AGREED	APPROVED
Chairman of the Coordinating Council Educational and Methodological Association Osh State University. Associate Professor Araphaev R.N. "05" 03 2025 y.	Rector of Osh State University. Professor Kuzubekov K.G. " 25 " 03 2025 y.

OSH STATE UNIVERSITY

EDUCATIONAL STANDART OF SECONDARY VOCATIONAL EDUCATION

Speciality: 060106 – «Orthopedic dentistry»

Qualification: Dental technician

Osh - 2025

At the meeting of the branch Committee on medical education of the Educational and Methodological Association of Osh State University, 2025" 14 " 05 , № 7 Protocol reviewed the educational standard of secondary vocational education in the specialty **060106 Orthopedic dentistry**. Approved by the Coordinating Council of the Educational and Methodological Association of Osh State University. Proposed for approval by the Academic Council of Osh State University in 2025" 30 " 06 , № 9 the protocol. Rector of Osh State University № 3426 approved by the order of the Government of the Kyrgyz Republic.

The educational standard has received recommendations from the following foreign experts.

1. Saimov Mahmud Tolipovich, Director of Almalyk Public Health Technical College of the Republic of Uzbekistan;

2. Mahmudova Gulzhamol Imankulovna - Republic of Kazakhstan, Head of Department of International Relations and Academic Mobility, Peoples' Friendship University named after A. Kuatbekova.

3. Ergasheva Gulbakhor Dzhunashevna, Director of the Medical College "PAP" of the Namangan region of the Republic of Uzbekistan;

Chapter 1. GENERAL PROVISIONS

The educational standard of training in the specialty **060106 Orthopedic dentistry** was approved by the order of the OSH State University Rector. The educational standard of the educational program in the specialty **060106 Orthopedic dentistry** was developed and approved at OSH State University, taking into account the requirements of secondary vocational education. The educational standard developed at OSH State University (hereinafter referred to as the educational standard) is equivalent to state educational standards, has a unified structure of requirements for secondary vocational education and allows them to perform their functions in terms of ensuring the unity and quality of education, objective control, and sets specific requirements for the development of the educational program being implemented. This educational standard sets out the requirements for the conditions and results of mastering the basic professional educational programs. Not lower than the relevant requirements of the state standards of secondary vocational education.

The ES specialty **Orthopedic dentistry** was developed with the participation of the following parties:

1.Chairman of the working group: AmatIsmailovichOrozbaev is the head of the BVEP specialty **060106 Orthopedic dentistry**.

Members:

I. From the medical college

2. Mamayeva Tamara Abdykadyrovna, Chairperson of the SCC ”Dental and surgical disciplines";

3. Bakiev AibekBekmamatovich, teacher of the subject cycle commission “dental and surgical disciplines” ;

4. Omoshov Azamat Koychumanovich, teacher of the subject cycle commission ”dental and surgical disciplines";

5. AlimbekovOmurbekAlimbekovich teacher of the subject cycle commission ”dental and surgical disciplines";

6. ShoorukovAsylbekAbdivahapovich, teacher of the subject cycle commission ”Natural sciences and exact sciences";

II. From domestic medical colleges

7. KalmatovaNurkanTagaevna, Head of the Department of Orthopedic Dentistry at the Kyzylkiy Medical College;

8. TurdievRuzimatAlimovich, lecturer at Osh Medical College;

9. MalikovaAnipaZanievna -Latin language teacher at the College of International Educational Programs;

10. TologulBatyrkanovnaArpachieva, Director of the Naryn Medical College;

11. MataevAli-MukhametAbdykadyrovich, teacher at Osh Medical College;

II. Employers;

12. AsanovKushtarbekDuishobaevich - Chief Physician of Dental clinic No. 2 in Osh city;

13. AbduvalievDzhoomartGalbaevich, Deputy Director of Osh City Dental Clinic No. 1;

14. AzizilloSaipovich Saipov, Head of the Department of Dental Clinic No. 1 in Osh city; Head of the Dental Technical Laboratory Department;

15. KarabaevKanybekMadanbekovich -Director of the State of Emergency "Biodent”;

16. KubanychbekuuluKursantbek -Director of the State of Emergency "Eurodent".

III. From employees of foreign universities (colleges) :

17. LyailyaAsimtaevnaOrozbekova - Deputy Chairman Head of Practice at Taldy-Kurgan Higher Medical College;

18. IsmailovMukhiddinAbduvalievich -Honorary Citizen Of The City Of Samarkand, Republic Of Uzbekistan Director of the “Ishtikhan” Medical College;

19. ErgeshovaGulbakhorZhukashevna-Namangan region of the Republic of Uzbekistan Director of the “PAP” Medical College under the Government of the Kyrgyz Republic;

20. Zhunusova Gulnara Rakhimbaevna, Head of the Department of Agriculture and Food of Zheti-Suu district Deputy Head of the Regional Health Department;

This educational standard is established in accordance with the Decree of the President of the Kyrgyz Republic “On measures to increase the potential and competitiveness of educational organizations of secondary vocational education of the Kyrgyz Republic” dated July 18, 2022 No. 243, Resolution of the Cabinet of Ministers of the Kyrgyz Republic dated November 21, 2022 No. 654 “On Amendments to certain decisions of the Government of the Kyrgyz Republic on granting a special status state secondary educational institutions”, Resolution of the Government of the Kyrgyz Republic dated February 5, 2024 No. 45 “on the Government of the Kyrgyz Republic on granting the status of, "On amendments to certain resolutions of the Cabinet of Ministers of the Kyrgyz Republic“, the Law of the Kyrgyz Republic” On Education “dated August 11, 2023, the Law of the Kyrgyz Republic” On approval of the layout of the State educational standard of primary, secondary and higher professional education of the Kyrgyz Republic" dated July 8, 2024 No. 371, the Kyrgyz Republic has a national qualifications system, national qualifications framework, European qualifications framework, sectoral qualifications framework, professional standards, Complies with the OSH State University Charter and local regulatory documents in force at the time of approval of the educational standard. The procedure for the development, approval and amendment of this educational standard is regulated by the Regulations on the Development, Approval and Amendment of Educational Standards of OSH State University.

Chapter 2. Abbreviations

SES- State Educational standart;
ES – Eductionalstandart;
SCC– subject cyclical commission;
PWD- people with disabilities
MPI - medical and preventive institution;
HPE - higher professional education
BVEP - basic vocational education program;
GPC – general professional competence
PC – professional competence;
GC- general competence;
LO- Learning outcomes;
SVE – secondary vocational education;
EMA - educational and methodological association;
TS - teachingstaff
OSCE – an objectively structured clinical examination
SPGCC - socio-personal and general cultural competencies;
SC- selective cource
STEAM skills - science, modern technology, engineering, art, formation of mathematical skills

Chapter 3. Terms

The following terms and definitions are used in the self-developed educational standard of secondary vocational education.
- academic integrity is a set of values and principles that establish standards of behavior in the development of educational programs and educational activities, including when performing written work (tests, term papers, essays, dissertations), expressing one's position and relationships between participants in the educational process.
- academic freedom is a set of delegated powers to organize the content of education, additional types of training and educational activities in elective disciplines in order to create conditions for the creative development of students, teachers and the use of innovative technologies and teaching methods.
– the basic curriculum is a catalog of disciplines for the full period of study that prepare students for a profession in a field or specialty (hereinafter referred to as the curriculum). The curriculum includes a mandatory component (basic and university (specialized)), regulates the number of credits allocated for teaching compulsory subjects and subjects of students' choice, sets deadlines and types of practice.;
– distance education is a form of self-education (distance learning) using information technology; **- online form of distance - education** using information technology in real time;
– competence - predefined social requirements (norms) in the preparation of a student(s) for training, necessary for effective productive activity in a particular field;
- credit is a conditional amount of measurement of labor intensity in the program of basic vocational education;
-**the basic educational program** is a set of educational and methodological documentation regulating the goals, expected results, content and organization of the educational process for the preparation of the relevant field;

- learning outcome -the competence gained as a result of studying in the main educational program /module;
– credit technology of learning -learning based on the student's choice and independent planning of the sequence of disciplines through the accumulation of credits;
– independently developed competencies-competencies introduced by the developers of the standard;
- semester curriculum -a curriculum that serves to organize the educational process during a certain academic period (including calculating the labor intensity of teachers' teaching activities per semester);
- Student's Individual Curriculum (SIC) - Defines the student's semester curriculum, which is based on the academic disciplines offered for the semester;
- **qualifying disciplines-** academic disciplines reflecting the individual training of a student, included in the qualifying component within the framework of credits established by educational organizations, taking into account the specifics of socio-economic development and the needs of a particular region.;
– industry-specific form of education -the implementation of an educational program by several educational organizations;
-current regulatory internal regulations – the regulatory internal regulations in force during the development of this Regulation;
-business communication and self-organization (self-discipline), creative and critical approach in non-standard situations;
– STEAM skills - science, modern technology, engineering, art, data - usage and management.

Chapter 4. SCOPE OF APPLICATION

4.1. The Educational standard (hereinafter referred to as the educational standard) of secondary vocational education The main professional educational programs in the specialty **060106 Orthopedic dentistry**the set of requirements for development and implementation is indicated.
4.2. ES establishes the requirements for the training of a specialist in the educational programs of the specialty 060106 Orthopedic dentistry and, based on its results, the qualification of **a dentist** in this specialty is awarded.
4.3. The independently developed standard of secondary vocational education for the implementation of educational technologies in preparation for the educational program in the specialty **060106 Orthopedic dentistry** is the basis for the development of basic curricula, work programs of academic disciplines, practices and programs of state final certification as part of the secondary vocational school.
4.4. The main users of the ES are:
-the basis of organizational and methodological documents for the development, implementation and training of basic educational programs in preparation for an educational program in **060106 Orthopedic dentistry**. As well as the teaching and professorial staff of the educational organization in order to assess the quality of mastering secondary vocational education programs, supplement, update, taking into account the achievements of science, technology and the socio-economic sphere, and systematically monitor the achieved learning outcomes.;
-Students of an educational organization for the effective implementation of educational activities while mastering the educational program in the specialty **060106 Orthopedic dentistry**;
-the rector and vice-rectors of the educational organization, the educational and methodological association of the educational organization and its relevant branch committees, deans of faculties, directors of institutes and colleges, heads of departments, heads of departments, heads of control centers, etc., responsible within their competence for the quality of graduate training, the organization of the educational process;
-examination and state final attestation commissions that evaluate academic achievements and the quality of education of graduates of educational institutions;

- employers in the relevant field of professional activity to determine the specialty (qualification) when hiring graduates;
- organizations that finance the university, including secondary vocational education;
- authorized organizations that carry out the accreditation of educational programs in the field of education;
- representatives of state executive authorities who ensure compliance with the rule of law, supervision in the education system, and quality control in the field of secondary vocational education;
- applicants for the choice of specialties.

Chapter 5. REGULATORY DEADLINES AND LABOR INTENSITY OF THE EDUCATIONAL PROGRAM DEVELOPMENT

5.1. Requirements for the level of education of applicants. When applying, the applicant must have one of the following documents:
- certificate of basic general education;
- certificate of secondary general education;
- for a diploma of secondary vocational education;
- diploma of primary vocational education (if there is a document of basic or secondary general education).

5.2. In accordance with this educational standard, the program of secondary vocational education is implemented on a full-time basis.

5.3. The total labor intensity of the educational program for training in the specialty **060106 Orthopedic dentistry** is 180 credit units, regardless of the form of study, the educational technologies used, and the student's individual curriculum.

5.4. The normal period of study for full-time education, including vacations provided after passing the state final certification of the SVE on the basis of secondary general education:
- on the basis of secondary general education -2 years and 10 months (the established standard period for mastering an educational program on the basis of basic general education is extended by 1 (one) year).

5.5. The standards for the duration of studies according to the individual curriculum of the student are determined on the basis of the academic policy of the educational organization and regulatory documents on the organization of the educational process.

5.6. When organizing the educational process using credit education technology, the volume of each academic discipline is a whole number of academic credits. 1 academic credit is equal to 30 academic hours. The duration of the academic hour is set at 45 minutes.

5.7. The capacity of all types of academic work in the curriculum is determined by ECTS academic credits. The annual labor intensity is 60 credits and the semester labor intensity is 30 credits for full-time education of BVEP of secondary vocational education.

5.8. An educational organization grants the right to persons with secondary professional or higher professional education of the appropriate profile to master an educational program in accelerated programs, taking into account existing knowledge and recognition of learning outcomes. Determines the results of training in certain disciplines and/or certain types of on-the-job training that were previously mastered, based on the results of full or partial recertification (offsetting).

5.10. Conducting (organizing) the final state certification in online form is not allowed regardless of the types of practices and when using the educational program in online form. It is allowed only in case of emergency.

5.11. When implementing a secondary general education program integrated into the secondary vocational education program (11th grade program), a document on secondary general education (certificate) is not issued, grades on secondary general education taught at the college are recorded in the document on secondary vocational education (diploma).

Chapter 6. REQUIREMENTS FOR THE DEVELOPMENT AND IMPLEMENTATION OF THE BASIC EDUCATIONAL PROGRAM

6.1. An educational organization independently develops educational programs for secondary vocational education, taking into account the needs of the labor market. The basic educational program is developed on the basis of the professional Education standard, the National Qualifications System, the industry/industry qualifications framework and professional standards (if any).

6.2. **The purpose of the basic educational program** of secondary vocational education in the specialty **Orthopedic dentistry** in the field of education:

- specialty training, which allows graduates to successfully work in their chosen field, is the training of specialists who are able to produce prostheses and orthodontic devices, as well as perform other dental work necessary to restore teeth and jaws that can be used to meet the needs of the population. the purpose of personal education:

- to teach students politeness, determination, tolerance, responsibility, communication skills, dedication in doing their job, humanity, accuracy. professional goals:

- in the field of professional activity, professionals with secondary education are being formed who are able to apply types of artificial dentures to meet the needs of the population, produce various types of artificial dentures using modern medical technologies, dental equipment, instruments and dental technical materials.

6.3. The relevant structures of the educational organization are, updates the BVEP at least once every 5 (five) years in accordance with the recommendations of interested parties, taking into account the development of technology, technology and the social sphere. Educational program updates include:

- development of a strategy to ensure the quality of graduate training;;

- implementation of periodic monitoring of educational programs;;

-development of objective procedures for assessing the level of knowledge and knowledge of students, skills, and competencies of graduates based on the requirements for graduate competence agreed with the employer;;

- ensuring the quality and competence of the teaching staff;;

- providing the implemented educational program with sufficient resources, monitoring the effectiveness of their use;;

-Conducting regular self-assessment on the minimum accreditation requirements established by the Cabinet of Ministers of the Kyrgyz Republic;;

- informing the public about the results of their activities, plans, and innovations.

6.4. The educational organization implementing the educational program is obliged to:

- the formation of a socio-cultural environment;

- creating the conditions necessary for the comprehensive development and socialization of the individual, maintaining the health of students;;

- to promote the development of educational/extracurricular components of the educational process, including the development of self-government, the participation of students in the activities of public organizations, sports and creative clubs, scientific student societies.

6.5. A set of relevant disciplines (modules) for each cycle of the educational program and their capacity are determined by the educational organization (the relevant structures of the educational organization) independently.

6.6. The set of BVEP disciplines should include mandatory (basic) and selective parts. Optional courses are offered for the professional cycle, and the catalog of disciplines for it is determined by the educational organization (the relevant structures of the educational organization).

6.7. The degree of compulsory disciplines, the sequence of their development and the distribution of labor intensity into groups “A”, “B” and “c” are organized in accordance with the provisions of the educational organization on the organization of the educational process and the annexes to this layout. 6.8. The educational organization is obliged to ensure the accessibility of training courses (disciplines, modules) to students OOP, conduct introductory courses, and determine through a survey the selected courses and preferences of the student to form an individual learning trajectory. The student forms his/her individual curriculum with the participation of an Academic Consultant provided by the educational organization.

6.9. When creating a BVEP, an educational organization is obliged to familiarize students with their rights and obligations, to clarify that the subjects chosen by students are mandatory for them, and their total labor intensity should not be less than stipulated in the curriculum.

6.10. An educational organization is obliged to take into account the policy of gender equality when developing and implementing an educational program, ensure social inclusion, and develop digitalization.

6.11. General requirements for the rights and obligations of students in the implementation of the educational program:

- students have the right to choose specific disciplines within the amount of study time allocated for the development of academic disciplines chosen by students within the framework of the educational program of higher professional education;

- when forming their individual educational trajectory, students have the right to consult with an educational organization on the choice of disciplines and their impact on their future profession;

- in order to achieve results in the development of educational programs in terms of competence development, students have the right to participate in the development of student self-government, the activities of public organizations, sports and creative clubs, scientific student societies;

- students are required to complete all tasks provided for in the educational program of the educational organization within the prescribed time.;

- the student's workload is set at least 38 hours per week, including all types of classroom and extracurricular (independent) learning activities.

The maximum weekly workload is set by the educational organization;

- when training a full-time specialist, the volume of classroom classes is at least 35% of the total volume per week;

- the total length of the vacation period in the academic year should be 7-10 weeks, including at least two weeks in winter, depending on the duration of study.

- When implementing the educational program, the number of students in 1 stream in practical, laboratory, and seminar classes must be at least 12.

Chapter 7. CHARACTERISTICS OF PROFESSIONAL ACTIVITY OF GRADUATES OF THE EDUCATIONAL PROGRAM OF SPECIALTY 060106 ORTHOPEDIC DENTISTRY

7.1. The areas of professional activity of graduates of the educational program in the direction 060106 orthopedic dentistry include:

-manufacture of dentures, orthodontic and maxillofacial devices, holding events in healthcare institutions for the appointment of an orthopedic dentist;

- high-quality implementation of types of prosthetics, stages of laboratory manufacture of artificial prostheses, depending on their design, provision of qualified assistance to the population.

The objects of professional activity of graduates of educational programs in the specialty

7.2. **060106 Orthopedic dentistry** are:

- types of prostheses depending on the design;

-orthodontic and maxillofacial devices;

- dental laboratory equipment and apparatuses;

- basic and auxiliary materials;

- organization of dental procedural activities;

- primary labor collectives.

7.3. Types of professional activities for which graduates of educational programs in the specialty **060106 Orthopedic dentistry** can be trained in the field of dental education:

- denture manufacturing activities;

- diagnostic activities;

- sanitary and educational activities;

-organizational and managerial professional activity.

7.4. A specialist who has been qualified as a dentist in the specialty **060106 Orthopedic dentistry** is ready to solve the following professional tasks in accordance with the type (types) of professional activity:

- Denture manufacturing activities:

- the orthopedist knows how to produce crowns and bridges made of plastic and metal, depending on the design, material, in accordance with the instructions of the dentist;

- can produce loop, cast,buckled, artificial lamellar prostheses;

- manufactures stamped metal crowns and stamped welded bridges;

- manufactures plastic dental crowns and bridges;

- knows that repairing broken and defective dentures can help in recovery;

- prepares whole cast dental bridges;

-the orthodontist knows the production of maxillofacial devices together with the dentist;

- artificial veneer, which is put on pin teeth, can make teeth;

-prepares the main types of maxillofacial devices for defects of the maxillofacial part;

- prepares flexible removable types of dentures;

- metal ceramics can make dentures;

- a zirconia fixed denture is manufactured by modeling a 3D projection of the maxillofacial area using computer technology.

Diagnostic activities:

- analysis of the problem and the correct and accurate definition of the disease;

- explaining to the patient the essence of orthopedic interventions. Sanitary and educational activities:

- compliance with the anti-epidemic regime and safety rules in healthcare institutions;

- knowledge and observance of personal hygiene rules and equipment operation procedures in the dental technical laboratory.

Organizational and managerial professional activities:

- proper provision of instructions for the manufacture of dentures, their types and design features in medical institutions and their structural divisions;

- the application of regulatory documents regulating the professional activity of a specialist.

Chapter 8. REQUIREMENTS FOR THE RESULTS OF MASTERING THE EDUCATIONAL PROGRAM OF SPECIALTY 060106 ORTHOPEDIC DENTISTRY

8.1. As a result of mastering the educational program, the graduate should develop the following general competencies (GCS).

Areas	Competencies	Learning outcomes
Language and communication skills	GC-1: Makes public reports; chooses the style and type of his activity and presents it, correctly, accurately expresses and proves his opinion in written and oral form, outputs research results in the professional field in Kyrgyz, Russian and foreign languages.	LO-1: speaks three languages: Kyrgyz and Russian at the B2 level, a foreign language at the B1 level, and carries out speech activities in the professional field.
National and universal human values	GC-2: In his professional activity, he critically analyzes and evaluates personal-civil relations, is able to initiate and ensure the implementation of ideas aimed at improving the philosophy of statehood, civic identity, patriotism, universal and national values.	LO-2: respects universal and national values while preserving identity, national identity, can take care of development and dissemination, can relate to the interests of the state and social identity, civic responsibility.
Soft skills	GC-3: Generates new ideas and can adapt to innovations and unforeseen situations in the external environment through creative thinking; He thinks analytically and reacts critically when organizing and running business projects.	LO-3: Able to generate ideas and think critically, integrate and analyze other points of view, think well-reasoned and constructively in a professional environment, self-control in non-standard business situations, can apply psychological stability and

		research skills.
STEMskills	GC-4: digital media can use texts, infographics, basic mathematical, engineering, scientific principles, adapt to new trends in various business areas of the digital and creative economy;	LO-4. Uses modern information and telecommunication technologies and mathematical methods, flexibly responds to trends in the technical, digital and creative economy.

Self-developedcompetencies	**Competencecontent**
GPC -1	Will be able to organize their individual activities, select approaches to performing professional tasks, evaluate its effectiveness, improve professional and independent knowledge, and adapt to changes.
GPC -2.	Will be able to recognize medical features and indications for the use of safety measures.
GPC -3	In the effective performance of professional duties, they can use the information necessary for professional and personal development through search and interpretation.
GPC -4	The use of regulatory documents may involve legal responsibility in professional activities.
GPC -5	May have the ability to recognize anatomical, physiological features and vital signs in both normal and pathological conditions of a person of any age.
GPC -6	Can carry out research aimed at understanding and optimizing the psychology of professional activity, labor processes, as well as improving the quality of life of employees.
GPC -7	Can take urgent measures aimed at preventing deterioration of the condition and, if necessary, maintaining vital functions until professional medical assistance arrives.
GPC -8	Knowledge of the language in professional activities facilitates mutual understanding between medical professionals from different countries and knowledge of new medical concepts..
GPC -9	In healthcare organizations, they can be engaged in resource management, planning, organization and control of the activities of healthcare institutions.
GPC -10	Moral and ethical principles and codes of conduct that medical professionals can follow in relation to patients and colleagues.
GPC -11	Provides first aid in case of injury, the basics of personal and collective hygiene necessary for military personnel.

8.1. A graduate qualified as a dentist in the specialty 060106-orthopedic dentistry, should have the following diagnostic, sanitary, educational, organizational and managerial professional competencies (OK) for the type of professional activity:

Competencies related to prosthetic manufacturing activities

Types of denture manufacturing activities:	
PC-1	With the help of direction by an orthopedic dentist, will be able to produce crowns and bridges made of plastic and metal, depending on the design,

	material, in accordance with the instructions of the dentist.
PC 2	Can produce loop, cast, buckled, artificial lamellar prostheses.
PC -3	Can produce stamped metal crowns and stamped welded bridges.
PC -4	Can make dental crowns and bridges from plastic.
PC -5	Repairing broken and defective dentures requires corrective care.
PC -6	Can damage whole castings,dental bridges.
PC -7	Can produce maxillofacial devices together with a dentist.
PC -8	An artificial lining that can be put on the pin teeth can make teeth.
PC -9	Can prepare the main types of maxillofacial devices for defects of the maxillofacial part.
PC -10	Knows how to make flexible removable dentures.
PC -11	Can make metal ceramics dentures.
PC -12	Modeling a 3D projection of the maxillofacial area using computer technology, zirconia can be used to prepare dentures

Professional competencies in the diagnosis of diseases	
PC -13	Will be able to analyze the problem and correctly and accurately diagnose the disease.
PC -14	Can explain to the patient the essence of orthopedic interventions.
Professional competencies in sanitary and educational activities	
PC -15	Can observe the rules of anti-epidemic regime and safety in healthcare institutions.
PC -16	Knows the rules of personal hygiene and the operating procedure of equipment in the dental technical laboratory.
Professional competencies in organizational and managerial activities	
PC -17	Ensures the correctness of the instructions for the manufacture of dentures in medical institutions and their structural units, their types and design features.
PC -18	Knows how to apply regulatory documents regulating the professional activity of a specialist.

Chapter 9. REQUIREMENTS FOR THE CONDITIONS OF IMPLEMENTATION OF THE EDUCATIONAL PROGRAM OF SPECIALTY 060106 ORTHOPEDIC DENTISTRY

9.1. Personnel requirements for the implementation of the educational program

9.1.1. General requirements for the staffing of the educational process:

-the implementation of the BVEP for the preparation of educational programs should be provided by teaching staff with basic education and/or qualifications of at least bachelor's, master's and specialist degrees and systematically engaged in educational (scientific) methodological activities.;
- the proportion of full-time teachers to the total number of teachers in the educational program should be at least 70%;
-the teaching staff serving the educational program must improve their professional education once every 3 years, and pedagogical education once every 5 years.;

- specialists who are equated to teachers due to industrial necessity, They must be provided with teachers with at least 5 years of practical experience.

9.1.2. Requirements for staffing the educational process in accordance with the specifics of the educational field **060106 Orthopedic dentistry** specialists who are equivalent to teachers with an academic degree due to industrial necessity must be provided with teachers with practical experience in the relevant field for at least 3 years during the last 5 years. At least 10% of the teachers who implement the educational program must be from production (regardless of the form of ownership).

9.2. Requirements for educational, methodological and informational support of the educational process

9.2.1. Requirements for the literature fund: When implementing the educational program of specialty **060106 Orthopedic dentistry**, each student should be provided with databases and a library fund formed according to the full list of disciplines of the educational program.;

-an educational organization must provide regulatory legal acts related to the educational field, local acts of the educational organization, and periodicals of a professional orientation;

- compulsory textbooks and teaching aids must comply with the norm of 0.5 copies per student.

9.2.2. Requirements for e-learning: The educational organization is obliged to provide a modern electronic library system and electronic library platforms, educational and methodological databases accessible to students. Students should have access to modern professional databases, information queries, and search engines. The electronic library system should provide access to e-learning via the Internet even outside the educational organization. The compulsory (basic) and additional textbooks for each discipline (module) in the curriculum must be provided in electronic form.

9.2.3. Requirements for the placement of electronic forms of teaching materials (complexes) on the relevant digital platforms of the educational institution: Teaching materials and text, audio, video, multimedia resources for each academic discipline of the basic educational program must be posted on the digital platforms of the educational organization before the start of the educational process and accessible to every student.

9.3. Requirements for the logistical support of the educational process. An educational organization implementing the basic professional educational program of secondary vocational education must have a material and technical base that complies with current sanitary and fire safety rules and regulations, ensuring the conduct of all types of laboratory, disciplinary and interdisciplinary training, practical training of students provided for in the curriculum. The implementation of the main professional educational program in the specialty should ensure that the student performs laboratory and practical work, including practical tasks using personal computers as a mandatory component. The usable area per pupil should be at least 3m2.

9.3.1.Special classrooms (laboratory, language, computer, virtual, multimedia, simulation, etc.) An educational organization implementing an educational program must have the material and technical base provided for in the educational organization's curriculum in accordance with sanitary and fire safety rules and regulations, ensuring all types of laboratory, disciplinary and interdisciplinary training of students, practical and scientific research.

Classrooms:

1. Kyrgyz (Russian) language (posters and stands).
2. Social disciplines (posters and stands).
2. Foreign language (posters and stands).
1. Latin (posters and stands).
3. Computer science (posters and stands, computers).
4. Anatomy and physiology (posters and stands, the human skeleton and its structural units, mannequins, phantoms).
5. Infectious diseases (posters and stands, mannequins, laboratory diagnostic tools).
6. Fully removable dentures (posters and stands, mannequins, laboratory diagnostic tools).
7. Fully removable dentures (posters and stands, mannequins, laboratory diagnostic tools).
8. Artificial teeth casting (posters and stands, mannequins, tools for laboratory diagnostics).

9. Maxillofacial prostheses (posters and stands, mannequins, tools for laboratory diagnostics).
10. Orthodontic devices (posters and stands, mannequins, laboratory diagnostic tools).
11. Primary health care (posters and stands, mannequins, laboratory diagnostic tools).
12. Non-removable dentures (posters and stands, mannequins, laboratory diagnostic tools).
13. Toothache (posters and stands, mannequins, laboratory diagnostic tools).
14. Microbiology (posters and stands, visual aids, microscope)
15.Interactive whiteboard, projector
16. Computer lab.
17. Educational and training center:
18. An office for watching video slides, themed films (TV, computer with Internet connection).
19. Sports complex:
- sports hall,
- an open wide-field stadium.
20. Halls:
- library, electronic library;
- reading room with internet access;
- electronic library;
- solemn assembly hall-1;
– medical center-1;
- kitchen-1.

9.3.2. Conditions of training at the production base (on-the-job training): An educational organization should provide compulsory practical training, on-the-job training aimed at acquiring general and professional knowledge, skills and abilities on the basis of enterprises in order to consolidate professional knowledge and skills. NGOs should develop and approve programs in relevant professional disciplines, including on-the-job training conducted at the enterprise or in the organization. During on-the-job training, a mentor and a teacher working in a medical institution should conduct classes together. This is established by an agreement between the university (institute, college, department) and a medical institution.

Students will work with a mentor at the factory to see the stages of making patients' dentures with their own eyes, hold them in their hands and learn the appropriate skills.

- together with the educational institution, the enterprise organizes the procedure for assessing the general and professional knowledge, skills of students acquired in the learning process with elements of dual training in the profession in accordance with professional standards. On-the-job training (dual) prepares future dentists to work in production.

9.4. Requirements for knowledge quality assessment

9.4.1. Types of checks: Assessment of the quality of training of students and graduates should include their current, intermediate and final state certification. The current certification of students is carried out during the academic semester based on the assessment system established (approved by the Academic Council) by the educational organization implementing the educational program. The intermediate assessment of students is conducted every semester, and the results of the current assessment for the semester in all disciplines / modules must be organized in accordance with the local acts of the educational organization.

9.4.2. Assessment Fund and assessment criteria: Bases and criteria for assessment tools should be developed, including standard tasks for current, intermediate and final attestation, test papers, unit tests and practical tasks that allow assessing the level of acquired competencies for compliance of individual student achievements with the phased or final requirements of the educational program. According to the types of examinations for each discipline, assessment tools and assessment criteria are developed prior to the start of the educational process and should be posted on the educational institution's website for access to students.

9.5. Requirements for the organization of practice.

9.5.1. General provisions on practice: When studying under educational programs, internships conducted for students are considered as a form of educational process that forms professional competencies in the training of a specialist. Each student is required to complete the types of practice specified by the educational organization. An educational organization must ensure that production practices are conducted in production organizations, depending on the direction and specialty of professional education. Students studying in the specialty 060106 Orthopedic Dentistry undergo internships in educational and industrial medical institutions in the 2nd, 3rd, 4th, 5th, and 6th semesters.

9.5.2. When preparing for the educational program of secondary vocational education, the following types of practice are carried out:

Educational and production practice -educational and industrial practice for obtaining initial professional skills;

Production practice - industrial practice of training a specialist in the profile;

- production practice in the technique of manufacturing fixed and removable dentures;

-production practice in the technology of manufacturing orthodontic devices and maxillofacial prostheses. Prequalification practice.

9.5.3. Requirements for types of internships. The areas of the main types of college internships are determined according to the curricula of the specialties. The main ones are educational industrial practice, industrial practice, prequalification practice. Educational and industrial practices should be conducted in organizations of a medical institution in order to gain work experience in developing the first professional skills based on theoretical knowledge. In this type of practice, students get acquainted with the dentist's workplace, equipment, and tools. Production practice should be conducted in organizations of medical institutions on the technique of manufacturing fixed and removable dentures, production practice on the technology of manufacturing orthodontic devices and maxillofacial prostheses.

Students' professional skills. Students begin to make dentures, learn how to make orthodontic devices and dentures of the maxillofacial region. Professional skills that you will acquire during the internship: Students work in collaboration with an orthopedic dentist who orders and installs prosthetics for patients.

Working in dental laboratories of dental clinics, on the basis of orders received on his instructions, manufacturing various types of prostheses, taking into account the design features of each prosthesis, acquires professional skills in manufacturing zirconium, ceramic, flexible prostheses, orthodontic

devices, removable dentures, fixed dentures, crowns, bridges and other orthodontic devices. **Prequalification practice** is the final stage of training and should be conducted in organizations of medical institutions after students have fully mastered the theoretical and practical training program, gained work experience in developing their first professional skills based on theoretical knowledge in organizations of medical institutions, depending on the specialty. The pre-graduate internship for dental qualification is the final stage of training, which allows students to acquire the necessary practical skills and knowledge. This is usually done after mastering theoretical and practical disciplines.

The main goals and objectives of the dentist's prequalification practice:

- must master practical skills in the manufacture of various types of dental prostheses;
- must learn to manufacture orthodontic appliances, maxillofacial prostheses;
- must master the manufacture of zirconium, ceramic fixed dental prostheses;
- must be able to master the manufacture of zirconium, ceramic fixed dentures;
- must be able to model 3D projections of the maxillofacial area using computer technology and manufacture zirconium dioxide dentures.

The educational institution is obliged to provide the documents necessary for carrying out the above-mentioned types of practice.

9.6. Final certification. Requirements for the comprehensive final state exam and justification for the allocation of labor intensity (number of credits) : The final state certification of students should be conducted after completing the full course of study. The types of state certification examinations and the procedure for their organization are determined by the educational organization in accordance with the regulatory legal acts of the Kyrgyz Republic and the educational organization governing the conduct of the final state certification of graduates. The final state certification is allowed to graduates who have no academic debt and have completed the full course of study provided for in the curriculum. One comprehensive state final certification is being organized with the assignment of the qualification "dental technician" in the specialty **060106 orthopedic dentistry**, which should consist of the following stages.

The final state certification should consist of two stages:

* Stage I-testing;

* Phase II is an objectively structured clinical exam conducted in specially designated classrooms with video recordings. (practical skills);

9.6.1. Requirements for comprehensive final state certification and justification of academic load allocation (number of credits): The final state certification of graduates should be conducted in the form of a comprehensive state interdisciplinary examination in the specialty, which provides for an assessment of theoretical and practical professional training based on state requirements for the minimum content and level of graduate training in orthopedic dentistry. The comprehensive final State exam evaluates a student's knowledge, theoretical and practical skills, and clinical work experience, and must have at least 3 credits of study load to prepare for tests, practical skills, and situational tasks. The final assessment should be based on the average result of the 2nd stage of the state final assessment.

Chapter 10. SAMPLE OF THE BASIC CURRICULUM OF THE EDUCATIONAL PROGRAM

Blocks	Cycles	Cycles directions	Disciplines	Divisions of credits into groups			Divisions of hours			1-academic year		2-academic year		3-academic year		4-academic year	
				"A"	"B"	"C"	total	audit.	SIW	1-semester	2-semester	3-semester	4-semester	5-semester	6-semester	7-semester	8-semester
1-block	1-cycle. General education (12 credit)	Language and communication skills	Kyrgyz language														
			Russian language														
			English														
		National and universal human values	Catalogue disciplines№														
		STEM skills	Catalogue disciplines№														
		Physical education															
	2-cycle. General professional education	General professional disciplines															
	3-цикл. Professional education	Professional disciplines															
2-block	Practices																
3-block	State finalcertification																
The overall complexity of the educational program				Atleast 180 credits													

Note: The basic curriculum is developed using Appendices 1-3 according to this scheme.

The first block of the curriculum consists of 3 cycles: a cycle of general education, a cycle of general vocational education and a cycle of vocational education.

The general educational cycle is divided into areas (catalog of disciplines) under the title ”language and communication skills", ”national and universal values", ”Soft skills“, ”STEM skills". Each field offers at least 3 disciplines, and the catalog of disciplines is determined by the educational organization. Students can independently choose the disciplines offered in the fields.

Academic disciplines in the entire cycle of the basic curriculum are divided into groups "A", "B", "C" according to the degree of commitment and sequence of assimilation of the content.:

"A" is a discipline that follows the sequence of disciplines during the semester specified in the basic curriculum, and the disciplines required for study.

"B " - the sequence of disciplines does not matter, it is mandatory reading. Students study the disciplines of this group, independently planning them for the desired semesters for the specified academic years. The student can choose the disciplines of group " c" at his discretion from the catalog. The semesters of subjects in this group should be clearly indicated in the curriculum.

Group "C" offers a catalog of disciplines, and students can choose only one discipline from each catalog. Disciplines in the same catalog should be related.

Group "C" allows students to deepen the disciplines of group "A" of the basic curriculum, acquire additional competencies to ensure graduate competitiveness, taking into account the requirements of the labor market and the achievements of science and technology.

The disciplines of group " C" can be updated every academic year, taking into account the requirements of the labor market and the achievements of science and technology.

Appendix 1

The basic curriculum for secondary professional medical education distribution of total labor intensity

Structure of the educational program			Labor intensity of educational program blocks (credit)		
1-block	**Дисциплиналар**		**«A»**	**«B»**	**«C»**
			104-158credit		
	Cycles	General educational disciplines		12 credit	
		Professional cycle	92-146 credit		
		General educational disciplines	15%-25%	6%-10%	
		Professional cycle	50%-60%	20%-25%	20%-25%
	Дене тарбия		72-120 hours		
2-block	**Practice**		20-70credit		
3-block	State finalcertification		2-6 credit		
The overall complexity of the educational program			**At least 180 credit**		

Appendix 2

According to the cycles of compulsory disciplines of the basic curricula of secondary professional medical education , the distribution and labor intensity

Blocks	Cycles	Cycles directions	Disciplines	Divisions of credits into groups			Divisions of hours			1-academic year		2-academic year		3-academic year	
				"A"	"B"	"C"	total	audit.	SIW	1-semester	2-semester	3-semester	4-semester	5-semester	6-semester
1- block	1-cycle. General education (12 credit)	Language and communication skills			4										
					4										
		National and universal human values													
		STEM skills			4										
		Physical education													
	2-cycle. General professional education	General professional disciplines													
	3-цикл. Professional education	Professional disciplines													

2-block	**Practices (20-70 credit)**												
3- block	State finalcertification**(2-6 credit)**												
The overall complexity of the educational program							**At least 180 credits**						

Appendix 3

The catalog of disciplines of the basic curriculum
Note: the disciplines in the ”catalog of disciplines" of the general education cycle are selected by the student.

Catalogue #	Catalogue direction	Title of catalogue disciplines	Amount of credit
1 discipline catalogue	National and universal values	English language	4
		Kyrgyz language	
		Russian language	
		Chinese language	
2 discipline catalogue	Soft skills	History of the Fatherland, National Values and Culture	4
		MoralityandFaith	
		Ecological Knowledge and Culture in Professional Activity	
		Manasology	
3 discipline catalogue	STEM skills	Project practice	
		CriticalThinking, DesignThinking	
		Self-discipline (self-knowledge) and Psychology	
4 discipline catalogue	Language and communication skills	Industry Mathematics	4
		Digital Technologies in Professional Activity	

The table contains a list of members of the working group, no. , full name, position, signature

Osh State University educational standard specialty 060106 Orthopedic Dentistry.
Composition of the team from the medical college.Chairman of the working group:

Composition of the Medical College

№	Surname, name, patronymic	Place of work, position.	Signature
1	Orozbaev Amat Ysmailovich	Chairman of the OPOP in the specialty 060106 orthopedic dentistr	
2	Mamaeva Tamara Abdykadyrovna	Head of the subject cycle commission for dental and surgical disciplines	
3	Bakiev Aibek Bekmamatovich	Lecturer of the subject cycle commission on dental and surgical disciplines	
4	Omoshov Azamat Koichumanovich	Lecturer of the subject cycle commission on dental and surgical disciplines	
5	Alimbekov Omurbek Alimbekovich	Lecturer of the subject cycle commission on dental and surgical disciplines	
6	Shorukov Asylbek Abdibakhapovich	Teacher of the commission for the subject cycle of natural and exact sciences	
		Composition of domestic colleges	
7	Kalmatova Nurkan Tagaevna	Head of the Department of Orthopedic Dentistry, Kyzyl-Kiya Medical College	
8	Turdiev Ruzimamat Alimovich	Lecturer at Osh State University KUU Medical College	
9	Malikova Anipa Zanievna	College of International Educational Programs (CIEP), Latin Language Teacher	
10	Арпачиева Төлөгүл Батыркановна	Нарын медициналык колледжинин директору;	
11	Mataev Ali-Mukhamet	Lecturer at Osh State University KUU Medical College	
		Employers	
12	Asanov Kushtarbek Duyshobaevich	Chief physician of Osh city dental clinic No. 2	
13	Abduvaliev Zhoomart Galbaevich	Deputy Director of Osh City Dental Clinic No. 1	
14	Saipov Azizillo Saipovich	Head of the dental laboratory of Osh city dental clinic No. 1	
15	Karabaev Kanybek Madanbekovich	Director of the private enterprise “Biodent”	
16	Kubanychbek uulu Kursantbek	Director of the private enterprise “Eurodent”	
		Chairman of the working group	
17	Orozbekova Lyayla Asimtaevna	Kazakhstan republic sons of karashtuu Taldy korgon zhogorku medical college college practice bashchysy	
18	Ismailov Mukhiddin Abduvalievich	Director of Ishtihan Medical College in the Samarkand region of the Republic of Uzbekistan;	
19	Ergeshova Gulbahor Zhukashevna	Director of the Medical College "PAP" of Namangan city region of the Republic of Uzbekistan;	
20	Zhunusova Gulnara Rakhimbaevna	Deputy Head of the Health Department of Zhetysu region of the Republic of Kazakhstan;	

The following foreign experts have provided opinions on the educational standards.

1	Saimov Mahmud Tolipovich	Director of the Almalyk College of Public Health, Republic of Uzbekistan;	
2	Makhmudova Gulzhamol Imankulovna	Republic of Kazakhstan, Head of the Department of International Relations and Academic Mobility, Peoples' Friendship University named after A. Kuatbekov.	
3	Ergeshova Gulbahor Zhukashevna	Director of the Medical College "PAP" of Namangan city region of the Republic of Uzbekistan;	