SYLLABUS OF THE EDUCATIONAL COMPONENT

ORTHOPEDIC DENTISTRY(INCLUDING IMPLANTOLOGY)

Specialty: **221 "Dentistry"**
Educational and professional program: **Dentistry**
Component code in the educational program: MC 30
Higher education level: **second (master's)**
Form of education: **full-time (full-time)**
Year of study: 3
Semester(s): V (autumn)**,VI (spring))**
Type of educational component: **mandatory**
Academic year: **2026-2027**

Amount:**5.5ECTS credits (165 hours)**
Training sessions: **lectures, practical classes, independent work, consultations**
Final control: differential credit
Prerequisites:**GC 4; GC 6; GC 7; GC 8; GC 12;GC 13;GC 14;GC 18; GC 19; GC 21;GC 22;GC 23; GC 25; GC 27**

Department/Unit: **Department of Prosthetic Dentistry**, Peremohy Ave., 51, UDC KhNMU, 4th floor
Head of the educational component: Doctor of Medical Sciences, **Professor Yanishen Igor Volodymyrovych**,
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Page of the educational component in the Distance Learning System of KhNMU (Moodle):http://distance.knmu.edu.ua/course

DESCRIPTION OF THE EDUCATIONAL COMPONENT

Orthopedic dentistry is an educational component aimed at developing knowledge and practical skills in diagnosing, planning, and performing orthopedic treatment for defects in hard dental tissues, partial and complete tooth loss using modern designs of fixed and removable dentures.

PURPOSE OF THE COURSE: professional formation of a future specialist capable of solving clinical problems using acquired knowledge and skills in the discipline, which involves the integration of teaching the educational component with therapeutic, surgical and pediatric dentistry.

LEARNING OUTCOMES:

- Explain the anatomical, physiological and biomechanical foundations of the functioning of the dento-maxillary apparatusthat are important for orthopedic treatment.
- Diagnose defects in hard dental tissues, partial and complete tooth loss, determine the types of occlusion disorders and plan methods for their orthopedic correction.
- Choose the optimal type of orthopedic structure (fixed, removable, combined, on implants)according to the clinical situation.
- To master the methods of clinical and laboratory stages of manufacturing orthopedic structures, to control the quality of the prostheses and the accuracy of their fixation.
- Apply modern materials, digital technologies and CAD/CAM systemsin the process of making dentures.
- Evaluate the functional, aesthetic, and biocompatible characteristics of prostheses, determine the causes of possible complications and ways to eliminate them.

CONTENT OF THE EDUCATIONAL COMPONENT

List of lectures topics (20 hours):

1. Examination of patients in the orthopedic dentistry clinic. Clinical analysis of occlusion.
2. Pain relief in the orthopedic dentistry clinic.
3. Indications for replacement of hard tissue defects with inlays and post-mount structures.
4. Indications and clinical and technological stages of manufacturing artificial crowns.
5. Indications and clinical and technological stages of manufacturing bridge prostheses.

6. Partial absence of teeth. Condition of the dentition requiring prosthetics with removable dentures. Types and designs of dentures.
7. Biological and clinical foundations of prosthetics with partial lamellar prostheses. Laboratory stages of their manufacture.
8. Biological and clinical foundations of prosthetics with clasp prostheses. Component elements. Fundamentals of planning the design of clasp prostheses.
9. Adaptation to removable dentures when replacing partial dentition defects. Errors and complications in the manufacture of clasp dentures.
10. Errors and complications during the stages of orthopedic treatment with partial removable plate prostheses and clasp prostheses.

List of topics of practical lessons (100h):

1. Examination of a patient in a clinic of orthopedic dentistry. Components of the masticatory system, their characteristics. Types of occlusions, their characteristics and signs.
2. Pain relief in the orthopedic dentistry clinic.
3. Final lesson.
4. Replacement of hard tissue defects with inlays and post-mount structures.
5. Clinical and laboratory stages of manufacturing stamped and plastic crowns.
6. Clinical and laboratory stages of manufacturing solid-cast and solid-cast composite crowns.
7. Final lesson.
8. Clinical and laboratory stages of manufacturing stamped-brazed bridge prostheses.
9. Clinical and laboratory stages of manufacturing cast and cast composite bridges.
10. Complications and errors in prosthetics with bridge prostheses.
11. Final lesson.
12. Examination of a patient with partial dentition defects. Abutment teeth, requirements for abutment teeth.
13. Determination and fixation of central occlusion in Betelman groups I, II, III defects.
14. Placing teeth in partial dentures. Checking the design of partial dentures.
15. Technology for manufacturing partial removable lamellar prostheses.
16. Imposition of a partial removable lamellar prosthesis. Correction of partial lamellar prostheses.
17. Errors and complications of the CHP. Final lesson.
18. Replacement of partial defects of the dentition with clasp dentures.
19. Parallelometry. Classification of staplers, indications for use.
20. Technological stages of manufacturing clasp dentures. Preparing the model for duplication.
21. Modeling the framework of a clasp prosthesis.
22. Fitting the clasp prosthesis frame.
23. Comparative characteristics of partial removable dentures.
24. Adaptation to clasp dentures. Final lesson.
25. DIFFERENTIATED ACCOUNTING.

List of topics of independent work of the student (45 hours)

1. Patient care and filling out medical documentation.
2. Pain relief in the orthopedic dentistry clinic. Possible complications and methods for their elimination.
3. Pathology of hard dental tissues. Etiology, clinical features.
4. Clinical and laboratory stages of making inlays by direct and indirect methods. Features of the formation of carious cavities of Black classes I-V.
5. Disinfection and sterilization of instruments, impressions. Prevention of the spread of infectious diseases in the dental clinic.
6. Classification of dentition defects according to Kennedy, taking into account Apligate's additions.
7. Additional (special) examination methods.

8. Types of occlusions, their characteristics and signs. Methods of fixing the mesio-distal position of the lower jaw in central occlusion.
9. Types of plastering wax composition into a cuvette. Indications.
10. Basics of working with an articulator.
11. Modern types of impression materials.
12. Types of porosity of basic plastic and their characteristics. Prevention.

The IWS is aimed at deepening and consolidating the theoretical knowledge gained during classroom training and contributing to the formation of professional competencies. The results of the IWS are subject to control and are included in the final control of knowledge.

Consultations:online, according to the schedule of the educational department.

Teaching methods:narrative-explanation, conversation, illustration, demonstration, presentation, videos, video films, discussion, modeling of processes and situations, case method, project method, debate, "Brainstorming" method.

EVALUATION

Current Learning Activities (CLA)- is the educational activity of a student during the semester, which is controlled by a scientific and pedagogical worker conducting classes in a group. CLA is considered completed if the student has completed all missed classroom lessons and lectures in the current semester, and the average score for all PC topics is 3 points or higher, in which case the report is marked "completed" and the average score in a 4-point system is indicated (calculated automatically within the functionality of the ASM electronic journal), or "not completed", if the student has missed classroom lessons and lectures in the current semester, or the average score is below 3 points.

Independent work of the student (IW) The educational material of the discipline, intended for the student to master in the process of independent work, is submitted for final control together with the educational material studied during classroom training sessions.

General Educational Activities (GEA)- is considered completed if student has completed all missed classroom lessons and lectures, and the average score for all PC topics is 3 points or higher. Points for the GEA for disciplines with the form of control "differentiated credit" are calculated as the arithmetic average of PC points for all topics of all semesters, throughout the entire period of studying the discipline (with an accuracy of one hundredth) according to Table 1 "Recalculation of the average score for current control into a multi-point scale, automatically within the functionality of the electronic journal of the ASM. GEA is determined in points from 70 to 120. GEA is determined in points from 120 to 200, in accordance with the "Instructions for assessing the educational activities of higher education applicants at KhNMU".

Individual tasks(IT) contribute to a more in-depth study of theoretical material by the student, the formation of skills in using knowledge to solve relevant practical tasks. IT is performed by the student independently, receiving the necessary consultations from a scientific and pedagogical worker.

- repor tstudent's essay on a practical lesson 0-2 points;
- presentation report in the practical lesson 0-3 points,
- report at scientific and practical conferences, writing abstracts, articles 0-5 points;
- participationin the All-Ukrainian Olympiad – 5-10 points

IT are evaluated in points (no more than 10), which are added to the points scored for the LND upon completion of the discipline, during the "credit test."

The total score for GEA and IT cannot exceed 200 points.

Final control. Admission to the DC is calculated in terms of GEA scores from 70 to 120 points. The DC itself is evaluated from 50 to 80 points.

Grade in subject (GS). The grade for the discipline is the sum of the points for the CLA, IT and DC and ranges from 120 to 200 points.

Appealing the results of the final control is carried out in accordance with the procedure established in KhNMU (https://knmu.edu.ua/wp-content/uploads/2021/05/polog_apel_kontrol.pdf).

EDUCATION COMPONENT POLICIES

Recommendations for working on the course: To successfully complete the relevant course, you must regularly attend practical classes; have theoretical preparation for practical classes according to the topic; not be late or miss classes; complete all necessary tasks and work in each class; be able to work with a partner or as part of a group; contact the course supervisors for help on various issues related to the subject of the classes and receive it when you need it. The participation of education seekers in conducting scientific research and conferences on this topic is encouraged.

Attending classes. Attendance at lectures and practical classes is mandatory. The uniform for offline classes is a white medical gown. If you are more than 5 minutes late, you may not be allowed to attend the class. Missed classes are made up in accordance with the Regulations on the procedure for students of KhNMU to complete classes (https://knmu.edu.ua/wp-content/uploads/2021/05/polog_vidprac_zaniat.pdf).

Academic integrity. KhNMU stands on the positions of zero tolerance to manifestations of academic dishonesty. Any violations of the principles of academic integrity entail responsibility in accordance with the procedure established by KhNMU (https://knmu.edu.ua/wp-content/uploads/2021/05/polog_ad-1.pdf).

Use of electronic gadgets and artificial intelligence tools. Copying, using various kinds of software, hints, using a mobile phone, tablet, or other electronic gadgets during class for purposes unrelated to the educational process are not allowed.

Policy on individuals with special educational needs. Applicantswith special educational needs should contact a teacher to develop an individual educational trajectory.

Teacher response time:24 hours.

Technical requirements for the course:

- access to a computer, laptop, tablet or smartphone
- corporate Google account with your own photo
- skills in working with Google Workspace (Google Meet, Docs, Sheets, Slides, Forms) and Moodle

Technical support: ASM (ev.shevtsov@knmu.edu.ua), Google (tehotdelknmu@gmail.com), Moodle (al.korol@knmu.edu.ua)

RECOMMENDED SOURCES

1. Dentistry. Textbook. In 2 books. – Book. 1 /M.M.Rozhko, Z.B.Popovich, V.D.Kuroyedova and others..; edited by Prof. M.M.Rozhko. – K.: VSV “Medicine”, 2020. – 872 p.
2. Rozhko M.M., Nespryadko V.P., Mykhailenko T.N. and others. Prosthetic technique. – K.: Kniga-plus, 2018. – 604 p.
3. Basic technologies for manufacturing dentures: teaching aids / Vinnytsia. NMU named after M.I. Pirogov, Ukr. med. stomat. academy, Ternop. State Medical University named after I.Ya. Gorbachevsky; compiled by E.V. Belyaev and others. - Vinnytsia: Works, 2019. - 104 p.
4. Gasyuk P.A., Kostenko E.Ya., Machogan V.R., Rosolovska S.O., Vorobets A.B., Radchuk V.B. Stud Book on Orthopedic Dentistry. Ternopil-Uzhgorod. 2018. - 369 p.
5. Gasyuk P. A. Almanac of Orthopedic Dentistry // P. A. Gasyuk, E. Ya. Kostenko, V. R. Machohan, S. O. Rosolovska, A. B. Vorobets // Ternopil: Bohdan – 2018. – 352p.
6. Gasyuk P. A. Technological aspects of manufacturing orthopedic structures // P. A. Gasyuk, D. M. Korol, S. O. Rosolovska, L. S. Korobeynikov, V. B. Radchuk, R. V. Kozak // Ternopil: FOP Parkhin R. A. – 2017. – 140p.
7. Korol D. M. Fundamentals of clasp prosthetics / D. M. Korol, D. D. Kindiy, L. S. Korobeynikov, O. D. Odzhubeyska, R. V. Kozak, T. P. Malyuchenko // Poltava. – 2019 – 139p.

8. Korol M. D. Dental materials science / M. D. Korol, O. D. Odzhubeyska, D. M. Korol, I. M. Tkachenko, V. M. Petrushanko, M. O. Ramus, A. D. Dorubets, D. D. Kindiy, L. S. Korobeynikov // Poltava: FOP Myron I. A. – 2018. – 176p.
9. Fastovets O. O. Fixed dental prosthetics: educational and methodological manual / O. O. Fastovets, R. A. Kotelevsky, S. S. Kobylyak // Dnipro: DMA. – 2017. – 212p.

Methodological guidelines:

1. Order of patient's orthopedic treatment stages. Golik VP, Yanishen IV, Grishanin GG, Tomilin VG, Diudina IL 2017.
http://repo.knmu.edu.ua/handle/123456789/15536
2. Replacement of partial defects of dentition with bridge-like prostheses. Indications and contraindications. Yanishen I.V., Pogorila A.V., Pereshivaylova I.O., Shepenko A.G. – 2017.
http://repo.knmu.edu.ua/handle/123456789/22228
3. Modern methods of examination of dental patients. Preparation of the oral cavity before orthopedic intervention. Drawing up a treatment plan for a dental patient. Yanishen I.V., Pereshyvailova I.O., Pogorila A.V., Yaryna I.M. - 2018.
http://repo.knmu.edu.ua/handle/123456789/22247
4. Aesthetic crowns: plastic, composite, metal-ceramic, metal-free. Indications and contraindications. Yanishen I.V., Pereshyvailova I.O., Pohorila A.V., Yaryna I.M. – 2018.
http://repo.knmu.edu.ua/handle/123456789/22274

Lectures:

1. Orthopedic treatment (restoration) of dentition defects (partial adentia) by dental fixed bridges. Tomilin, VG-2020.
http://repo.knmu.edu.ua/handle/123456789/12149
2. Adaptation to removable prosthesis in orthopedic treatment of dentition partial defects. Mistakes and complications in orthopedic treatment by removable dentures. Tomilin, VG -2020.
http://repo.knmu.edu.ua/handle/123456789/12144

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