

PRIVATE HIGHER EDUCATIONAL INSTITUTION
"INTERNATIONAL ACADEMY OF ECOLOGY AND MEDICINE"
Department of Dentistry

SYLLABUS
EDUCATIONAL DISCIPLINE

«**Medical practical training**»


LEVEL OF HIGHER EDUCATION The second (master's) level

DEGREE OF HIGHER EDUCATION Master

FIELD OF KNOWLEDGE 22 Healthcare

SPECIALTY 221 Dentistry

COURSE 3

Considered and approved
at a meeting of the Department of Dentistry
Protocol № 1 from «01» 09 2020 p.
Acting head of the department _____
MD, prof.  Kuts P.V.

Kiev 2020

1. General information	
Subject	Medical practical training
Lector	Acting Head of the Department, Doctor of Medical Sciences, Professor, Kuts P.V. Bida A.V.
Teacher's e-mail	forum-for-me@bigmir.net
Discipline format	Normative discipline.
The volume of the discipline	120 hours, 4 ECTS
Link to the distance learning site	maem.kiev.ua
Consultations	Web conferences in various programs (Zoom, Skype, Myit, Jitsy, Teams, Viber, Facebook, Cisco Webs). Exchange tasks via e-mail, Wandrive
2. Annotation to the course	
<p>According to the curriculum of industrial medical practice for 3rd year students of the Faculty of Dentistry is provided in the case when the student has acquired knowledge of basic clinical disciplines (propaedeutics of therapeutic dentistry, therapeutic dentistry, propaedeutics of pediatric therapeutic dentistry, prevention of dental diseases, pharmacology).</p> <p>Industrial medical practice is carried out by involving students as an assistant to a dentist in the therapeutic department of a dental clinic.</p> <p>Industrial medicine is an integral part of therapeutic dentistry - a discipline whose methods are aimed at maintaining the dental health of the oral cavity of people, prevention of periodontal disease and oral mucosa.</p> <p>The course of industrial medical practice involves the assimilation of theoretical material on the peculiarities of the work of a dentist and the basic manipulations and their practice under the supervision of the head (in the form of practical classes and consultations); independent work of the student in dental departments and consolidation of the acquired knowledge and skills in the form of independent shifts, preparation for practical classes, mastering of practical skills, filling of the basic reporting documentation, individual work and preparation for final control of knowledge.</p>	
3. Purpose and objectives of the course	
<p>The main purpose of practice in therapeutic dentistry and prevention is to master the skills of assistant dentist therapeutic department, forms and methods of work in dental institutions, the formation on the basis of knowledge of professional skills and abilities to make independent decisions on diagnosis and treatment of major dental diseases. educating the constant need for systematic updating of their knowledge.</p>	
4. Competencies and learning outcomes	
Learning outcomes	Teaching methods
<p>Have modern methods of prevention, diagnosis and treatment of odontopathologies of hard tissues of teeth</p>	<p>Practical classes, oral interviews, tests, dialogue with applicants for higher education, creative work with the creation of multimedia presentations and their presentation, independent work with literary sources</p>
<p>Integral: Ability to solve problems and problems in the field of health care in the specialty "Dentistry" in a professional activity or in the learning process, which involves research and / or innovation and is characterized by uncertainty of conditions and requirements.</p>	

General:

1. Ability to abstract thinking, search, analysis, synthesis; processing information from various sources, basics of evidence-based medicine.
2. Ability to lifelong learning.
3. Knowledge and understanding of the subject area and understanding of the profession.
4. Ability to implement knowledge in practice.
5. Ability to communicate orally and in writing in the state language. Ability to communicate in a foreign language.
6. Ability to effectively professional and interpersonal communication and use of information and communication technologies.
7. The ability to adapt to new conditions and situations and the ability to act autonomously in them.
8. Ability to identify and solve problems.
9. Ability to work in a team, including interdisciplinary and international.
10. Observance of deontological norms in professional activity.
11. Ability to implement a system of knowledge and practical skills to ensure a healthy lifestyle and patients.
12. Ability to self-assess their own achievements and increase their level.
13. Ability to assess the state of the environment, to help eliminate its negative effects on health.
14. Ability to act socially responsible and civic conscious.
15. Ability to organize legal support and management of professional activities.
16. Leadership in the development and implementation of innovations and their use in professional activities.
17. The ability to exercise their rights and responsibilities as a member of society, to realize the need for its sustainable development, the rule of law.
18. The ability to preserve and multiply moral, cultural, scientific values and achievements of society.

5. Organization of course training

Special (professional, subject):

Collection of medical information about the patient's condition

Evaluation of laboratory and instrumental research results.

Establishing a clinical diagnosis of a dental disease.

Diagnosis of emergencies.

Planning and implementation of measures for the prevention of dental diseases.

Determining the nature and principles of treatment of dental diseases

Determining the necessary mode of work and rest, diet in the treatment of dental diseases.

Performing medical and dental manipulations

Treatment of major dental diseases.

Assessment of the impact of the environment on the health of the population (individual, family, population)

Maintaining medical records

Processing of state, social and medical information.

The volume of the course

Type of lesson	0
Lectures	30
Practical classes	90
Independent work	90

Course signs

Semester 5,6	Specialty <u>221 Dentistry</u>	Course (year of study) 3	Normative discipline
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Course thematics

**THEMATIC PLAN OF PRACTICAL CLASSES
in the 3rd year, 6th semester**

№	Topic name	Number of hours
1	Emergency care for fainting, shock, allergic reactions, hypertensive crisis of the patient at the dentist. Providing emergency care to a patient with acute purulent pulpitis, acute purulent periodontitis. Know the rules of safety when working in the dental office.	3
2	Objective examination of the patient at the dentist's appointment with a dentist. Evaluation of the obtained data. Conducting additional survey methods. Substantiation and formulation of clinical diagnosis.	3
3	Filling out an outpatient card of a dental patient, recording the dental formula, writing referrals to the physiotherapy room, for X-ray examination. Write prescriptions for prescribed drugs.	3
4	Interpretation of general principles of treatment of a patient with caries, pulpitis, periodontitis. Choosing a rational method of treatment of caries, pulpitis, periodontitis using new materials, techniques and technologies. Analysis of long-term results of treatment of caries, pulpitis, periodontitis.	3
5	Differential diagnosis of primary caries with non-carious lesions, secondary caries with chronic periodontitis, acute deep caries with hyperemia of the pulp of the tooth and chronic forms of pulpitis, acute purulent pulpitis with trigeminal neuralgia and acute sinusitis; pulpitis with periodontitis.	3
6	Anesthesia (application, injection) of hard tissues of the tooth and pulp. Carrying out anesthesia and application of its various types (intrapulpar, spongy, intraligamentary).	3
7	Carrying out endodontic manipulations: opening of the apical opening to create an outflow of exudate in acute forms and exacerbation of chronic apical periodontitis; machining and expansion of root canals step-back, crown-down techniques. Determination of the length of the root and root canal by X-ray, using an apex locator.	3
8	Calculation of the prevalence, intensity and increase in the intensity of caries. Evaluation of the effectiveness of oral hygiene. Determination of the hygienic index according to Fedorov-Volodkina and assessment of the state of oral hygiene. Carrying out professional teeth cleaning: removal of supragingival and subgingival tartar by manual method and with the help of a scaler; drug treatment of gingival pockets and oral mucosa; coating of teeth with fluoride varnish, rem-therapy. Providing recommendations for oral hygiene, taking into account the individual characteristics of the patient	3
9	Appointment according to the indications of physical methods during the complex treatment and prevention of caries and non-carious lesions. Conducting conversations, lectures on health education.	3
10	Credit	3
	Total	30

THEMATIC PLAN OF INDEPENDENT WORK OF STUDENTS (IWS)

6. Course evaluation system**General course evaluation system**

Current control is performed based on the control of theoretical knowledge, skills and abilities in practical classes. Independent study students are assessed in practical classes, and is an integral part of the final grade of the student. Current control is performed during the training sessions and aims at checking the assimilation of students learning the material. Forms of current control are:

- a) test tasks with a choice of one correct answer, with the definition of the correct sequence of actions, with determination of the conformity, defining the specific portion of the photo or diagram ("detection");
- b) individual oral questioning, interview;
- c) the solution of typical situational tasks;
- g) control of practical skills;

Grades on the national scale ("excellent" - 5, "good" - 4, "satisfactory" - 3, "unsatisfactory" - 2), received by students, are displayed in the journals of attendance and academic group performance.

Final control

The final control is the form of a differentiated credit at the end of the 1st semester and at the end of the 2nd semester upon completion of the course of medical biology.

The semester exam is a form of final control of mastering by the student of theoretical and practical material on academic discipline. The final control (exam) is carried out at the last control lesson.

Students are admitted to the FC who have attended all the classes provided by the curriculum in the discipline and while studying the module scored the number of points not less than the minimum (**72 points**). A student who, for good or bad reasons, has missed classes, is allowed to rework academic debt for a certain period of time.

Evaluation of current educational activities. During the assessment of mastering each topic for the current educational activity of the student scores are set on a 4-point (national) assessment scale. This takes into account all types of work provided by the discipline program. The student must receive a score on each topic. Scores on the traditional scale are converted into points. The final assessment of the current academic activity is the arithmetic mean (the sum of scores for each lesson is divided by the number of lessons per semester) and translated into points according to **Table 2**.

Table 2. Conversion of the average score for the current activity into a multi-point scale (for disciplines completed by diff.credit, exam)

4- point scale	120- point scale	4- point scale	120- point scale	4- point scale	120- point scale	4- point scale	120- point scale
5	120	4,45	107	3,91	94	3,37	81
4,95	119	4,41	106	3,87	93	3,33	80
4,91	118	4,37	105	3,83	92	3,29	79
4,87	117	4,33	104	3,79	91	3,25	78
4,83	116	4,29	103	3,74	90	3,2	77
4,79	115	4,25	102	3,7	89	3,16	76
4,75	114	4,2	101	3,66	88	3,12	75
4,7	113	4,16	100	3,62	87	3,08	74
4,66	112	4,12	99	3,58	86	3,04	73
4,62	111	4,08	98	3,54	85	3	72
4,58	110	4,04	97	3,49	84	<3	Not enough
4,54	109	3,99	96	3,45	83		
4,5	108	3,95	95	3,41	82		

*The maximum number of points that a student can collect for current educational activity during semester in order to be admitted to the exam is **120 points**.*

*The minimum number of points that a student can collect for current educational activity during semester in order to be admitted to the exam is **72 points**.*

Calculating of the number of points is based on obtained marks of student according to traditional scale while learning subject during the semester, by calculating the arithmetic mean (AM) that is rounded to two signs after comma.

Evaluation of independent work of students. Independent work of students, which is provided by the topic of the lesson together with the classroom work, is evaluated during the current control of the topic in the relevant lesson. Assimilation of topics that are submitted only for independent work is checked during the final module control.

Evaluation of final control.

The maximum number of points that a student can score during the exam is **80 points**.

The final control is considered credited if the student scored at least 60% of the maximum amount of points (for a 200-point scale - at least **50 points**).

Determining the number of points that a student scored in the discipline: the number of points that a student scored in the discipline is defined as the sum of points for the current academic activity (Table1) and for the final control (diff.credit, exam) (Table 3).

Table 3. Scale of assessment of differentiated (exam) credit:

Traditional scale	Points
«5»	70-80
«4»	60-69
«3»	50-59

General course evaluation system	The final written work is performed in the form of a test.
Requirements for written work	Classroom work
Practical classes	Classroom work

The 1st semester

Classroom work - score from 2 to 5 for each topic.

Differentiated credit (semester control) Semester control at the end of the 1st semester is provided in the form of Differentiated credit. (Table 2) Provides a final grade on a 120-point scale as the sum of grades for the current control of knowledge (oral examination, written survey, Practical work, abstracts). Semester control includes control of theoretical and practical training.

Amount: minimum $72 + 50 = 122$, maximum $120 + 80 = 200$

The 2nd semester

Classroom work - score from 2 to 5 for each topic.

Final module control is evaluated from 50 to 80 points and consists of:

Test control - 40 tests = 40 points (1 point for the correct answer to 1 test).

Answer to 2 theoretical questions of 20 points for each = 40 points. Amount: 80.

Amount: minimum $72 + 50 = 122$, maximum $120 + 80 = 200$

The list of theoretical questions to prepare students for the exam.

1. Dental diseases prevention: meaning, aim, tasks, kinds, methods, assessment of medical efficiency.
2. Anatomic-physiological features of oral cavity structure in children of different ages.
3. The development of maxillofacial area, teeth, mucous membrane and periodontal tissues.
4. Periods of development of primary and permanent teeth. Influence of whole organism on teeth development.

5. Characteristic of physiological eruption of teeth in children. Periods of foundation, mineralization, eruption of primary teeth.
6. Periods of formation and resorption of roots in primary and permanent teeth. Kinds and types of root resorption.
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7. Periods of foundation, mineralization, eruption, and root formation of permanent teeth.
8. The factors of embryonic and postembryonic period which are influenced on foundation and mineralization of teeth.
9. External and heredity factors which make conditions for development of caries and non-caries damages of teeth.
10. Algorithm of dental patient examination.
11. Dental formula. Clinical and anatomical dental formula record.
12. Anatomic – topographical features of primary and permanent teeth in children. The differences between primary and permanent teeth.
13. WHO dental survey, characteristic of the methods. Estimation of results.
14. Pellicle, soft dental deposits, plaque. Their role in pathogenesis of caries and periodontal disease.
15. Dental deposits. Their role in pathogenesis of caries and periodontal diseases.
16. Oral hygiene indices. Estimation of oral hygiene state with Fedorov - Volodkina, Green-Vermillion, Sinless – Low indices.
17. Methods of tooth cleaning. Supervised brushing of teeth in school.
18. Oral hygiene items. Classification. Indications for application.
19. Oral hygiene products. Classification. Physical-chemical features. Indications for products application.
20. Choice the hygiene products and items used for oral cavity accordant to the stomatological status.
21. Professional hygiene of oral cavity. Methods and products of professional hygiene of oral cavity.
22. Oral hygiene teaching and education. Organization. Methods of realization.
23. Enamel. Histological structure, chemical content, physical features. «Maturing» of enamel after dental eruption.
24. Immature enamel as a cariogenic factor. Methods and products of preventive influence.
25. The structure and biological properties of dentin.
26. Homeostasis of dental hard tissues after eruption. Mechanism of biological regulation.
27. Biological properties of dental pulp. Contemporary conception about metabolic processes in dental enamel and pulp.
28. Saliva. Its properties, content, role in «maturing» of enamel and support of homeostasis in dental hard tissues.
29. The microflora of oral cavity. Its physiological significance and impact on development of caries and periodontal diseases. The products and methods of prevention of pathological impact.
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30. Epidemiology of dental diseases. Epidemiological examination in stomatology. Methods and registration documents.
31. The prevalence and intensity of dental caries in children. The influence of climate, geographical, social-economical, and ecological factors on frequency and intensity of dental caries in children.
32. Indices of caries.
33. Evaluation of enamel acid resistance (TER-test, CRT-test).
34. Cariogenic situation in oral cavity. Etiological factors of caries. Methods of exposure

and removal this situation.

35. The role of carbohydrates in mechanism of dental caries. Prevention measures.
36. The scientific background of dental caries primary prevention.
37. Protective mechanisms of oral cavity. Their role in prevention of dental caries, periodontal diseases.
38. Periodontium, structure. General and local etiological factors of periodontal disease.
39. Indices estimation of the periodontal status (CPITN, CPI, PMA, PI, Pissarev – Shiller test).
40. Sanitary education in the complex system of dental diseases prevention. The base forms of sanitary – instructive work among different age groups.
41. Fluorine insufficiency and surplus in drinking water, its influence on dental hard tissues. The fluorine products used for treatment and prevention of dental caries and periodontium.
42. Preparatory period in organization of primary dental caries prevention. Its characteristic.
43. Methods and products of exogenous dental caries prevention in children.
44. Significance of calcium, phosphor and fluorine in the system of exogenous dental caries prevention. Calcium, phosphorus and fluorine medicines, their mechanism of action.
45. Methods and products of endogenous dental caries prevention in the periods of foundation and development of teeth in a child (during pregnancy and breast - feed woman).
46. Exogenous dental caries prevention with fluorine medicines. techniques of application, the estimation of efficiency.
47. Pit and fissure sealing as a method of dental caries prevention. Indications and methods.
48. Fissure sealants: classification, content, properties.
49. Kinds and methods of endogenous dental caries prevention in children. Planning of dental caries preventive measures accordant to the cariogenic situation in oral cavity. Cooperation with paediatrician.
50. Entrance pathways of fluorine in human organism. The maintenance of the fluorine in drinking water. The caries preventive mechanism of fluorine action.
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51. Needs in the macro- and microelements, vitamins in children. Modern medicines included macro- and microelements, vitamins and their prescription for the children of different ages.
52. Types of exogenous dental caries prevention in the children of different ages. The efficiency control of exogenous dental caries prevention.
53. Products for exogenous dental caries prevention, indications, methods of application.
54. Hygienic methods used for periodontal diseases prevention. Prescription of oral hygienic items and products for periodontal diseases.
55. Breast feeding. Its role in dental diseases prevention.
56. The role of rational nutrition in dental caries prevention.
57. The cariogenic role of general somatic diseases in period of pregnancy and life of child. The leading role of dentist, gynecologist, podiatrist in the primary prevention of dental caries. The organization and the method of their introduction.
58. Complex system of prevention of dental caries. The main elements of program. Estimation of efficiency of the program of dental caries and periodontal diseases prevention.
59. Organization of complex system of prevention of dental caries. Public, group, individual levels of introduction.
60. Individual prevention of periodontal diseases. The hygiene items and products, methods of their application.

61. Contemporary principles of dental diseases prevention, their organization and guide methods.
62. Planning, organization and introduction of preventive measures in organized children group.
63. Analysis and estimation of efficiency in primary dental caries and periodontal diseases prevention.
64. Sanitary education is a motivation of population to preservation and support of oral cavity health.

The list of practical skills for final module control

1. Removal dental deposits.
2. Assessment acid enamel resistance (TER, QESRE, CRT).
3. Fissure sealing.
4. Diagnostic using of painting.
5. Deep fluoridation of hard dental tissues.
6. To perform professional oral hygiene.
7. Make dental examination according to the algorithm. Record dental formula.

Circumstance of admission to the final control	<ol style="list-style-type: none"> 1. Semester control at the end of the 1st semester is provided in the form of a differential credit. (Table 2) Provides a final score on a 120-point scale as the sum of scores for the current control of knowledge (oral examination, written survey, tests, verification of identification of micropreparations, abstracts), the results of 2 content modules. 2. Students are allowed to take the differentiated credit, exam only if there is no debt for the implementation of the curriculum.
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7. Course policy

The organization of the educational process is carried out with the use of the European Credit Transfer System (ECTS) to assess student performance. The points gained in the current survey, independent work and points of the final control are credited. This must take into account the student's presence in class and his activity during practical work. Inadmissible: absences and late classes; use of a mobile phone, tablet or other mobile devices during the lesson (except for the cases provided by the curriculum and methodical recommendations of the teacher); copying and plagiarism; untimely performance of the task, the presence of unsatisfactory grades for 50% or more of the submitted theoretical and practical material.

8. RECOMMENDED LITERATURE

Basic:

1. Paediatric dentistry/ Richard Welbury, Monty Duggal – 3rd ed., 2005 Copyright., P. 306-310.
2. L.A. Khomenko. Pediatric Therapeutic Dentistry.- K.:Book-plus, 2012
3. Clinical Textbook of Dental Hygiene and Therapy (2nd ed.)-Suzanne Noble, 2012, p.430
4. .Kaskova L.F., Berezhna o.E., Vashchenko I.U. propaedeutics of a childtherapeutic dentistry dentistry (English is my). - poltava, 2013. -140 p.
5. Peter Heasman. Restorative Dentistry, Paediatric Dentistry and Orthodontics. - Churchill Livingstone,2003. - P. 378.
6. Ford T.P., Rhodes J.S., Ford H.E. Endodontics Problem-Solving in Clinical Practice. - Martin Dunitz Ltd,2002. - 206 p.

Additional:

1. Advanced Endodontics by Nageswar Rao R. -2009. - 374p.
2. Harly's Endodontics in Clinical Practice 6th Edition by Bun San Chong. Churchill Livingstone, 2010. - 312p.
3. Handbook of Clinical Techniques in Paediatric Dentistry by Jane A.Soxman. - WileyBlackwell, 2015. - 208p.
- 4' Paediatric Dentistry at a Glance / Monty Duggal, Angus Cameron, Jack Toumba. - Wiley-Blackwell, 2012. - 120p.

1. Paediatric Dentistry: A Clinical Approach, 3rd Edition / Goran Koch, Sven Poulsen, Ivar

Espelid, Dorte Haubek. - wiley-Blackwell, 2016.- 40gp.

1. <https://www.cdc.gov/oralhealth/index.html>
2. https://www.ada.org/~media/ADA/Public%20Programs/Files/bringing-diseaseprevention-to-communities_adh.ashx
3. https://www.who.int/health-topics/oral-health/#tab=tab_1
4. <https://www.dentalwellness4u.com/prevention/welcome.html>
5. <https://www.intechopen.com/books/emerging-trends-in-oral-health-sciences-anddentistry/assorted-errands-in-prevention-of-children-s-oral-diseases-andconditions>
6. <https://www.dentalcare.com/en-us/professional-education/ce-courses/ce377>
7. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4390741/>
8. <https://pdfs.semanticscholar.org/764c/0465bf70ee20d7f0c174e57200793b2a2ea1.pdf>
9. <https://www.nature.com/articles/6400291>

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