Educational institution "RMU"

Department of Dental Disciplines

Syllabus

in the discipline "ORTHOPEDIC DENTISTRY"
for students majoring in 560004 "BDS"

Form of study	on an ongoing basis
Well	/4/5
Semester	/7/9/10
Exam	
Total credits for the curriculum	3/5/4
Total number of hours for the curriculum	/90/150/120
Lectures Practical classes	9/9/9 18/18/18
Independent work	48/72

Curriculum Developer:
Baishukurov E.

Reviewed and approved at a meeting of the Department of Fundamental Disciplines
Protocol No. 1 from "6"
September 2025.

Head of the Department Bektasheva A.K.

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(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	SIV	SIVT		
4	7	18	18	36	18	18	90	2
5	9	18	18	90	21	21	150	
5	10	18	18	54	24	24	120	

Course Summary: Orthopedic Dentistry

Review
Orthopedic (prosthetic) dentistry is one of the leading clinical disciplines in modern dentistry, aimed at restoring the integrity, functionality, and aesthetics of the dentition and the maxillofacial system. It deals with the diagnosis, prevention, and treatment of defects and deformities of teeth, dental rows, and jaw structures using various prosthetic methods. Orthopedic dentistry is closely connected with other dental disciplines, including therapeutic, surgical, and orthodontic dentistry, and plays a vital role in maintaining the patient's overall oral health and quality of life.
This field covers the design, fabrication, and fitting of dental prostheses (fixed, removable, combined, and implant-supported), as well as the rehabilitation of the temporomandibular joint (TMJ) and masticatory function. A comprehensive approach is required, involving cooperation with specialists in maxillofacial surgery, periodontology, implantology, and functional diagnostics.

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

Prerequisites:
• Anatomy
• Histology
• Physiology
• Pathological anatomy
• Pathological physiology

• Materials science and technology of dental materials
• Therapeutic dentistry
• Surgical dentistry
• Orthodontics

Postrequisites:
• Maxillofacial surgery (including reconstructive and implant surgery)
• Gnathology and functional diagnostics of the temporomandibular joint (TMJ)
• Implantology and digital prosthetic technologies
• Aesthetic dentistry
• Gerontostomatology and complex oral rehabilitation

Planned results of mastering the academic discipline

Target
The development of this discipline is aimed at preparing a dentist to provide comprehensive orthopedic (prosthetic) care to patients with defects of teeth, dental rows, and the maxillofacial system.

The objectives of mastering the discipline are:

- master diagnostic methods used in examining patients with dental and jaw defects;
- understand indications and contraindications for various types of prosthetic treatment;
- master the planning and design of dental prostheses;
- develop theoretical knowledge and practical skills in fabricating and fitting dental prostheses in outpatient and clinical settings;
- master methods of preventing and managing complications arising from prosthetic treatment.

After mastering the discipline "Orthopedic Dentistry" the student:

Will know:

- Anatomy and physiology of the masticatory system and temporomandibular joint;
- Biomechanics of occlusion and articulation;
- Classification, etiology, and pathogenesis of defects of teeth and dental rows;
- Principles of design and construction of removable and fixed dental prostheses;
- Modern materials and technologies used in orthopedic dentistry.

Can be used to:

- Identify defects and deformities of the dentition and supporting structures;
- Develop a comprehensive treatment and rehabilitation plan;
- Select appropriate methods and types of prosthetic restoration;
- Formulate an individual strategy for patient management and functional rehabilitation.

Will be able to analyze:

- Clinical manifestations of dental and maxillofacial defects for diagnostic and treatment planning;
- The relationship between occlusion, articulation, and functional disorders;
- The effectiveness of chosen prosthetic designs and rehabilitation methods;
- Preventive measures to maintain long-term function and aesthetics of the prosthetic restoration.

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			
2	Orthopedic dentistry	4	7	18	3	18	54	72	126	
3	Orthopedic dentistry	5	9	18	5	18	90	72	162	
4	Orthopedic dentistry	5	10	18	4	18	72	72	144	

Contents of the academic discipline

7th semester

No.	Name chapters and topics disciplines (lectures and practical classes)	Classroom classes		Total number of hours for classroom work	Hours of independent work		Used educational technologies, methods and teaching techniques	Current shapes and border control academic performance
		lecture	seminary		SIVT	SIV		
1	**Lecture 1** Introduction to orthopedic dentistry. Objectives and classifications of dental defects.	2		10			L – Traditional Lecture RD – Regulated Discussion	*AS – Assessment of practical skills (competencies)* *SPS – Situational Problem Solving*
	Organization of the orthopedic (prosthodontic) dental office. Asepsis and antisepsis.		2		2	2		
	Patient examination, medical history taking, and completion of dental documentation.		2		2	2		

	Classification of dental arch defects (according to Kennedy, E.D. Kuleshov, and others)		2		2	2		
	Tooth preparation for a stamped (metal) crown.		2		2	2		
2	Dental indices.		2	2	2	2		
3	**Lecture 2** Methods of examination of orthopedic patients.	2		6			VL – Lecture on Visualization SGM – Small Group Method	AS – Assessment of practical skills (competencies) SPS – Situational Problem Solving A – Protection of Abstraction
	Tooth preparation for a metal-ceramic crown.		2		2	2		
	Fabrication of a temporary crown.		2					
4	**Lecture 3** Fixed orthopedic structures: general classification and indications.	2		6			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)
	Impressions: anatomical, functional, and two-stage techniques.		2		2	2		
	Determination of the centric relation of the jaws.		2					
5	**Lecture 4** Stamped, cast and solid-cast crowns: types, features.	2		4			*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)
	Preparation of teeth with severe attrition.		2		2	2		

6	**Lecture 5** Preparation of teeth for different types of crowns.	2		6			Lecture on visualization of overhead lines -SGM – Small Group Method - FD – Forum discussion	AS – Assessment of practical skills (competencies)
	Wax modeling of crown reproductions.		2		2	2		
	Try-in of the cast prosthetic construction		2		2	2		
7	**Lecture 6** Intermediate and supporting elements of bridge prostheses.	2		4			• VL – Lecture on visualization • SGM – Small Group Method	• AS – Assessment of practical skills (competencies) • SPS – Situational Problem Solving • DR – Report Protection
	Periodontosis. Clinical presentation. Differential diagnostics.		2		2	2		
8	**Lecture 7** Temporary orthopedic structures.	2		6				
	Cementation (fixation) of permanent prosthetic constructions.		2		2	2		
	Errors during tooth preparation – analysis using study models.		2		2	2		
9	**Lecture 8** Errors and complications at the stages of preparation and fixation.	2		2			• VL – Lecture on Visualization • SGM – Small Group Method	
10	**Lecture 9** Materials in fixed prosthetics (metals, ceramics, cements).	2		2			• VL – Lecture on Visualization • SGM – Small Group Method	
11	Features of restoration of anterior (front) teeth.		2	2	2	2		• AS – Assessment of practical skills (competencies) • A – Protection of

								Abstraction
12	Control of occlusal and proximal contacts.		2	2	2	2		• AS – Assessment of practical skills (competencies) • A – Protection of Abstraction
	Final standings.							
		6 p.m.	**36 hours**	**54 hours**	**36 hours**	**36 hours**		
	Total hours					**126 hours**		

9th semester

No.	Name chapters and topics disciplines (lectures and practical classes)	Classroom classes		Total number of hours for classroom work	Hours of independent work		Used educational technologies, methods and teaching techniques	Current shapes and border control academic performance
		lecture	seminary		SIVT	SIV		
1	**Lecture 1** Removable partial dentures: designs, indications, and selection.	2		10			L – Traditional Lecture RD – Regulated Discussion	*AS – Assessment of practical skills (competencies)* *SPS – Situational Problem Solving*
	Diagnostics in partial and complete edentulism.		4		2	2		
	Fabrication of an individual impression tray.		4		2	2		
2	**Lecture 2** Removable partial dentures: designs, indications, and selection.	2		18			VL – Lecture on Visualization SGM – Small Group Method	AS – Assessment of practical skills (competencies) SPS – Situation

								al Problem Solving A – Protection of Abstraction
	Taking a functional impression.		4		2	2		
	Construction of occlusal rims		4		2	2		
	Determination of the centric relation of the jaws.		4		2	2		
	Determination of the centric relation of the jaws.		4		2	2		
3	**Lecture 3** Cast metal (framework) dentures: design and biomechanics.	2		6			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)
	Wax tooth setup.		4		2	2		
4	**Lecture 4** Complete removable dentures: principles of occlusal restoration.	2		10			*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)
	Try-in of the wax model.		4		2	2		
	Final cementation/fixation of a partial denture.		4		2	2		
5	**Lecture 5** Specific features of prosthetic treatment in complete edentulism.	2		6			Lecture on visualization of overhead lines -SGM – Small Group Method	AS – Assessment of practical skills (competencies)

	Design of a cast metal (framework) denture.		4		2	2	- FD – Forum discussion	
6	**Lecture 6** Anatomical and topographical landmarks for denture fixation.	2		6			Lecture on visualization of overhead lines -SGM – Small Group Method - FD – Forum discussion	• AS – Assessment of practical skills (competencies) • SPS – Situational Problem Solving • DR – Report Protection
	Laboratory stage: framework, clasps, and saddle.		4		2	2		
7	**Lecture 7** Centric occlusion: restoration in edentulous patients.	2		6			• VL – Lecture on visualization • SGM – Small Group Method	• AS – Assessment of practical skills (competencies) • SPS – Situational Problem Solving • DR – Report Protection
	Try-in and adjustment of a cast metal denture.		4		2	2		
8	**Lecture 8** Errors and adjustments in removable dentures	2		6			• VL – Lecture on Visualization • SGM – Small Group Method	• AS – Assessment of practical skills (competencies) • A – Annotation Protection DR – Report Protection
	Care of removable prosthetic constructions.		4		2	2		
9	**Lecture 9** Patient adaptation to removable dentures. Communication psychology.	2		6			• VL – Lecture on Visualization • SGM – Small Group Method	• AS – Assessment of practical skills (competencies) • A – Protection of Abstraction
	Clinical case analysis: cast metal (framework) denture.		4		2	2		
10	Post-prosthetic adaptation.		4	4	2	2		
11	Testing denture retention and function.		4	4	2	2		

12	Errors in tooth setup. **Module 2**		4	4	2	2		
13	**Final standings.**		4	4	2	2		
		6 p.m.	**72 hours**	**90 hours**	**36 hours**	**36 hours**		
	Total hours					**162 hours**		

10th semester

No.	Name chapters and topics disciplines (lectures and practical classes)	Classroom classes		Total number of hours for classroom work	Hours of independent work		Used educational technologies, methods and teaching techniques	Current shapes and border control academic performance
		lecture	seminary		SIVT	SIV		
1	**Lecture 1** Basics of occlusal relationships.	2		5			L – Traditional Lecture RD – Regulated Discussion	*AS – Assessment of practical skills (competencies)* *SPS – Situational Problem Solving*
	Functional diagnostics of the temporomandibular joint (TMJ).		3		2	2		
2	**Lecture 2** Temporomandibular joint: anatomy, functions, pathology..	2		5			VL – Lecture on Visualization SGM – Small Group Method	AS – Assessment of practical skills (competencies) SPS – Situational Problem Solving A – Protection of Abstraction
	Occlusal recording in cases of dental arch destruction.		3		2	2		
3	**Lecture 3**						Lecture on visualization of	AS – Assessment of practical

	TMJ dysfunctions: diagnosis and the role of the prosthodontist.	2		5			overhead lines -SGM – Small Group Method - FD – Forum discussion	skills (competencies) AS – Assessment of practical skills (competencies)
	Fabrication of splints and mouthguards.		3		2	2		
4	**Lecture 4** Orthopedic (prosthodontic) treatment for bruxism and occlusal overloads.	2		5			*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)
	Management of patients requiring full rehabilitation.		3		2	2		
5	**Lecture 5** Splints, mouthguards, and bite appliances – types and indications.	2		5	2	2	Lecture on visualization of overhead lines -SGM – Small Group Method - FD – Forum discussion	AS – Assessment of practical skills (competencies)
	Comprehensive approach: periodontology + prosthodontics.		3		2	2		
6	**Lecture 6** Occlusion and its rehabilitation in prosthodontics.	2		8				• AS – Assessment of practical skills (competencies) • SPS – Situational Problem Solving • DR – Report Protection
	Development of an individual treatment plan.		3		2	2		
	Clinical case analysis of a patient with occlusal disorders.		3		2	2		
7	**Lecture 7** Specific features of prosthetic treatment in elderly and medically compromised patients.	2		8			• VL – Lecture on visualization • SGM – Small Group Method	• AS – Assessment of practical skills (competencies) • SPS – Situational Problem Solving • DR – Report Protection
	Quality control of prosthetic constructions.		3		2	2		
	Errors in the rehabilitation of complex patients.		3		2	2		

8	**Lecture 8** Principles of comprehensive orthopedic (prosthodontic) treatment.	2		11			• VL – Lecture on Visualization • SGM – Small Group Method	• AS – Assessment of practical skills (competencies) • A – Annotation Protection DR – Report Protection
	Try-in and adjustment of prosthetic constructions at the final stage.		3		2	2		
	Prosthetic treatment in cases of occlusal anomalies.		3		2	2		
	Correction of unsuccessful prosthodontic treatment.		3		2	2		
9	**Lecture 9** Contact allergic cheilitis. Atopic cheilitis. Eczematous cheilitis. Clinical presentation. Differential diagnosis. Treatment.	2		14			• VL – Lecture on Visualization • SGM – Small Group Method	• AS – Assessment of practical skills (competencies) • A – Protection of Abstraction
	Evaluation of results: functional and aesthetic aspects.		3		2	2		
	Preparation of a clinical case presentation.		3		2	2		
	Rehearsal of public defense.		3		2	2		
	Consultations with the supervisor regarding diploma work.		3		2	2		
10	Final examination		3	3	2	2		
	Final standings.							
		6 p.m.	**54 hours**	**72 hours**	**36 hours**	**36 hours**		
	Total hours					**144 hours**		

Methodological recommendations for preparation for practical classes.

Practical classes follow lectures and serve as explanatory, generalizing, and reinforcing activities. 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, students review the seminar plan, which includes a list of topics and questions, a list of references, and homework assignments covering the material presented. The following preparation plan is recommended for students:

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
1	Main stages of orthopedic treatment of patients with partial tooth loss.	ppt	**Shillingburg H. T.** – Fundamentals of Fixed Prosthodontics //**Rosenstiel S. F., Land M. F., Fujimoto J.** – Contemporary Fixed Prosthodontics. // **Zarb G. A., Hobkirk J., Eckert S., Jacob R.** – Prosthodontic Treatment for Edentulous Patients	1	20 points
2	Modern digital technologies in orthopedic dentistry (CAD/CAM systems, 3D scanning, and printing of prosthetic structures).	ppt	**Shillingburg H. T.** – Fundamentals of Fixed Prosthodontics //**Rosenstiel S. F., Land M. F., Fujimoto J.** – Contemporary Fixed Prosthodontics. // **Zarb G. A., Hobkirk J., Eckert S., Jacob R.** – Prosthodontic Treatment for Edentulous Patients	2	20 points

3	Prevention of complications in orthopedic treatment. Common errors and ways to prevent them.	ppt	**Shillingburg H. T.** – Fundamentals of Fixed Prosthodontics //**Rosenstiel S. F., Land M. F., Fujimoto J.** – Contemporary Fixed Prosthodontics. // **Zarb G. A., Hobkirk J., Eckert S., Jacob R.** – Prosthodontic Treatment for Edentulous Patients	3	20 points
4	Gnathological principles of orthopedic treatment. Diagnosis and correction of temporomandibular joint (TMJ) dysfunctions.	ppt	**Shillingburg H. T.** – Fundamentals of Fixed Prosthodontics //**Rosenstiel S. F., Land M. F., Fujimoto J.** – Contemporary Fixed Prosthodontics. // **Zarb G. A., Hobkirk J., Eckert S., Jacob R.** – Prosthodontic Treatment for Edentulous Patients	4	20 points
5	Rehabilitation of patients with maxillofacial defects after trauma and surgery.	ppt	**Shillingburg H. T.** – Fundamentals of Fixed Prosthodontics //**Rosenstiel S. F., Land M. F., Fujimoto J.** – Contemporary Fixed Prosthodontics. // **Zarb G. A., Hobkirk J., Eckert S., Jacob R.** – Prosthodontic Treatment for Edentulous Patients	5	20 points
6	Implant-based methods in orthopedic dentistry: types of implants and principles of prosthetic rehabilitation on implants.	Venn diagram	**Shillingburg H. T.** – Fundamentals of Fixed Prosthodontics //**Rosenstiel S. F., Land M. F., Fujimoto J.** – Contemporary Fixed Prosthodontics. // **Zarb G. A., Hobkirk J., Eckert S., Jacob R.** – Prosthodontic Treatment for Edentulous Patients	6	20 points
7	Orthopedic treatment of patients with periodontal diseases (splinting constructions, stabilization of dental arches).	ppt	**Shillingburg H. T.** – Fundamentals of Fixed Prosthodontics //**Rosenstiel S. F., Land M. F., Fujimoto J.** – Contemporary Fixed Prosthodontics. // **Zarb G. A., Hobkirk J., Eckert S., Jacob R.** – Prosthodontic Treatment for Edentulous Patients	7	20 points

8	Temporary and diagnostic constructions in orthopedic dentistry.	ppt	**Shillingburg H. T.** – Fundamentals of Fixed Prosthodontics //**Rosenstiel S. F., Land M. F., Fujimoto J.** – Contemporary Fixed Prosthodontics. // **Zarb G. A., Hobkirk J., Eckert S., Jacob R.** – Prosthodontic Treatment for Edentulous Patients	8	20 points
9	Removable partial (clasp) dentures: classification, structural elements, and biomechanical principles.	ppt	**Shillingburg H. T.** – Fundamentals of Fixed Prosthodontics //**Rosenstiel S. F., Land M. F., Fujimoto J.** – Contemporary Fixed Prosthodontics. // **Zarb G. A., Hobkirk J., Eckert S., Jacob R.** – Prosthodontic Treatment for Edentulous Patients	9	20 points
10	Removable plate dentures: structural elements, fabrication stages, and adjustment.	ppt	**Shillingburg H. T.** – Fundamentals of Fixed Prosthodontics //**Rosenstiel S. F., Land M. F., Fujimoto J.** – Contemporary Fixed Prosthodontics. // **Zarb G. A., Hobkirk J., Eckert S., Jacob R.** – Prosthodontic Treatment for Edentulous Patients	10	20 points
11	Fixed prosthetic constructions: indications, types, and features of fabrication.	ppt	**Shillingburg H. T.** – Fundamentals of Fixed Prosthodontics //**Rosenstiel S. F., Land M. F., Fujimoto J.** – Contemporary Fixed Prosthodontics. // **Zarb G. A., Hobkirk J., Eckert S., Jacob R.** – Prosthodontic Treatment for Edentulous Patients	11	20 points
12	Principles of occlusion and articulation in orthopedic dentistry.	ppt	**Shillingburg H. T.** – Fundamentals of Fixed Prosthodontics //**Rosenstiel S. F., Land M. F., Fujimoto J.** – Contemporary Fixed Prosthodontics. // **Zarb G. A., Hobkirk J., Eckert S., Jacob R.** – Prosthodontic Treatment for Edentulous Patients	12	20 points

13	Planning of orthopedic treatment and principles for selecting prosthetic designs.	ppt	**Shillingburg H. T.** – Fundamentals of Fixed Prosthodontics //**Rosenstiel S. F., Land M. F., Fujimoto J.** – Contemporary Fixed Prosthodontics. // **Zarb G. A., Hobkirk J., Eckert S., Jacob R.** – Prosthodontic Treatment for Edentulous Patients	13	20 points
14	Methods of diagnosis and examination of patients in orthopedic dental practice.	ppt	**Shillingburg H. T.** – Fundamentals of Fixed Prosthodontics //**Rosenstiel S. F., Land M. F., Fujimoto J.** – Contemporary Fixed Prosthodontics. // **Zarb G. A., Hobkirk J., Eckert S., Jacob R.** – Prosthodontic Treatment for Edentulous Patients	14	20 points
15	Materials used in orthopedic dentistry: modern trends and biocompatibility.	ppt	**Shillingburg H. T.** – Fundamentals of Fixed Prosthodontics //**Rosenstiel S. F., Land M. F., Fujimoto J.** – Contemporary Fixed Prosthodontics. // **Zarb G. A., Hobkirk J., Eckert S., Jacob R.** – Prosthodontic Treatment for Edentulous Patients	15	20 points
16	Main stages of orthopedic treatment of patients with partial tooth loss.	ppt	**Shillingburg H. T.** – Fundamentals of Fixed Prosthodontics //**Rosenstiel S. F., Land M. F., Fujimoto J.** – Contemporary Fixed Prosthodontics. // **Zarb G. A., Hobkirk J., Eckert S., Jacob R.** – Prosthodontic Treatment for Edentulous Patients	16	20 points
17	Classification of dental arch defects (according to Kennedy, Edentulous classifications, etc.).	ppt	**Shillingburg H. T.** – Fundamentals of Fixed Prosthodontics //**Rosenstiel S. F., Land M. F., Fujimoto J.** – Contemporary Fixed Prosthodontics. // **Zarb G. A., Hobkirk J., Eckert S., Jacob R.** – Prosthodontic	17	20 points

			Treatment for Edentulous Patients		
18	Anatomical and physiological features of the masticatory system and their significance in orthopedic dentistry.	ppt	**Shillingburg H. T.** – Fundamentals of Fixed Prosthodontics //**Rosenstiel S. F., Land M. F., Fujimoto J.** – Contemporary Fixed Prosthodontics. // **Zarb G. A., Hobkirk J., Eckert S., Jacob R.** – Prosthodontic Treatment for Edentulous Patients	18	20 points

Guidelines for preparing independent work

When studying the discipline "Therapeutic 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.

AnnotationAn 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:

- 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 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

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:

- - 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 175 +996708294387v/d