MINISTRY OF HEALTH OF THE REPUBLIC OF BELARUS
Educational Institution
BELARUSIAN STATE MEDICAL UNIVERSITY

APPROVED
by Rector of the Educational Institution
«Belarusian State Medical University»
S.P.Rubnikovich
27.06.2023
Reg. No. UD-7-07-0911-03-1-1/2324/p.

PROGRAM
OF PRACTICAL SESSIONS

IN DENTAL PROSTHETIC PRACTICE

for the specialty
7-07-0911-03 «Dentistry»

2023

The program is based on the educational standard of higher education in the specialty 7-07-0911-03 «Dentistry», approved and enforced by the Resolution of the Ministry of Education of the Republic of Belarus of 01.09.2023 № 302/127; and on the curriculum of the higher educational institution in the specialty 7-07-0911-03 «Dentistry» approved by 17.05.2023 registration No. 7-07-0911-03/2324/mf

COMPILERS:

T.V.Krushinina, Head of the Propaedeutics of Dentistry and Materials Science Department PhD, Associate Professor;

N.A.Gres, PhD, Associate Professor of the Propaedeutics of Dentistry and Materials Science Department;

V.V.Krivonoschenko, Assistant Lecturer of the Propaedeutics of Dentistry and Materials Science Department

RECOMMENDED FOR APPROVAL:

By the Department of Prosthetic Dentistry of the educational institution «Belarusian State Medical University»
(protocol No. 21 of 19.06.2023).

By the Council of the Medical Faculty for International Students of the of the Educational Institution «Belarusian State Medical University»
(protocol No. 9 of 27.06.2023)

EXPLANATORY NOTE

The purpose of the students' educational dental technician practice is consolidation and deepening of knowledge gained in the process of theoretical training, mastering practical skills by students, forming the necessary skills and competencies for their subsequent independent professional activity in the specialty «Dentistry».

The educational practice of students is aimed at the formation of their practical skills in the studied academic disciplines, the consolidation of theoretical knowledge, mastering primary skills.

The objectives of the educational practice «Dentistry» are:

acquisition of patient care skills;

acquisition of skills for performing medical manipulations;

familiarization with the requirements of the sanitary and anti-epidemic regime in the health care organization;

mastering the skills of providing medical care.

At the end of the educational dental technician practice **the student must know:**

regulatory legal acts regulating activities in the field of healthcare;

basics of organizing medical dental care in the Republic of Belarus;

organization of production in a dental laboratory;

basic and auxiliary materials used in denture technology;

manufacturing technologies for dentures, maxillofacial and orthodontic devices;

medical ethics, deontology and psychology of professional communication;

basics of labor legislation, rules and regulations of labor protection and fire safety;

be able to:

organize a dental technician's workplace (including cleaning);

simulate the wax composition of an artificial one-piece crown on a phantom model;

simulate the wax composition of a plastic bridge prosthesis on a phantom model;

arrange artificial teeth in the wax composition of a complete removable denture on a phantom model;

repair removable dentures on a phantom model;

be proficient:

the technique of making plaster models from impressions made of alginate materials;

the technique of making collapsible models using impressions from silicone materials;

casting of plaster models in an occluder (articulator);

modeling the wax composition of the inlay on a phantom model;

modeling of a wax composition of a plastic crown on a phantom model;

production of wax bases with bite ridges for the upper and lower jaws on a phantom model;

placement of artificial teeth in the wax composition of a partial removable denture on a phantom model;

production of an individual spoon on a phantom model;

technique of edging an individual tray with a functional impression;

final processing of metal prostheses;

final processing of plastic prostheses;

final processing of ceramic prostheses;

In total, 108 academic hours are allocated for the educational Dental Technician practice during the 2 semester.

These comprise 54 hours of practical classes, 8 hours of supervised independent work (hereinafter, SIW), 48 hours of independent work of the student (hereinafter, IW).

In accordance with the schedule of the educational process, during the first two weeks after the end of the practice, a student passes a graded credit to the head of the practice from the department of the medical university in the form provided by the practice program.

A graded credit is taken if a student has a report on the implementation of the practice program.

A student who has not completed the practice program and (or) got an unsatisfactory mark when passing the graded credit, is repeatedly sent to practice (no more than once) by order of the Rector of the medical university in his free time from practical classes to complete the practice program in full.

Educational Practice of students is carried out in specialized classrooms of a state institution «University Dental Clinic» (practice base).

Educational Practice is combined with the educational process.

The general management and organization of students' practice is entrusted to the head of the practice from the educational institution «Belarusian State Medical University».

The general and direct management of the students' practice in educational practice is carried out by the head of the practice from the Propaedeutics of Dentistry and Materials Science Department of the medical university.

Scientific and methodological guidance of the practice of the medical university students is carried out by the Dental faculty.

THE CONTENT OF THE PRACTICE

In the process of dental training practice, students get acquainted with the objects of their future professional activities, prepare for the conscious study of academic disciplines, study the principles and organization of the dental laboratory in health care organizations, master and improve the level of knowledge in the field of studying the compositions, properties and use of modern construction and auxiliary materials in the manufacture of dentures, they acquire knowledge about the basic manipulations used in various technologies for the manufacture of dentures.

During the practice period the students have to follow the legislation on labor protection and the rules of the internal labor regulations of the practice base.

FORMS OF PRACTICE

The educational Dental Technician practice is carried out in the following forms:

undergoing orientation sessions on labor protection according to the legislation;

compliance with the requirements of safe work at the workplace;

compliance with the internal labor regulations of the practice base;

compliance with the rules and norms of medical ethics and deontology;

registration and submission of reporting documentation on the implementation of the practice program;

studying the documentation of the practice base within the scope of tasks defined by the practice program;

conducting sanitary and educational work;

familiarization with the work of the dental laboratory of the state institution «University Dental Clinic»;

study of the basic manipulations used in various technologies for the manufacture of dentures;

fulfillment of the planned volume of manual practical skills under the guidance of practice leaders from the department;

study of the compositions, properties and application of modern structural and auxiliary materials in the manufacture of dentures;

study of the main technological processes used in the casting of metal alloys, metal forming, soldering and welding of metal parts of dentures, molding and polymerization of plastics, sintering of ceramic masses.

INFORMATION AND METHODOLOGICAL PART

CALENDAR AND THEMATIC PLAN OF THE EDUCATIONAL PRACTICE

Type of work	Number of hours		
	in-class	IW	SIW
Introduction to the specialty «Dentistry». Organization of dental service in the Republic of Belarus. Medical ethics and deontology in dentistry. Organization and equipment of dental office and dental laboratory	1	1	
Dentures. Algorithm of the manufacturing of dentures. Dental materials classification	1	2	1
Auxiliary materials: impression materials. Classification, requirements, application. Impressions, impression trays. Alginate	2	2	-

materials: composition, properties, application			
Auxiliary materials: silicone impression materials. Composition, properties, application. Types of silicone impressions	2	2	-
Auxiliary materials: gypsum. Classification, composition, properties, application	2	2	1
Types of gypsum casts. Requirements for casts	2	2	
Modeling materials. Investment and isolation materials	2	2	
Manufacturing technologies of dentures from metal alloys: metal alloy casting	2	2	-
Manufacturing technologies of dentures fro heat-cured acrylic resins	2	2	1
Basic (structural) materials: cold-cured acrylic resins, requirements, composition, application. Thermoplastic and light-cured polymers. Artificial teeth for removable dentures	2	1	-
Finger adapted dough method of acrylic resin Technologies of milling and thermoforming plastics.	2	1	-
Anatomy of the teeth. Tooth rows. Sign of teet Anatomy of the incisors of the upper jaw	2	2	1
Signs of teeth that determine their belonging to the right or left half of the dentition. Anatomy the incisors of the lower jaw	2	2	
Signs of teeth that determine their belonging the right or left half of the dentition. Anatomy the canine of the upper jaw	2	2	-
Signs of teeth that determine their belonging the right or left half of the dentition. Anatomy the canine of the lower jaw	2	2	-
Signs of teeth that determine their belonging the right or left half of the dentition. Anatomy the premolars of the upper jaw	2	2	-
Signs of teeth that determine their belonging the right or left half of the dentition. Anatomy the premolars of the lower jaw	2	2	
Signs of teeth that determine their belonging the right or left half of the dentition. Anatomy the first molars of the upper jaw	2	2	1
Signs of teeth that determine their belonging the right or left half of the dentition. Anatomy the second molars of the upper jaw	2	2	
Signs of teeth that determine their belonging the right or left half of the dentition. Anatomy the first molars of the lower jaw	2	2	1
Signs of teeth that determine their belonging	2	2	-

the right or left half of the dentition. Anatomy the second molars of the lower jaw			
General characteristics and classification of microprostheses. Clinical and laboratory stages of manufacturing micro prostheses	2	2	-
General characteristics of artificial crowns. Clinical and laboratory stages of manufacturing artificial crowns	2	2	-
General characteristics of prostheses that eliminate defects in the dentition. Bridge prostheses, clinical and laboratory stages of manufacturing bridge prostheses	2	2	1
General characteristics of removable dentures. Clinical and laboratory stages of manufacturing partial removable dentures	2	1	-
General characteristics of clasp prostheses. Clinical and laboratory stages of manufacturing clasp prostheses	2	1	1
General characteristics of complete removable dentures. Clinical and laboratory stages of manufacturing complete removable dentures. Repair of removable dentures	2	1	-
Total	**52**	**48**	**8**

LIST OF PRACTICAL SKILLS, FIXED DURING PRACTICE AND LEVELS OF THEIR DEVELOPMENT

Levels of mastering practical skills:

1 – to know theoretically, to be professionally oriented, to know the indications for conducting;

2 – to know theoretically, evaluate, take part in the work of medical personnel;

3 – to know theoretically, perform independently.

№	Practical skills	Recommended	
		Number	Level of mastering
1.	Organization of the workplace of a dental technician	1	2
2.	Production of plaster models from impressions obtained with alginate hydrocolloids and solid-crystalline impressio materials	5	3
3.	Production of collapsible models from silicone impression	3	3
4.	Plastering models in the occludator (articulator)	3	3
5.	Modeling the wax composition of the inlay on the phanto model	3	3
6.	Modeling the wax composition of the plastic crown on the	1	3

	phantom model		
7.	Modeling the wax composition of the artificial metal crow on the phantom model	1	2
8.	Modeling the wax composition of the plastic bridge on the phantom model	1	2
9.	Production of wax bases with bite rollers	3	3
10.	Arrangement of artificial teeth with partial loss of teeth	3	3
11.	Arrangement of artificial teeth with complete loss of teeth	2	2
12.	Making an individual spoon	2	3
13.	Individual tray edging with functional impression	3	3
14.	Repair of removable denture	1	2
15.	Finishing of metal prostheses	3	3
16.	Finishing of plastic prostheses	3	3
17.	Finishing of ceramic prostheses	3	3

SAMPLE QUESTIONS FOR THE GRADED CREDIT

1. Dental laboratory. Organization, equipment, tools.
2. Safety measures and prevention of professional diseases.
3. Classification of dental materials.
4. Dentures. General characteristics. General technological sequence of denture fabrication
5. Impression materials used in dentistry. Requirements for impression materials.
6. Plaster. Properties, preparation.
7. Plaster models: types, production of integral and folding models
8. The rotational systems used in dentistry. Dental rotating instruments, a general characteristic. The metal blade rotating instruments used in dentistry.
9. Modeling materials: composition, properties, application.
10. Modeling materials. Dental wax
11. Modeling materials. Modeling plastic (ashless plastic).
12. Molding materials: composition, properties, application
13. Model duplication: materials, equipment and tools
14. Auxiliary materials and tools for processing dentures.
15. Metals and alloys of metals, used for production of dentures. Classification, properties, requirements
16. Technological process of processing alloys and metals.
17. Processing, grinding and polishing of metal prostheses.
18. Plastics: classification, properties, application
19. Processing of plastic prostheses.
20. Processing, grinding and polishing of plastic prostheses.
21. Ceramic materials: classification, properties, application
22. Technological processes for the manufacture of dental prostheses from ceramic materials.
23. Metal ceramics. Manufacturing method.
24. Final processing of ceramic dentures.

25. Dental formula, types of recording. Parts of the tooth, surface. Macro- and microrelief of the coronal part of permanent incisors, canines, premolars, molars.
26. Clinical and laboratory stages of inlay manufacturing
27. Clinical and laboratory stages of crown manufacturing
28. Clinical and laboratory stages of bridge manufacturing
29. Clinical and laboratory stages of partial removable manufacturing
30. Clinical and laboratory stages of clasp removable manufacturing
31. Clinical and laboratory stages of complete removable manufacturing
32. Repair of removable dentures. Materials, sequence.

REQUIREMENTS FOR THE CONTENT OF REPORTING DOCUMENTS

During the practice the student accomplishes the practice program under the supervision of the head of the practice from the organization. According to the results of the practice, a written report on the implementation of the practice program is prepared. In the report the student indicates the acquired practical skills, their number and level of mastering according to Appendix 1.

The report must be signed by the student and the head of the practice from the department.

The report and other reporting documents should be executed on A4 paper using the MS Word application.

The accounting documentation is kept at the medical university in accordance with the procedure determined by the legislation in the field of archive and record keeping.

Appendix 1.

MINISTRY OF HEALTH OF THE REPUBLIC OF BELARUS
Educational institution
BELARUSIAN STATE MEDICAL UNIVERSITY
Practice base
UNIVERSITY DENTAL CLINIC
Department _____

DIARY

on the implementation of the educational (name) practice

_____

Student _____
Specialty _____
Faculty _____
Year of study, group No. _____
Period of practice _____

Practice leader from the department
*(name)*_____

_____
(signature)

Date	The topic of the practical lesson	Demonstration, independer work	Teacher's signatur

Student _____
(signature) Name

Head
of practice from the department

_____
(signature) Name

Appendix 2.

MINISTRY OF HEALTH OF THE REPUBLIC OF BELARUS
Educational institution
BELARUSIAN STATE MEDICAL UNIVERSITY
Practice base
UNIVERSITY DENTAL CLINIC

Department _____

APPROVE
Base manager practices

_____ 202__

REPORT

on the implementation of the educational (name) practice

_____

Student _____
Specialty _____
Faculty _____
Year of study, group No. _____
Period of practice _____

Practice leader from the department
(name) _____

_____
(signature)

№	List of practical skills	Recommended		Mastered	
		number	level of masterin	number (total)	level of masterin
1.	Organization of the workplace of a dental technician	1	2		
2.	Production of plaster models from impressions obtained wit alginate hydrocolloids and solid-crystalline impression materials	5	3		
3.	Production of collapsible models from silicone impressions	3	3		
4.	Plastering models in the occludator (articulator)	3	3		
5.	Modeling the wax composition of the inlay on the phantom model	3	3		
6.	Modeling the wax composition of the plastic crown on the phantom model	1	3		
7.	Modeling the wax composition of the artificial metal crown on the phantom model	1	2		
8.	Modeling the wax composition of the plastic bridge on the phantom model	1	2		
9.	Production of wax bases with bite rollers	3	3		
10.	Arrangement of artificial teeth with partial loss of teeth	3	3		
11.	Arrangement of artificial teeth with complete loss of teeth	2	2		
12.	Making an individual spoon	2	3		
13.	Individual tray edging with functional impression	3	3		
14.	Repair of removable denture	1	2		
15.	Finishing of metal prostheses	3	3		
16.	Finishing of plastic prostheses	3	3		
17.	Finishing of ceramic prostheses	3	3		

Student _____

(signature) Name

Head
of practice from the department

_____

(signature) Name

COMPILERS:

Head of the Propaedeutics of Dentistry and Materials Science Department PhD, Associate Professor; _____ T.V.Krushinina
signature

Associate Professor of the Propaedeutics of Dentistry and Materials Science Department _____ N.A.Gres
signature

Assistant Lecturer of the Propaedeutics of Dentistry and Materials Science Department _____ V.V.Krivonoschenko
signature

The design of the educational practice program and accompanying documents meet the established requirements

Dean of the Faculty of Foreign Students of the educational institution «Belarusian State Medical University» O.S.Ishutin
17 06 2023

Head of the practice of the educational institution «Belarusian State Medical University» N.A.Medved
26 06 2023

Methodologist of the educational institution «Belarusian State Medical University» O.R.Romanovskaya
16 06 2023

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