

SELECTIVE DISCIPLINE for second-year students of the Faculty of Dentistry for
2021-2022 academic year

The name of the discipline	MATERIALS SCIENCE IN PROSTHETIC DENTISTRY
Departure	Prosthetic dentistry
Research and teaching staff who will teach the discipline	Prof. Belikov O.B. As. Roshchuk O.I.
Brief description of the content of the discipline	<p>Objective of the discipline: in-depth study of mechanical, technological, physical, chemical and biological properties of materials for the fabrication of prosthetic constructions, their structure, properties and the relationship between them, which explores the dependence of structure and properties on methods of production and processing of materials and their change under the influence of external factors: power, thermal, radiation, etc.</p> <p>Tasks: mastering the skills of selecting a material that would meet all the requirements, did not have a negative effect on the tissues of the prosthetic area and the patient's body as a whole, could replace missing teeth, making this replacement invisible and convenient for the patient. Justification of the choice of certain materials depending on the type of prosthesis, the value of certain materials for the fabrication of prosthetic constructions. Analysis of the requirements for basic and auxiliary materials used in prosthetic dentistry, composition, properties and use of certain groups of dental materials, methods of using auxiliary materials in the fabrication of dentures. Study of the positive and negative properties of auxiliary materials for the fabrication of dentures.</p> <p>The results of the discipline learning: The student must <i>know</i>:</p> <ol style="list-style-type: none"> 1. Fundamentals of dental materials science. Choosing the "ideal" material for prosthetics. 2. Classifications of dental materials by chemical nature and purpose. Basic properties of materials and their significance for prosthetic dentistry. 3. Characteristics of alloys and ceramic masses for the fabrication of metal-ceramic constructions of dentures. 4. The concept of "polymeric materials". Classification of dental polymeric materials. <p>The student must <i>be able to</i>:</p> <ol style="list-style-type: none"> 5. Make a choice of material for prosthetic constructions in accordance with the clinical situation.
Ensuring general and professional competencies	<p>GC 1 Ability to abstract thinking, analysis and synthesis.</p> <p>GC 2 Knowledge and understanding of the subject area and professional activity.</p>

	<p>GC 3 Ability to apply knowledge in practice.</p> <p>GC 4 Ability to communicate in the state language both orally and in writing.</p> <p>GC 5 Ability to communicate in English.</p> <p>GC 6 Skills of usage of information and communication technologies.</p> <p>GC 7 The ability to act socially responsibly and consciously.</p> <p>SC 1 Ability to collect medical information about the patient and analyze clinical data.</p> <p>SC 2 Ability to interpret the result of laboratory and instrumental research.</p> <p>SC 3 Ability to plan and conduct prevention measures of diseases of organs and tissues of the oral cavity and maxillofacial area.</p> <p>SC 4 Ability to treat major diseases of organs and tissues of the oral cavity and maxillofacial region.</p> <p>SC 5 Ability to identify tactics, methods and emergency medical care.</p> <p>SC 6 Ability to maintain regulatory medical documentation.</p>
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