SYLLABUS OF THE EDUCATIONAL COMPONENT

PROPAEDEUTICS OF ORTHOPEDIC DENTISTRY

Specialty: **221 "Dentistry"**
Educational and professional program: **Dentistry**
Component code in the educational program: **GC 22**
Level of higher education: **second (master's)**
Form of education: **full-time (full-time)**
Year of study: **2**
Semester(s): III (autumn**),IV (spring)**
Type of educational component: **mandatory**
Academic year: **2025-2026**

Amount:**4ECTS credits (120 hours)**
Educational sessions: **lectures, practical classes,independent work,consultations**
Final control: differential credit
Prerequisites:**GC 1, GC 3, GC 4; GC 6; GC 7; GC 8;GC 13**

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

The educational component is aimed at developing knowledge and practical skills in diagnosing, planning, and conducting 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 and functional features of the human dentofacial apparatus, including the structure of the jaws, dentition, muscles, and temporomandibular joint.
- Identify bite types, occlusion types, and articulation principles, analyze the biomechanics of lower jaw movements.
- Apply knowledge of anatomy, physiology, and biomechanicsfor examining patients in the orthopedic dentistry clinic.
- Describe the classification of impressions and impression materials, explain the principles of material selection according to the clinical situation.
- Describe the properties, indications and application technology of different groups of impression materials.
- Distinguish between structural dental materials, describe the stages of polymerization and the principles of their use.
- Demonstrate practical skills in making diagnostic models and working with devices that reproduce the movements of the lower jaw, adhering to safety and asepsis requirements.
- Determine indications and contraindications for various orthopedic treatment methods, taking into account the patient's general condition and local changes.

CONTENT OF THE EDUCATIONAL COMPONENT

List of topics of practical lessons (6 hours):

1. Orthopedic dentistry as a medical science. Organs of the dento-maxillary system and their functions.
2. Examination of patients in the orthopedic dentistry clinic (part 1).
3. Examination of patients in the orthopedic dentistry clinic (part 2).

List of topics of independent work of the student (64h):

1. Organizational principles of orthopedic office work.
2. Functional anatomy of the masticatory apparatus.
3. Neuromuscular complex of the human dento-maxillary apparatus.
4. Anatomical features of the structure of the temporomandibular joint.
5. Teeth, dentition. Groups of teeth, anatomical topography.
6. Physiological and pathological types of bites.
7. Articulation and occlusion.
8. Examination of patients in the orthopedic dentistry clinic. Final lesson.
9. Classification of impressions and impression materials.
10. Hard-crystallizing impression materials, their characteristics and applications.
11. Thermoplastic impression materials, their characteristics and applications.
12. Alginate impression materials, their characteristics and applications.
13. Silicone impression materials, their characteristics and applications.
14. Materials for duplicating models and materials for making refractory models.
15. Obtaining jaw models. Devices that reproduce the movements of the lower jaw.
16. Modeling materials.
17. Plastic dental construction materials. Final lesson.
18. Structural metal alloys for dental prostheses.
19. Classification of denture designs.
20. Clinical application of stamped crowns.
21. Clinical application of plastic crowns.
22. Clinical application of cast crowns.
23. Clinical application of cast composite crowns. Final lesson.
24. Clinical application of stamped-brazed bridge prostheses (mechanical, chemical, electrolytic).
25. Clinical application of cast bridge prostheses.
26. Clinical application of combined bridge prostheses. Final lesson.
27. Clinical application of partial removable dentures.
28. Clinical application of clasp prostheses.
29. Clinical application of complete removable dentures. Final lesson.
30. DIFFERENTIATED ACCOUNTING.

List of topics for student independent work (50 hours)

1. History of the development of orthopedic dentistry.
2. Contribution of Ukrainian scientists to the development of orthopedic dentistry. Kharkiv School of Orthopedic Dentists.
3. To master the ability to draw the muscular apparatus of the upper and lower jaw and explain the mechanisms of the main and additional functions of the masticatory muscles.
4. To master the ability to draw the structure and explain the mechanisms of movement of the temporomandibular joint.
5. To master the ability to draw the anatomical structure of the upper and lower jaw.
6. Explain the vertical movements of the lower jaw.
7. Explain lateral transverse movements of the lower jaw.

8. Examination of patients in the orthopedic dentistry clinic. Additional methods of examination of patients in the orthopedic dentistry clinic.
9. Physico-chemical properties of basic and auxiliary materials used in the manufacture of cast crowns.
10. Methods of stamping metal crowns.
11. Technology for manufacturing plastic crowns.
12. Technology for manufacturing combined crowns.
13. Methods of casting metal crowns.
14. Methods and technology for processing plastic, combined crowns.
15. Pain relief during preparation of abutment teeth for cast crowns and bridges.
16. Types of intermediate parts of bridge prostheses.
17. Technology of soldering and processing of bridge prostheses (mechanical, chemical, electrolytic).
18. Casting. Technology of casting the intermediate part and the entire frame of the bridge prosthesis.
19. Modeling rules and manufacturing technology for cast prostheses.
20. Parallelometry methods.
21. Rules for modeling and manufacturing technology of clasp dentures.

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. Propaedeutics of orthopedic dentistry: textbook / Korol D. M., Korol M. D., Nidzelsky M. Ya. et al.; ed. by Korol D. M. – Vinnytsia: Nova Knyga, 2019. – 328 p.
2. Propaedeutics of orthopedic dentistry: textbook / P.S. Flis, G.P. Leonenko, I.A. Shynchukovsky and others; edited by P.S. Flis. – 2nd ed. – K: VSV “Medicine”, 2020. – 328 p.

3. 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.
4. Rozhko M.M., Nespryadko V.P., Mykhailenko T.N. and others. Prosthetic technique. – K.: Kniga-plus, 2018. – 604 p.
5. 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.
6. 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.
7. 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.
8. 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.
9. 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.
10. 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

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