | 4 |  |  |
| 6 | Non-vital (internal) bleaching technique for the treatment of teeth discoloration. |  |  |  | 2 |  |  |
| 7 | Restoration of teeth using ceramic veneers and inlays, fabrication of ceramic veneers and inlays. |  |  |  | 2 |  |  |
| 8 | Comparison of composite and ceramic veneers. |  |  |  | 2 |  |  |
| 9 | The restoration of teeth with significant crown destruction.  |  |  |  | 4 |  |  |

 5.6. Distribution of seminars in semesters

|  |  |  |
| --- | --- | --- |
| п/№ | Themes of the seminars | Academic hours |
|  |  | Semester | Semester |
|  | **Not conducted** |  |  |
|  |  |  |  |
|  |  |  |  |
|  | TOTAL ( - AH) |  |  |

 5.7. Distribution of self-study by types and semesters

|  |  |  |
| --- | --- | --- |
| п/№ | Type of self-study work | Academic hours |
|  |  | Semester |
|  |  | 5 | 6 | 7 | 8 | 9 | 10 |
| 1 | Case history |  |  |  |  |  |  |
| 2 | Essay |  |  |  |  |  |  |
| 3 | Presentation |  |  |  | 10 |  |  |
| 4 | Report |  |  |  |  |  |  |
| 5 | Preparation to clinical classes |  |  |  | 10 |  |  |
|  | TOTAL ( AH) |  |  |  | 20 |  |  |

**6. Assessment tools**

6.1. Types of current control and intermediate attestation, assessment tools.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| №  | № of semester  | Types of control | Part of the discipline  | Assessment tools |
| Type | Number of questions  | Number of distractors |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|  | 5 | Test, questioning | Methods of correction of aesthetic parameters of the teeth  | tests | 10 | 2 |

6.2. Examples of assessment tools:

Choose ONE correct answer.

1. **Internal tooth discoloration that occurs after teeth eruption can be caused by:**

A. tetracycline intake

B. using a rinse with chlorhexidine

C. tooth injury with a damage of the neurovascular bundle

D. hemolytic anemia

1. **Intracoronal bleaching is used for:**

A. treatment of fluorosis

B. bleaching of tetracycline teeth,

C. whitening of teeth previously treated with silver post

D. “smoker" plaque removal

1. **Absolute contraindication to the resin veneers:**

A. open bite

B. bruxism

C. poor oral hygiene

D. non-vital teeth

1. **The most frequent complication that occurs after bleaching of vital teeth:**

A. enamel cracks

B. lack of results

C. hypersensitivity

D. darkening of the tooth

1. **Cutting edge of incisors in young patients is:**

A. transparent

B. opaque

C. the same as in elderly

D. does not have features

6.3. Assessmen tools, included in the fund of assessment tools for final state certification.

**7. Educational & methodical support of the discipline (printed editions, electronic publications, internet other network resources)**

7.1. The basic textbooks

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| № | Book  | Authors | Edition | Exemplars  |
| In the library | At the department |
| 1 | 2 | 3 | 4 | 7 | 8 |
|  | Sturdevant’s Art and science of operative dentistry. 6th edition  | HO Heymann, EJ Swift, AV Ritter. |  Mosby, 2012 |  | 1 |
|  | Cohen’s pathways of the pulp. 11th edition | KM Hargreaves, L Berman. | Mosby, 2015: 928 pages. |  | 1 |
|  | Oral and maxillofacial diseases. 4th edition.  | C. Sculli, S Flint. | CRC Press, 2010 |  | 1 |

7.2. Additional editions\*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| № | Book  | Authors | Edition | Exemplars |
| In the library | At the department |
| 1 | 2 | 3 | 4 | 7 | 8 |
|  | Oral Diseases.Textbook and Atlas. | TM Lotty, LC Paris, RS Rogers. -  | Springer-Verlag Berlin Heidelberg, 1999  |  | 1 |
|  | Summitt’s Fundamentals of Operative Dentistry: A Contemporary approach, 4th edition JL.  | TJ Hilton | Quintessence Pub Co, 2013 |  | 1 |
|  | Oxford Handbook of Clinical Dentistry 6th Edition  | D Mitchell, L Mitchell | Oxford University Press; 2014 |  | 1 |
|  | Pocket Atlas of Oral Diseases by George Laskaris  | G Laskaris | Thieme; 2005 |  |  |

7.3. Tutorial guides.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| № | Name | Authors | Edition | Exemplars |
| In the library | At the department |
| 1 | 2 | 3 | 4 | 7 | 8 |
|  | Tutorial Guide of Operative Dentistry for Dental students of second and third Years of education  | Ф.Ю. Даурова, М.К. Макеева, З.С. Хабадзе. | Москва: РУДН, 2016 – 151 с. |  | 1 |
|  | Cariology and non-caries lesions: tutorial guide | Ф.Ю. Даурова, Л.А. Кожевникова, М.К. Макеева, З.С. Хабадзе. | Москва: РУДН, 2016 – 184 с.  |  | 5 |

7.4. Recommendations for the tutors

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| п/№ | Name | Authors | Edition | Exemplars |
| In the library | At the department |
| 1 | 2 | 3 | 4 | 7 | 8 |
|  | Sturdevant’s Art and science of operative dentistry. 6th edition  | HO Heymann, EJ Swift, AV Ritter. |  Mosby, 2012 |  | 1 |
|  | Cohen’s pathways of the pulp. 11th edition | KM Hargreaves, L Berman. | Mosby, 2015: 928 pages. |  | 1 |
|  | Oral and maxillofacial diseases. 4th edition.  | C. Sculli, S Flint. | CRC Press, 2010 |  | 1 |

**8. Logistic support of the discipline.**

Rooms for tutorials:

1. dental offices with universal dental units;

2. class rooms for reports, presentations and discussions.

*Equipment for tutorials:*

1. dental instruments sets;

2. restorative end endodontic materials;

3. radiovisiography systems;

4. negatoscopes;

5. multimedia projectors;

6. laptop;

7. PC;

8. flash-cards with lectures presentations;

9. tutorial guides.

**9.Educational technologies in an interactive form used in the process of teaching the discipline:**

9.1. Examples of educational technologies in an interactive form:

In accordance with the requirements of the Federal State Educational Standard, the active and interactive forms of performing classes are widely used in the educational process (computer presentation of expert materials, computer simulation; visualized test tasks; videos, analysis of specific situations, etc.) The specific weight of classes performed in interactive forms is **at least 10% of** classroom classes.

* 1. **Electronic educational resources used in the process of teaching the discipline:**

|  |  |  |
| --- | --- | --- |
| No. | Name and brief description of electronic educational and information resources (electronic publications and information databases) | Number of copies, access points |
| *1* | *2* | *3* |
| 1 | Educational portal of the First MGMU them. THEM. Sechenovahttp: //dl.sechenov.ru/ |  |
| 2 | Central Scientific Medical Library <http://www.scsml.rssi.ru/> |  |
| 3 | Library of Natural Sciences of the Russian Academy of Sciences<http://www.benran.ru/>; [http://www.benran.ru/Magazin/El/Str\_elk1.htm](http://www.benran.ru/magazin/el/str_elk1.htm) |  |
| 4 | International citation database PubMedhttp://www.ncbi.nlm.nih.gov/ |  |
| 5 | Publishing house of academic medical literature Elsevierhttp: //www.elsevier. com / |  |
| 6 | Scientific Electronic Library eLibraryhttp://elibrary.ru// |  |
| 7 | Information and educational portal for doctors Univadishttp://www.univadis.ru/ |  |
| 8 | Electronic Medical Library Consultant of a doctorhttp://www.rosmedlib.ru/ |  |