ENTRANCE EXAMINATION PROGRAM

For the Educational Program Group: BM087 – Dentistry (Continuous Integrated Medical Education with a shortened period of study) for the 2026–2027 academic year.

Duration of study: 4 years;

Mode of study: Full-time.

Astana 2026.

Contents

1. PURPOSE AND SCOPE

1.1 This Program is intended for applicants in the field of Healthcare applying to the Educational Program Group BM087 – Dentistry.

2. REGULATORY REFERENCES

2.1 This Program refers to the following regulatory document:

Order No. 600 of the Minister of Education and Science of the Republic of Kazakhstan dated October 31, 2018, "Standard Rules for Admission to Educational Organizations Implementing Higher and Postgraduate Education Programs".

3. MAIN PART

3.1 Brief Information

Mission of the Educational Program - To train and professionally develop internationally competitive dentists based on modern educational and practice-oriented curricula.

Purpose of the Educational Program - To prepare competitive specialists with a high level of professional competence who are capable of acquiring and developing new knowledge within the healthcare system, particularly in dentistry, and solving professional tasks in dental practice through the application of modern technologies.

Field of Professional Activity - Healthcare organizations; Educational institutions (secondary specialized and higher medical education institutions).

Graduates who complete the Continuous Integrated Medical Education Program in Dentistry and successfully pass the final certification are awarded a postgraduate education diploma with an academic transcript and/or a European Diploma Supplement, as well as a certificate of completion of internship with the qualification "General Dentist (Adult and Pediatric)".

Previous Education Requirements

Secondary vocational medical education with the qualification "Dental Technician/Dentist" and a minimum diploma GPA of 3.0.

3.2 Contact Information

Republic of Kazakhstan, Astana, 49A Beibitshilik Street, Office 309. Dean of the School – Violetta Robertovna Detochkina. Tel.: +7 777 200 3333

3.3 Venue of the Entrance Examination

Astana, 51 Beibitshilik Street, Non-Profit Joint Stock Company Astana Medical University.

3.4 Format of the Entrance Examination

The entrance examination is conducted in the form of a test.

The computer-based entrance examination in core disciplines is administered at Astana Medical University and includes:

- Fundamentals of Therapeutic Dentistry;
- Fundamentals of Prosthodontic Dentistry;
- Fundamentals of Surgical Dentistry.

The list was approved at the meeting of the Educational Program Quality Assurance Committee for Dentistry of Astana Medical University, Protocol No. 3 dated May 14, 2026.

3.5 Application Submission Schedule and Entrance Examination Dates

Table 1

Application Period	Entrance Examination Dates	Examination Time	Appeal Submission Deadline	Examination Venue
July 1 – August 3	August 5–14	10:00 – 12:00 14:00 – 16:00	Until 1:00 p.m. on the day following the announcement of results	51 Beibitshilik Street, 5th Floor, Rooms 501 and 509

*The entrance examination schedule (exact date, time, and applicant's full name) will be published on the University's website under the sections "Applicants" and "Shortened Study Program".

Applicants are admitted to the examination room upon presentation of a valid identification document. The entrance examination is conducted in rooms equipped with video and/or audio recording systems.

List of Required Documents

1) Application addressed to the Rector of the University in the prescribed form (Appendix 1);
2) Educational document (diploma and supplement; original and copy);
3) Identification document (original and copy);
4) Six photographs measuring 3 × 4 cm;
5) Medical certificate Form 075/u (original and copy), fluorography image, and a copy of Form 063/u (vaccination card);
6) Extract confirming completion of the psychometric examination;
7) Applicants holding technical and vocational education credentials, who have confirmed their qualification and possess at least one year of work experience in their specialty, shall additionally submit one of the documents provided for in Article 35 of the Labor Code of the Republic of Kazakhstan;
8) Results of the Independent Competency Assessment (ICA).

3.6 Appeals

Appeals shall be submitted personally by the applicant who has taken the entrance examination and addressed to the Chairperson of the Appeals Committee.

Appeals are accepted until 1:00 PM on the day following the announcement of the entrance examination results and are reviewed by the Appeals Committee within one day (Appendix 2).

3.7 Examination Materials

Entrance Examination Questions in "Fundamentals of Therapeutic Dentistry"

1. Organization of a therapeutic dental office. Equipment and instruments. Occupational safety and ergonomics.
2. Principles of asepsis and antisepsis. Pre-sterilization cleaning, sterilization methods and protocols. Prevention of viral hepatitis and HIV infection.
3. Dental anatomy. Tooth identification features. Anatomy of maxillary and mandibular teeth. Expression of tooth identification features in maxillary and mandibular teeth.
4. Histology of hard dental tissues.
5. Histology of the dental pulp.

6. Histology of the periodontium.
7. Histology of the oral mucosa.
8. Concept of dental caries and its complications. Black's classification of carious cavities. Basic principles, stages, and methods of cavity preparation.
9. Preparation of Class I–VI cavities according to Black's classification.
10. Restorative materials. Classification according to purpose. Temporary filling materials. Requirements, composition, properties, indications, preparation, and filling techniques.
11. Materials for therapeutic liners. Requirements, composition, properties, indications, preparation, and application techniques.
12. Dental cements. Classification of cements. Composition, properties, indications for use of zinc phosphate, bactericidal, zinc oxide-eugenol, silicate, silico-phosphate, and polycarboxylate cements. Mixing and filling techniques.
13. Metal-containing restorative materials: silver amalgam, composition, properties, indications, contraindications, preparation, and filling techniques.
14. Glass ionomer cements: classification, composition, properties, indications for use. Mixing and restorative techniques.
15. Composite restorative materials. Classification, composition, and properties.
16. Adhesive systems for composite restorative materials: composition and function of components. Composite restoration techniques. Finishing and polishing of restorations.
17. Compomers. Composition, properties, and indications for use.
18. Features of tooth restoration depending on cavity location. Contact point, its significance, and restoration methods.
19. Concept of endodontics. Endodontium. Morphological and functional complexes of the endodontium.
20. Anatomical and topographical features of pulp chambers and root canals of maxillary and mandibular teeth.
21. Stages of endodontic treatment (10 steps). Creation of primary endodontic access. Working length determination and methods of measurement.
22. Endodontic instruments. Classification. Functions and rules of use.
23. Concepts of pulpitis and periodontitis. Methods of pulpitis treatment. Pulp devitalization and agents used. Stages of endodontic treatment of pulpitis. Goals and objectives of periodontitis treatment. Stages of endodontic treatment of periodontitis.
24. Methods of root canal preparation. Classification. Instrumentation techniques (Step Back, Crown Down, Balanced Force).
25. Medicamentous treatment of root canals. Chemical methods of canal preparation and enlargement. Purpose, materials, and procedures.
26. Root canal filling materials (sealers). Classification and requirements.
27. Temporary root canal fillings (plastic non-setting materials): indications, types, composition, properties, preparation, and filling techniques.
28. Plastic setting materials for root canal obturation: types, composition, properties, preparation, and filling techniques.
29. Posts (fillers). Types. Gutta-percha: composition, properties, and varieties.
30. Root canal obturation using the single-cone, lateral condensation, and vertical condensation techniques; advantages and disadvantages.
31. Errors and complications during endodontic treatment. Prevention and management

Entrance Examination Questions in "Fundamentals of Prosthodontic Dentistry"

1. Dental laboratory: structure and organization. Dental technician's workplace.

2. Dental materials and instruments used by dental technicians. Safety regulations.
3. Functional anatomy of the dentofacial system. Basics of reproducing anatomical features of maxillary and mandibular tooth crowns using gypsum blocks.
4. Types of fixed prostheses. Indications for inlays (microprostheses).
5. Clinical and laboratory stages of inlay fabrication.
6. Tooth preparation for inlays according to Black's principles.
7. Abrasive instruments used for cavity preparation for inlays.
8. Wax pattern fabrication of an inlay (microprosthesis). Direct technique for inlay fabrication.
9. Indirect technique for inlay fabrication.
10. Main materials used for microprostheses. Replacement of wax with resin and metal.
11. Finishing and polishing of acrylic crowns. Cementation.
12. Indications for artificial crowns in hard tissue defects. Tooth preparation for stamped metal crowns.
13. Clinical and laboratory stages of crown fabrication. Abrasive instruments used for tooth preparation.
14. Devices reproducing mandibular movements (occluders and articulators). Fabrication of a gypsum mold (gypsum block).
15. Metals and alloys used in prosthodontics. Equipment for sleeve preparation and drawing.
16. Technology of preliminary and final sleeve stamping. Annealing.
17. Equipment for final sleeve stamping. Parker and MMSI methods. Pickling.
18. Technique for fitting single stamped metal crowns. Materials used for finishing dental restorations (grinding and polishing agents).
19. Grinding and polishing technology.
20. Cementation of crowns (temporary and permanent luting agents).
21. Indications for acrylic crowns. Clinical and laboratory stages of acrylic crown fabrication.
22. Tooth preparation for acrylic crowns. Impression taking. Shade selection. Model casting.
23. Technology of modeling the crown portion of the tooth stump for an acrylic crown. Acrylic materials for fixed prostheses.
24. Wax elimination. Flasking. Polymerization.
25. Removal of acrylic crowns from the flask, finishing, polishing, fitting, and cementation.
26. Clinical and laboratory stages of porcelain-fused-to-metal (PFM) crown fabrication.
27. Tooth preparation for a PFM crown. Technique for taking a two-layer impression.
28. Fabrication of a combined sectional model for a PFM bridge prosthesis.
29. Modeling waxes for PFM crowns. Fabrication of copings and collars.
30. Technology of coping modeling for PFM crowns.
31. Investment materials. Casting. Alloys used for metal-ceramic restorations.
32. Processing of the coping (sandblasting). Fitting the coping on the model and phantom. Shade selection for ceramic materials.
33. Application of ceramic material to the framework. Composition and properties of dental ceramics. Firing.
34. Fitting of a metal-ceramic crown on a phantom. Glazing, grinding, polishing, and delivery.
35. Cementation of a metal-ceramic crown.

36. Rationale for restoring teeth with fixed prostheses. Types of fixed bridge prosthesis designs.
37. Primary and auxiliary materials used in dentistry.

38. Clinical and laboratory stages of fabrication of stamped-soldered bridge prostheses.
39. Features of tooth preparation for stamped-soldered bridge prostheses. Impression materials. Impression taking and model casting.
40. Preliminary and final crown stamping. Materials used at this stage.
41. Fitting stamped steel crowns on abutment teeth, impression taking, and model casting.
42. Mounting models in an occluder. Wax modeling of the bridge pontic. Profile waxes.
43. Casting of the pontic section of a bridge prosthesis.
44. Processing of the pontic section, preparation for soldering. Soldering of bridge prosthesis components. Composition and properties of dental solders. Pickling.
45. Fitting the framework of a stamped-soldered bridge prosthesis on abutment teeth. Modeling of the veneer's labial surface. Polymerization.
46. Rationale for fabrication of acrylic bridge prostheses and veneered crowns. Clinical and laboratory stages.
47. Features of fabrication of stamped-soldered bridge prostheses with various abutment elements.
48. Rationale for fabrication of fixed metal-ceramic bridge prostheses. Clinical and laboratory stages of fabrication.
49. Tooth preparation for a metal-ceramic bridge prosthesis. Impression materials: composition and properties. Impression taking.
50. Sectional combined model.
51. Modeling of the framework for a metal-ceramic bridge prosthesis.
52. Fabrication of temporary crowns for abutment teeth. Profile waxes.
53. Application of porcelain mass to the framework of a metal-ceramic bridge prosthesis. Firing schedule.
54. Dental porcelain: composition and properties.
55. Fitting a ceramic-veneered bridge prosthesis on abutment teeth. Glazing. Cementation of a metal-ceramic bridge prosthesis.
56. Bioglass-ceramics. Composition and properties.
57. Polyceramic + fiberglass systems. Fabrication of prostheses from dental porcelain.
58. Technology of fabrication of bridge prostheses of various designs.
59. Removable partial denture: components and stages of fabrication.
60. Taking complete anatomical impressions of the maxilla and mandible. Casting gypsum models.
61. Marking the borders of a removable partial denture on the model. Fabrication of wax bases with occlusal rims.
62. Determination and registration of centric jaw relation. Mounting models in an occluder.
63. Retention devices for removable partial dentures. Clasps: types and placement in removable partial dentures.
64. Technology of fabrication of a single-arm wrought wire clasp.
65. Selection and arrangement of artificial teeth in a removable partial denture on an artificial gingiva and by direct adaptation.
66. Try-in of the removable partial denture framework in the oral cavity on a phantom. Final modeling of the wax denture.
67. Flasking models with the wax base and artificial teeth.
68. Wax elimination. Denture base molding. Polymerization.
69. Removal of the denture from the flask, finishing, grinding, and polishing. Fitting the removable partial denture in the oral cavity on a phantom. Denture adjustment.
70. Cast partial denture: components, their location on the jaw, indications, significance, and characteristics.

71. Clinical and laboratory stages of fabrication. Casting a combined diagnostic model using super-hard dental stone and regular dental stone.
72. Surveying. Structure of the dental surveyor. Functions of its components.
73. Methods of surveying.
74. Designing the framework of a cast partial denture on a gypsum model. Ney clasp system.
75. Fabrication of a refractory model.
76. Wax pattern fabrication of a cast partial denture framework using standard wax components.
77. Preparation of the wax framework pattern for casting. Casting procedure.
78. Finishing, grinding, and polishing of the cast partial denture framework. Fitting the framework in the oral cavity on a phantom.
79. Mounting models in an occluder. Arrangement of artificial teeth.
80. Try-in of the cast partial denture framework in the oral cavity on a phantom.
81. Fitting the completed cast partial denture in the oral cavity on a phantom.
82. Fabrication of attachment-retained cast partial dentures.
83. Anatomy of the edentulous maxilla. Obtaining a complete anatomical impression of the maxilla.
84. Anatomy of the edentulous mandible. Obtaining a complete anatomical impression of the mandible.
85. Casting jaw models in gypsum. Fabrication of custom trays from self-curing acrylic resin (Protacryl).
86. Fabrication of custom trays for the maxilla and mandible using the laboratory method.
87. Fitting a custom tray in the oral cavity on a phantom and obtaining a functional impression using corrective impression materials.
88. Fitting the maxillary custom tray using Herbst functional tests and obtaining a functional impression with corrective materials.
89. Fitting the mandibular custom tray using Herbst functional tests and obtaining a functional impression with corrective materials.
90. Casting maxillary and mandibular models and outlining denture base borders. Relief of bony prominences and exostoses.
91. Fabrication of occlusal rims with wax bases for the maxilla and mandible. Incorporation of metal wire reinforcement into the base.
92. Determination of centric jaw relation in cases of an unfixed vertical dimension of occlusion.
93. Mounting models in an occluder or articulator. Selection of artificial teeth.
94. Arrangement of teeth on a glass plate (Vasilyev method).
95. Arrangement of maxillary and mandibular teeth according to the spherical theory.
96. Arrangement of artificial teeth in prognathic relationships of the alveolar processes.
97. Arrangement of artificial teeth in progenic relationships of the alveolar processes.
98. Try-in of maxillary and mandibular denture constructions on a phantom. Final modeling of the wax denture bases.
99. Reverse flasking of models with wax bases and artificial teeth. Wax elimination.
100. Fabrication of a complete removable denture with a two-layer denture base. Technique for applying a resilient lining material.

Fundamentals of Oral Surgery

1. Organization of the work of an oral surgery department.
2. Concepts of asepsis and antisepsis in oral surgical procedures.

3. Basic methods of patient examination in oral surgery clinics.
4. Additional methods of patient examination in oral surgery clinics. Record keeping and performance analysis.
5. General anesthesia in dentistry. Indications, contraindications, patient preparation, and types of anesthesia.
6. Anesthesia: concept, anesthetic agents, and specific features of anesthesia in dentistry.
7. Local anesthesia in oral surgery. Concept, indications, contraindications. Classification of local anesthetics. Modern agents used for local anesthesia. Mechanism of action. Selection according to the clinical situation.
8. Topographic anatomy of the second branch of the trigeminal nerve.
9. Topographic anatomy of the third branch of the trigeminal nerve.
10. Infrazygomatic and orbital approaches to anesthesia of the second branch of the trigeminal nerve. Target area, anatomical landmarks, technique, and area of anesthesia.
11. Pterygomaxillary and palatal approaches to anesthesia of the second branch of the trigeminal nerve. Target area, anatomical landmarks, technique, and area of anesthesia.
12. Technique of anesthesia of the third branch of the trigeminal nerve according to Weisblat.
13. Bershe and Bershe-Dubov anesthesia techniques. Target area, anatomical landmarks, technique, and area of anesthesia.
14. General complications of local anesthesia. Syncope: pathogenesis and emergency management.
15. General complications of local anesthesia. Collapse: pathogenesis and emergency management.
16. General complications during anesthesia. Anaphylactic shock: types, pathogenesis, and emergency management.
17. Local complications during tooth extraction. Causes, treatment, and prevention.
18. Local complications after tooth extraction. Causes, treatment, and prevention.
19. Disorders of tooth eruption. Impaction and partial impaction: concept, clinical features, diagnosis, and treatment.
20. Disorders of tooth eruption. Tooth displacement (dystopia): clinical features, diagnosis, and treatment.
21. Difficult eruption of the wisdom tooth. Clinical features, diagnosis, treatment, and complications associated with difficult eruption of the mandibular third molar.
22. Instruments for tooth extraction. Types, design features, and indications.
23. Indications and contraindications for permanent tooth extraction. Preparation for tooth extraction surgery.
24. Tooth extraction using forceps. Principles and techniques of tooth extraction.
25. Surgical (atypical) extraction of teeth and tooth roots: indications, stages, instruments required, and complications.
26. Surgical methods for the treatment of periodontal diseases and their role in comprehensive therapy. Curettage: types, indications, and technique.
27. Surgical treatment of periodontal diseases. Gingivotomy and gingivectomy: indications and technique.
28. Surgical treatment of periodontal diseases. Widman–Neumann flap operation: indications and technique.
29. Surgical treatment of periodontal diseases. Vestibuloplasty: indications and technique.
30. Odontogenic inflammatory diseases. Classification, etiology, pathogenesis, and pathways of spread of odontogenic infection.

31. Chronic periodontitis. Etiology, pathogenesis, classification, clinical features, diagnosis, differential diagnosis, treatment methods, and indications for surgical treatment.
32. Exacerbation of chronic periodontitis. Etiology, pathogenesis, clinical features, diagnosis, differential diagnosis, treatment methods, and indications for surgical treatment.
33. Root amputation. Definition, indications, contraindications, surgical technique, stages, and outcomes.
34. Hemisection. Definition, indications, contraindications, surgical technique, stages, and outcomes.
35. Tooth replantation. Definition, indications, contraindications, surgical technique, stages, and outcomes.
36. Apicoectomy (root-end resection). Indications, contraindications, surgical technique, complications, and outcomes.
37. Acute periostitis of the jaw. Pathogenesis, clinical features, differential diagnosis, diagnosis, treatment, and outcomes.
38. Chronic odontogenic periostitis of the jaw. Clinical features, diagnosis, differential diagnosis, and treatment.
39. Acute odontogenic maxillary sinusitis. Etiology, clinical features, diagnosis, differential diagnosis, and treatment.
40. Chronic odontogenic maxillary sinusitis. Etiology, clinical features, diagnosis, and differential diagnosis.
41. Caldwell–Luc operation. Indications and surgical technique.
42. Perforation of the maxillary sinus floor and oroantral fistula. Clinical features, diagnosis, management, surgical closure methods, and prevention of fistula formation and perforation-related odontogenic sinusitis.
43. Acute serous lymphadenitis. Etiology, pathogenesis, clinical features, diagnosis, and treatment.
44. Acute suppurative lymphadenitis. Etiology, pathogenesis, clinical features, diagnosis, and treatment.
45. Adenophlegmon. Etiology, clinical features, diagnosis, and treatment.
46. Chronic lymphadenitis. Etiology, clinical features, diagnosis, differential diagnosis, and treatment.
47. Soft tissue injuries of the face. Contusions and abrasions: etiology, pathogenesis, clinical features, diagnosis, and treatment.
48. Soft tissue injuries of the face. Wounds: types, etiology, and characteristics.
49. Clinical features of soft tissue wounds depending on their location.
50. Primary surgical treatment of maxillofacial wounds. Specific features and technique.
51. Tooth luxation. Etiology, clinical features, diagnosis, and treatment.
52. Tooth fracture. Etiology, clinical features, diagnosis, and treatment.
53. Mandibular dislocation. Types, clinical features, and methods of reduction.
54. Fracture of the alveolar process. Mechanism of injury, clinical features, diagnosis, differential diagnosis, and treatment.

3.8. Entrance Examination Results

Minimum passing score: 90 points;
Maximum score: 100 points;
Examination duration: 1 hour 40 minutes (1 minute per test question);
Total number of questions: 100;
For each question: 1 correct answer;
Each correct answer is worth: 1 point.

Appendix 1

To the Chairperson of the Board – Rector of
NCJSC “Astana Medical University”

_____

From _____

full name

_____

residential address

_____

mobile phone number

_____

Home phone number

E-mail: _____

_____

ID number, date of issue, issuing authority

APPLICATION

I hereby request permission to take the entrance examination in the form of _____ for the educational program _____.

The following documents are attached to this application:

1) Educational document (original);
2) Six photographs sized 3 × 4 cm;
3) Identity document (original and copy);
4) Medical certificate in Form 075/u;
5) Extract confirming completion of the psychometric examination;
6) Employment record book.
7) Results of the Independent Competency Assessment (ICA).

I hereby give my consent to the collection, processing, and dissemination of personal information related to the examination results.

Signature/Date _____

Appendix 2

To the Chairperson of the Appeals Commission
_____

Full name of the applicant _____
IIN (Individual Identification Number) _____

APPEAL APPLICATION

I hereby request a review of the results of my special/entrance examination, as the test question _____
_____
(specify the reason for submitting the appeal — e.g., incorrect wording of the question, etc.).

Date of announcement of the special examination results _____

/_____/_____/_____/
Signature Full name Date