

	Educational institution Roel Metropolitan University
	Quality management system PPS syllabus Department of Dental Disciplines

Educational institution "RMU"
Department of Dental Disciplines

Syllabus

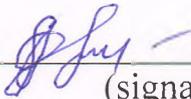
in the discipline "Propaedeutics of Orthopedic Dentistry"
for students majoring in 560004 "BDS"

Form of study	on an ongoing basis
Well	2
Semester	4
Exam	
Total credits for the curriculum	3
Total number of hours for the curriculum	90
Lectures	18
Practical classes	54
Independent work	18

Curriculum Developer:
 Makenzhanov A.

Reviewed and approved at a meeting of
 the Department of Fundamental
 Disciplines
 Protocol No. ___ from "___"
 _____ 2025.

Head of the Department Bektasheva
 A.K.



 (signature)

Bishkek 2025

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Well	Semester	Weeks	Total academic hours		Number of hours of independent work		Total hours	Number of modules
			Lecture	Practical classes	SRS	SRSP		
2	4	18	18	54	9	9	90	2

Course Summary: Propaedeutics of Orthopedic Dentistry

Review

Prosthetic dentistry is a branch of dentistry, focusing on the study of applied materials used in dentistry and providing the foundation for understanding the properties and types of various materials. The close relationship between materials science and other clinical disciplines makes it a key theoretical area in general dentistry. Prosthetic dentistry encompasses a wide range of materials used in dentistry, enabling a broad understanding of the types of prosthetics and fillings in the future.

Placement in an educational structure: This discipline is part of the compulsory professional training program.

Prerequisite:

Postrequisites:

Propaedeutics of orthopedic dentistry

Planned results of mastering the academic discipline

Target The mastery of this discipline is aimed at preparing a dentist for general erudition in the field of dentistry, the ability to broadly navigate the use of dental materials in the treatment of various orthopedic defects.

The objectives of mastering the discipline are:

- master the types of dental materials;
- to understand the indications for various types of raw materials;
- master the structure of the orthopedic department and dental laboratory;

After mastering the course “Propaedeutics of Orthopedic Dentistry”, the student:
I'll know:

- Classification of materials
- Structure and properties of materials
- Methods of their processing.

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Can be used:

- Methods of selecting materials.
- Modern materials science technologies

Will be able to analyze:

- .

Course title

No.	Course title	well	semester	Number of weeks	Number of credits	Number of academic hours		Hours of independent work	General	Type of final control
						lectures	seminary			
1	Propaedeutics of orthopedic dentistry	2	4	18	3	18	54	72	90	

Contents of the academic discipline

4th semester

No.	Name chapters and topics disciplines (lectures and practical classes)	Classroom classes		Total number of hours for	Hours of independent work		Used educational technologies, methods and teaching techniques	Current shapes and border control academic performance
		lecture	seminary		SRS	SRSP		
1	Lecture 1 Introduction to the Specialty. Organization and Equipment of the Orthopedic Department. Dental Instrumentation. Disinfection and Sterilization.	2		8			L – Traditional Lecture RD – Regulated Discussion	AS – Assessment of practical skills (competencies) SPS – Situational Problem Solving
	Organization of the orthopedic department. Dental instruments		3			1		
	Disinfection and sterilization		3		1			

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2	Lecture 2 Impression materials. Classification, composition, and requirements.	2		8			VL – Lecture on Visualization SGM – Small Group Method	AS – Assessment of practical skills (competencies) SPS – Situational Problem Solving A – Protection of Abstraction
	Impression materials. Hard crystallizing impression materials		3		1			
	Elastic impression materials. Alginate, silicone, thiokol.		3		1			
3	Lecture 3 Metals and their alloys. General information	2		11			Lecture on visualization of overhead lines -SGM – Small Group Method - FD – Forum discussion	AS – Assessment of practical skills (competencies) AS – Assessment of practical skills (competencies)
	Noble metal alloys		3		1	1		
	Cobalt-chromium alloys. Titanium alloys. Stainless steel.		3		1	1		
	Low-melting metals		3		1	1		
4	Lecture 4 Plastics. General information, classification	2		8			<i>Lecture on visualization of overhead lines</i> <i>-SGM – Small Group Method</i> <i>- FD – Forum discussion</i>	AS – Assessment of practical skills (competencies) AS – Assessment of practical skills (competencies)
			3		2	2		
5	Lecture 5 Dental porcelain	2		5			Lecture on visualization of overhead lines -SGM – Small Group Method - FD – Forum discussion	AS – Assessment of practical skills (competencies)
	Module 1.		3		2	2		

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6	Lecture 6 Molding materials. Dental wax	2		5				<ul style="list-style-type: none"> • AS – Assessment of practical skills (competencies) • SPS – Situational Problem Solving • DR – Report Protection
			3		2	2		
7	Lecture 7 Finishing materials for dentures. Grinding and polishing agents	2		8			<ul style="list-style-type: none"> • VL – Lecture on visualization • SGM – Small Group Method 	<ul style="list-style-type: none"> • AS – Assessment of practical skills (competencies) • SPS – Situational Problem Solving • DR – Report Protection
			3		2	2		
			3		2	2		
8	Lecture 8. Dental cements. Types and properties	2		8			<ul style="list-style-type: none"> • VL – Lecture on Visualization • SGM – Small Group Method 	<ul style="list-style-type: none"> • AS – Assessment of practical skills (competencies) • A – Annotation Protection • DR – Report Protection
					2	2		
			3		2	2		
9	Lecture 9 Modern materials in orthopedic dentistry. Scanning.	2		5			<ul style="list-style-type: none"> • VL – Lecture on Visualization • SGM – Small Group Method 	<ul style="list-style-type: none"> • AS – Assessment of practical skills (competencies) • A – Protection of Abstraction
			3		2	2		
10			3	3	2	2		<ul style="list-style-type: none"> • AS – Assessment of practical skills (competencies) • A – Protection of Abstraction

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11			3	3	2	2		<ul style="list-style-type: none"> • AS – Assessment of practical skills (competencies) • A – Protection of Abstraction
	Final standings.							
		6 p.m.	54 hours	72 hours	9 a.m.	9 a.m.		
	Total					90		
	hours							

Methodological recommendations for preparation for practical classes.

Practical classes follow lectures and serve as explanatory, generalizing, and reinforcing elements. They can be held not only in the classroom but also outside the school.

During practical classes, students absorb and assimilate new course material. Practical classes are held systematically, regularly, after each lecture or two or three lectures.

Practical classes are conducted according to the schedule of the educational process and independent work of students in disciplines.

When preparing for a practical lesson, it's important to review the methodological guidelines in advance. Pay attention to the lesson's purpose, key preparation questions, and the topic.

Before each practical lesson, the student studies the seminar plan with a list of topics and questions, a list of references and homework assignments on the topics presented at the seminar. The student is recommended to follow the following preparation plan for the seminar:

1. study lecture notes;
2. read the main and additional literature recommended for the section being studied;
3. answer the questions in the seminar plan;
4. study the topic and select literature for writing essays, reports, etc.

Plan for organizing students' independent work

Thematic plan for students' independent work (SIW)

No.	SIW Theme	Task for SIW	Literature	Deadline (weeks)	Maximum number of points
		PPT/abstract	/Open sources,		20

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<ul style="list-style-type: none"> • The main groups of materials in orthopedic dentistry. • Properties of dental metal alloys. • Ceramic materials: types, structure, features. • Polymer materials and their application in prosthetics. • Composite materials: advantages and limitations. • Mechanical properties of dental materials. • Biocompatibility of materials in the oral cavity. • Corrosion of dental alloys and methods of protection. • The influence of technological processes on the properties of materials. • CAD/CAM materials: modern types and characteristics. • Innovative materials: zirconium, 		<p>Craig's Restorative Dental Materials Atlas of Dental Materials and Techniques</p>		
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<p>lithium disilicate, PEEK.</p> <ul style="list-style-type: none"> • Adhesive systems and factors affecting bond strength. • Defects and damage to orthopedic structures. • Reasons for destruction of dental materials during operation. • Propaedeutics of orthopedic dentistry in 3D printing: properties and scope of application. 				
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Guidelines for preparing independent work

When studying the discipline "Propaedeutics of Orthopedic Dentistry", the following types of independent work of students are used:

- study of theoretical material from lecture notes and recommended textbooks, educational literature, and reference sources;
- independent study of some theoretical issues not covered in lectures, with writing papers and preparing presentations;

Students are asked to read and thoroughly analyze monographs and scientific articles on biochemistry. The results of their work with these texts are discussed during practical lessons.

Develop independent work skills. Students complete assignments independently, consulting textbooks, reference books, and scientific and methodological literature. Assignment completion is monitored both during practical classes through oral presentations and group discussions, and through written independent work.

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Annotation An abstract is a brief written summary of the content of a scientific paper on a given topic. It is an independent research project in which the student explores the essence of the problem being studied, with elements of analysis relevant to the abstract's topic.

Presents various points of view, as well as personal perspectives on the essay topic. The content of the essay should be logical, and the presentation of the material should be problem-based and thematic.

Requirements for writing annotations:

The volume of the abstract can be 9-10 pages of printed or handwritten text.

Main sections: content (plan), introduction, main content, conclusion, bibliography.

The text of the abstract should contain the following sections:

- title page indicating: name of the university, department, topic of the paper, full name of the author and full name of the teacher
- introduction, relevance of the topic.
- main section.
- conclusion (analysis of literature search results); findings.
- The list of literary sources must contain at least 10 bibliographic titles, including online resources.

The text part of the abstract is formatted on a sheet of paper of the following format: top indent – 2 cm; left indent – 3 cm; right indent – 1.5 cm; bottom indent – 2.5 cm; text font: Times New Roman, font height 14, spacing 1.5; page numbers at the bottom of the page. There is no page number on the first page.

The abstract must be formatted correctly and respectfully. References to references, including periodicals, from the past five years are required.

Abstract evaluation criteria:

- relevance of the research topic;
- compliance of the content with the topic;
- depth of material processing;
- the correctness and completeness of the disclosure of the questions posed;
- the significance of the results obtained for further practical activities;
- correctness and completeness of use of literature;
- compliance of the annotation design with the standard;
- quality of communication and answers to questions during the defense of the abstract.

Report— a type of brief but informative communication on the essence of the issue under consideration, presenting various opinions on the subject under study. In some cases, the author's personal perspective may be expressed within the framework of thematic questions.

Reporting requirements:

The abstract should not exceed five printed pages.

The quality report consists of four main structural elements:

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- Introduction;
- Introduction (at this stage, the speaker should interest the audience, formulate the relevance and novelty of the research, and emphasize the importance and purpose of the work performed.)
- The main part (tells about the research methods used, the work done, and analyzes the results obtained);
- Conclusion (summarizing the work).

The text part of the report is formatted on a sheet of paper in the following format:

- top indent – 2 cm; left indent – 3 cm; right indent – 1.5 cm; bottom indent – 2.5 cm;
- Text font: Times New Roman, font height – 14, spacing – 1.5;
- Page numbers are at the bottom of the sheet. There is no number on the first page.

Evaluation criteria:

- timeliness of submission;
- compliance with requirements;
- depth of material processing;
- compliance of the content with the topic;
- correctness and completeness of the source use.

Course policy

- Students are required to attend all classes (if a student misses more than 2 classes without a valid reason, he/she is required to make up the missed classes).
- During practical classes, students must complete all assigned tasks.
- Disrespectful behavior or rudeness may result in the student being removed from class.

Evaluation criteria

Current assessment is carried out through an oral survey, independent work and solving situational problems during practical classes, as well as class attendance and a total of up to 40 points.

The midterm assessment (modular exam) consists of a written assessment or computer-based knowledge test covering theoretical and practical material.

Midterm assessment questions cover the entire course module and assess students' understanding of the material. The total score is up to 40 points.

The final assessment (exam) is conducted using examination tickets, including theoretical questions and a practical assignment, worth up to 20 points.

The grades received for the quizzes, glossary, written papers, and presentations will serve as the basis for assigning grades on the final exam. If a student scores

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less than 60 points, no final grade is assigned, resulting in academic failure for the course.

The assessment policy stipulates that students must earn credits for each module:

Evaluation criteria	Module 1	Module 2
Classroom work (participation in discussions, oral questions, working with a glossary, attendance, etc.)	40 points	40 points
Independent work (work, presentation)	20 points	20 points
Total for the module (testing)	40 points	40 points
Total for discipline	100 points	

Evaluation criteria:

- **90-100**The student is given an “excellent” grade if the work meets the following requirements: completeness of the use of educational material, logical presentation (presence of diagrams, number of semantic connections between concepts), clarity (presence of drawings, symbols, etc.); accuracy of design, readability of notes, literacy (terminology and spelling);
- **76-89 "good"**A student is given a grade if the use of educational material is incomplete, the presentation is not logical enough (the presence of diagrams, the number of semantic connections between concepts), clarity (the presence of drawings, symbols, etc.); neatness of design, readability of notes, literacy (terminology and spelling), lack of connected sentences;
- **-60-75 "satisfactory"**A student is given a grade if the work does not use the educational material in full, if there is insufficient logical presentation (presence of diagrams, number of semantic connections between concepts), clarity (presence of drawings, symbols, etc.); neatness of design, readability of notes, literacy (terminology and spelling), and a lack of independence in compilation is observed;
- **0-59 "unsatisfactory"**A student is given a grade if the teaching and methodological material is not fully utilized, diagrams are missing, the number of semantic connections between concepts is insufficient, there is a lack of clarity (presence of drawings, symbols, etc.); the accuracy of the design, the readability of the notes, terminological and spelling errors, and lack of independence in composing the work.

Test assignment evaluation criteria

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20-QUESTION RATING SCALE

“5” – from 18 to 20 correct answers out of 20 test questions;

“4” – from 15 to 17 correct answers out of 20 test questions;

“3” – from 11 to 14 correct answers out of 20 test questions;

“2” – from 0 to 10 correct answers out of 20 test questions.

15-QUESTION RATING SCALE

“5” – up to 10% errors in test questions;

“4” – up to 20% errors in test questions;

“3” – up to 30% errors in test questions;

“2” – more than 30% of errors in test questions.

10-QUESTION RATING SCALE

“5” – from 9 to 10 correct answers out of 10 test questions;

“4” – from 7 to 8 correct answers out of 10 test questions;

“3” – 6 to 7 correct answers out of 10 test questions;

“2” – from 0 to 5 correct answers out of 10 test questions.

Exam assessment criteria:

-an “excellent” grade is given to a student who scores 90 or more correct answers;

-a “good” grade is given to a student who gives from 76 to 89 correct answers;

- the grade “satisfactory” is given to a student who has a number of correct answers from 60 to 75;

- the grade “unsatisfactory” is given to a student if he/she gave up to 59 correct answers inclusive.

Academic Discipline Policy:

Requirements for students during classes:

- - Mandatory presence
- - Active participation during the lesson
- - Preparation for classes, homework and independent work
- - Timely resolution of any outstanding tasks
- - Mandatory presence in appropriate clothing (lab coat, cap)

Prohibited actions:

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- - Being late or leaving classes early
- - Use of mobile phones during classes
- - Late submission of assignments and grades
- - Cheating or cheating during classes and assessments
- - Take an exam for another student

Help:For consultations on completing independent work (SIW/SIW), submitting and defending it, as well as for additional information on the material covered and on all other questions arising in the course taught, please contact the teacher Mon, Sat, Moskovskaya 176 +9966000010300 v/d

Links:

Sources of requirements

1. Oxford Handbook of Clinical Dentistry
2. McDonald and Avery Children's Dentistry
3. Types of anesthesia and emergency conditions in dental dentistry Rabinovich S.A.
4. Color atlas of common oral diseases (Robert P. Langlais)

Additional sources

- Oral pathology according to Schaefer
- Phillips's Science of Dental Materials (Textbook of Dental Medicine, Oral Diagnosis, and Oral Radiology)