# MINISTRY OF HEALTH PROTECTION OF UKRAINE ODESSA NATIONAL MEDICAL UNIVERSITY

Faculty of dentistry, international

### Department of therapeutic dentistry

## Course syllabus "Simulation Dentistry"

Institution of higher education, faculty, department	ODESSA NATIONAL MEDICAL UNIVERSITY Faculty of dentistry, international Department of therapeutic dentistry
The name of the academic discipline	"Simulation Dentistry"
Scope of the academic discipline	Total number of hours per discipline: 24 hours/ 0.8 credits. Semester IX, X 5 year of study
Days, time, place of educational discipline	According to the schedule of classes, the Department of Therapeutic Dentistry, str. Torgova, 15; St. Pishonivska, 1.
Teachers	Chief department, prof. V.Y. Skyba, docents: N.A. Ivchenko, A.O. Sedletska, O.I. Aksinorska, L.V. Honcharuk, O.M. Zherebko, S.M. Koval, O.M. Davidenko, O.V. Honcharenko, I.V. Gerasymova, assistants: E.O. Strochenko, S.V. Dizik, O.G.Tsymbaliuk
Contact information	Head of the department, prof. Vasyl Yakovych Skiba, tel. 0505523250 terstomonmedu@gmail.com Department of Therapeutic Dentistry Torgova str., 15; Pishonivska str., 1. Consultations every Wednesday: from 14.30 to 16.00 and on Saturdays: from 8.30 to 13.00. within the academic semester. During the winter holidays, every day from 8:30 a.m. to 1:00 p.m.

#### COMMUNICATION

Communication with applicants is carried out in classrooms (face-to-face) according to the schedule in classrooms and auditoriums. In the case of distance learning, communication can take place online on the Microsoft Teams platform according to the class schedule, as well as through e-mail correspondence, Viber messengers (through groups created in Viber for each group, separately through the head of the group).

#### ABSTRACT OF THE EDUCATIONAL DISCIPLINE

Subject of discipline study

Simulation dentistry is an educational discipline that enables students to acquire the necessary theoretical knowledge and learn practical skills in the diagnosis of major dental diseases, preparation and filling of carious cavities, root canals on phantoms and simulators, the use of modern filling materials, dental tools, and practical treatment actions diseases of the periodontium and mucous membrane of the oral cavity. All manipulations are carried out on modern simulators, phantoms, endoblocks. Students should familiarize themselves with the organization of the work of the dental clinic, learn the equipment and instruments of the dental office, safety rules. The acquired theoretical knowledge and practical skills in simulation dentistry will significantly help students in mastering their future specialty.

Course prerequisites: The study of the program is based on previously acquired knowledge of human anatomy, histology, embryology and cytology, medical physics, medical chemistry, Latin language, philosophy, foreign language.

Postrequisites of the course: The study of previous disciplines is integrated with the study of physiology, pharmacology, clinical immunology, therapeutic dentistry, surgical dentistry, orthopedic dentistry, pediatric dentistry, orthodontics. The knowledge gained by the students will contribute to the qualitative mastery of practical skills, the use of modern equipment, professional language in the work, allow them to participate in scientific and practical conferences, internships, including abroad.

The purpose of studying the discipline "Simulation Dentistry" is to improve the special (professional) competencies acquired during the study of the discipline "Therapeutic Dentistry" by repeating theoretical knowledge and practicing practical skills and abilities by students on phantoms and simulators, namely:

- formation of the required amount of theoretical knowledge by specialty;
- formation of a qualified doctor capable of successfully solving his professional tasks;
- mastering the practical skills of treating dental patients in outpatient polyclinic conditions, forming the professional knowledge and skills of a doctor, for the original management of patients;
- mastering modern technical and auxiliary methods and methods of diagnosis of dental diseases in the necessary volume.

Upon completion, the dentist must possess the following professional competencies:

- the ability and willingness to analyze the problem, the use of proven methods in practice;
- -ability and readiness for logical and reasoned analysis, management

discussions and polemics, editing texts of professional content, implementation of educational and pedagogical activities, cooperation and conflict resolution;

- the ability and willingness to use management methods, to find and make responsible decisions in the conditions of different opinions and within the framework of one's professional competence;
- the ability and willingness to carry out their activities taking into account the moral and legal norms accepted in society, to comply with the rules of medical ethics, laws and regulations on working with confidential information, to keep medical secrecy.

Tasks of the discipline: To form students' professional skills and skills in performing professional actions for the diagnosis, treatment and prevention of non-carious dental lesions, caries, its complications (pulpitis and periodontitis), periodontal diseases and oral mucosa on simulators, simulators and phantoms.

Expected results: As a result of studying the academic discipline

- "Simulation Dentistry" student should know:
- Organization of dental office work. Functions and duties of medical personnel.
- Issues of ethics and deontology. Issues of ergonomics and safety technology.
- -Dental instruments for examination and treatment of teeth, their purpose.
- Classifications of the main dental diseases.
- -Clinical methods of diagnosis of the main dental diseases.
- Additional methods of diagnosis of the main dental diseases.
- Etiology and pathogenesis of the main dental diseases.
- Innervation and blood supply of jaws and individual groups of teeth.
- -Methods of treatment of the main dental diseases.
- Methods of prevention of major dental diseases.
- Norms of working hours, qualitative and quantitative indicators of the work of a dentist.
- Rules for filling out medical documentation.

The student should be able to:

- Analyze the results of clinical examinations of patients with major dental diseases.
- Analyze the results of additional examinations of patients with major dental diseases.
- To determine the leading syndromes and symptoms in the clinic of therapeutic dentistry.
- Carry out dental caries treatment on a phantom.
- Carry out treatment of dental caries complications on a phantom.
- Carry out treatment of non-carious lesions of hard dental tissues on a phantom.
- Treat periodontal tissue diseases on a phantom.
- Carry out treatment of diseases of the mucous membrane of the oral cavity on a phantom.
- Carry out differential diagnosis of diseases in the clinic of therapeutic stomatology.
- Formulate a preliminary clinical diagnosis in the clinic of therapeutic stomatology.
- To substantiate the final diagnosis in the clinic of therapeutic stomatology.
  - Identify somatic diseases that require special patient management tactics at a

therapeutic appointment.

- Demonstrate the skills of filling out a package of medical documentation at a therapeutic appointment.

#### DESCRIPTION OF THE EDUCATIONAL DISCIPLINE

Forms and methods of education

The course includes practical classes (10 hours), organization of students' independent work (14 hours).

Teaching takes place in the form of Power Point demonstration and explanation, conversation, analysis of new information. During practical classes, a theoretical survey is conducted, test tasks are solved, situational tasks are performed, and practical skills are practiced on phantoms. Consultations are planned according to the schedule.

Teaching methods: conversation, role-playing, lectures, Power Point demonstrations and explanations, solving clinical situational problems, patient examination, instruction and practicing skills on phantoms, standardized hybrid dental patient. Teaching takes place in the form of conversation, analysis of new information. During the practical classes, a theoretical analysis is carried out, solving situational problems, compiling diagnostic and therapeutic search algorithms. Consultations are planned according to the schedule.

Content of the academic discipline:

Section 1:

Topic 1. Improving the mastery of methods of diagnosis and differential diagnosis of basic dental diseases on simulators and phantoms (examination of a dental patient, EOD, use of caries detectors, reading radiographs, differential diagnosis of periodontal and oral mucosa diseases, etc.).

Topic 2. Practicing the skills of preparing carious cavities of I - V classes according to Black on phantoms using a turbine drill. Performing practical actions on tooth preparation using the Moog Simodont Dental Trainer simulator.

Topic 3. Development of methods of treatment of non-carious lesions of teeth and caries on a phantom (application of insulating and medical pads, installation of a sectional matrix, introduction of an adhesive system, temporary and permanent filling, etc.).

Topic 4. Practice of endodontic treatment techniques (determination of working length, mechanical and drug treatment, expansion and filling of root canals of teeth on endoblocks and phantoms, etc.)

Topic 5. Carrying out curative and preventive measures for diseases of the periodontium and the mucous membrane of the oral cavity (introducing the drug into the periodontal pocket, medicinal treatment of the ulcer, conducting professional hygiene, describing the orthopantomogram, applying applications, etc.).

Differentiated scoring.

List of recommended literature:

Main (basic):

1. Therapeutic stomatology: Textbook for students of the stomatological faculty of higher educational institutions of the IV level of accreditation / Edited by Anatoliy Nikolishin - ed. 2nd, corrected and supplemented. – Vinnytsia: Nova kniga, 2012. –

680 p.

- 2. Therapeutic dentistry: In 4 vols. Vol. 2. Caries. Pulpit. Periodontitis. Oral sepsis: Textbook for students. stomatal f-tiv honey. ZVO 3rd edition. Recommended by the Ministry of Health / Ed. A.V. Borysenko K., 2020. 592 p.
- 3. V.M. Zaporozhan, O.O. Tarabrin. Simulation medicine. Experience. Acquisition Prospects.

Practical advisor. Sumy: PF "University Book Publishing House", 2018. 240 p.

- 4. Therapeutic dentistry: in 4 volumes. Volume 3. Periodontal disease: a textbook (University III-IV years) / M.F. Danylevskyi, A.V. Borysenko, M.Yu. Antonenko and others; under the editorship A.V. Borysenko 2nd ed., revised. and supplements.. 2018. 624 p.
- 5. Bidenko N.V., Borysenko A.V., Vasylchuk O.V. etc.. Algorithms for performing dental and medical manipulations for preparation for the State certification of students of the 5th year in the specialty "Dentistry". Kyiv: Kniga-plus, 2017. 455 p.

#### Addition:

- 1. Pavlenko O.V., Belychenko Yu.M., Volosovets T.M., Al-Alavny S.V. Handbook of endodontics: a textbook for medical universities/ Ed. Prof. O.V. Pavlenko. Simferopol: N. Orianda, 2010. 326p.
- 2. Therapeutic stomatology: equipment and tools: training manual / V.I. Gerelyuk, N.V. Neiko, V.V. Materynskyi, O.P. Kobrin. Ivano-Frankivsk, 2012. 95 p.
- 3. Dental diseases: therapeutic stomatology, ed. prof. Borysenko A.V. K.: Medicine, 2017. 664 p.
- 4. Modern filling materials and methods of their use in therapeutic stomatology: [teaching manual] / G.F. Biloklytska, O.V. Asharenkova, O.V. Kopchak K.: Publishing House "Askania", 2013. 143 p.
- 5. Clinical pharmacology and pharmacotherapy in dentistry: Education. manual for honey universities, institutes, acad. 2nd edition. Recommended by the Academic Council of the NMAPO named after P.L. Shupyka / Mazur I.P., Haytovych M.V., Golopyho L.I. K., 2019. 376 p.
- 6. Petrushanko T.O., Ostrovska L.Y., Ilenko N.M. Clinical practice in therapeutic stomatology: Study guide / T.O. Petrushanko, L.Y. Ostrovska, N.M. Ilenko. Kyiv: "Center for Educational Literature", 2019. 259 p.
- 7. Pharmacotherapy of diseases of the mucous membrane of the oral cavity and periodontal tissues. edited by Prof. Borysenko A.V. K.: Medicine, 2018. 504 p.

#### **EVALUATION**

Forms and methods of current control: the department of therapeutic dentistry uses various forms of control of classes in a certain educational discipline (oral, written, combined, testing, survey), practical (working with a patient, working on a phantom), assessment of communication skills and activity in class and during the role play, evaluating the interpretation of the results of clinical, laboratory and instrumental research.

Current evaluation criteria in practical training

#### Current evaluation criteria in practical training

Mark	Current evaluation
«5»	The applicant is fluent in the material, takes an active part in discussing and solving a situational clinical problem, confidently demonstrates practical skills during the examination of a sick child and the interpretation of clinical, laboratory and instrumental research data, expresses his opinion on the subject of the lesson, demonstrates clinical thinking.
«4»	The applicant has a good command of the material, participates in the discussion and solution of a situational clinical problem, demonstrates practical skills during the examination of a sick child and the interpretation of clinical, laboratory and instrumental research data with some errors, expresses his opinion on the subject of the lesson, demonstrates clinical thinking.
«3»	The acquirer does not have sufficient knowledge of the material, is unsure of participating in the discussion and solution of a situational clinical problem, demonstrates practical skills during the examination of a sick child and the interpretation of clinical, laboratory and instrumental research data with significant errors.
«2»	The acquirer does not possess the material, does not participate in the discussion and solution of the situational clinical problem, does not demonstrate practical skills during the examination of a sick child and the interpretation of clinical, laboratory and instrumental research data.

Forms and methods of final control: credit, issued to the applicant who completed all sections of the educational program of the selected discipline, took an active part in seminars, has an average current grade of at least 3.0 and has no academic debt.

Possibility and conditions of obtaining additional (bonus) points: not provided.

#### INDEPENDENT WORK OF HIGHER EDUCATION ACQUIRES

The independent self work of students is regulated by the curriculum and is carried out by the applicants independently according to calendar and thematic plans, it is carried out in the form of classroom and out-of-classroom work. The quality control of the independent work of the applicants is carried out during the differentiated assessment.

#### **EDUCATIONAL DISCIPLINE POLICY**

Deadlines and Rescheduling Policy:

- Absences of classes for non-respectable reasons are worked out according to the schedule of the teacher on duty.
- Absences due to valid reasons are processed according to an individual schedule with the permission of the dean's office.

Academic Integrity Policy:

Applicants must observe academic integrity, namely:

- independent performance of all types of work, tasks, forms of control provided for by the work program of this educational discipline;
- references to sources of information in the case of using ideas, developments, statements, information;
- compliance with the legislation on copyright and related rights;
- provision of reliable information about the results of one's own educational (scientific) activity, used research methods and sources of information.

Unacceptable in educational activities for participants of the educational process are:

- using family or official ties to obtain a positive or higher grade during any form of control of learning outcomes or academic performance;
- use of prohibited auxiliary materials or technical means (cheat sheets, notes, micro-earphones, telephones, smartphones, tablets, etc.) during control measures;
- passing procedures for control of training results by fake persons.

For violation of academic integrity, students may be held to the following academic responsibility:

- a decrease in the results of assessment of control work, assessment in class, credit, etc.;
- retaking the assessment (control work, credit, etc.);
- appointment of additional control measures (additional individual tasks, control works, tests, etc.);
- conducting an additional inspection of other works authored by the violator.

Attendance and Tardiness Policy:

Uniform: a medical gown that completely covers the outer clothing, or medical pajamas, a cap, a mask, and a change of shoes.

Equipment: notebook, pen.

State of health: applicants suffering from acute infectious diseases, including respiratory diseases, are not allowed to attend classes.

A student who is late for class can attend it, but if the teacher has put "nb" in the journal, he must complete it in the general order.

Use of mobile devices:

Mobile devices may be used by students with the permission of the instructor if they are needed for the assignment.

#### Behavior in the audience:

The behavior of applicants and teachers in the classrooms must be working and calm, strictly comply with the rules established by the Regulations on academic integrity and ethics of academic relations at Odessa National Medical University, in accordance with the Code of Academic Ethics and University Community Relations of Odessa National Medical University, Regulations on Prevention and detection of academic plagiarism in research and educational work of students of higher education, scientists and teachers of Odessa National Medical University.