

Postgraduate Residency Program

PROSPECTUS



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1. Introduction

Chartered in 1998 by the Government of People's Republic of Bangladesh as the Country's first Medical University, Bangabandhu Sheikh Mujib Medical University (BSMMU) is committed to excellence in postgraduate medical education, research and healthcare services through comprehensive team-based approach utilizing modern evidence-based scientific knowledge and technology. The University bears the heritage of the Institute of Postgraduate Medicine and Research (IPGM&R), which was established in 1965 and which made a glorious contribution to the development of postgraduate medical **and dental** education, healthcare and research in the country.

There have been tremendous changes in every sphere of human civilization through the years. Health system has also evolved significantly. Health needs and expectations of people are also changing. Now-a-days, people expect of a 'good specialist', not only a **medical or Basic medical science expert** but also one who possesses the characteristics of an expert **communicator (for patients and their attendants or for students), collaborator, manager, health advocate, scholar (plus researcher), and professional**. In order to adjust to these growing demands, medical **and dental** education and training have also been moving forward worldwide and fast. Responding to this global trend, the University has introduced a postgraduate Residency Program. The view is to develop competent specialist human resources for meeting national and international needs by imparting postgraduate medical **and dental** education and training in clinical and basic medical sciences. It also aims at promoting research appropriate to the development of healthcare services as p/er national needs as well as for the service of the mankind as a whole.

2. Goals and Objectives of the Residency Program of the University

The goal of the Program is to provide organized education and training for facilitating the residents' professional and personal development as specialist service-providers in terms of investigation, disease management, teaching / training / assessing and

research in the fields of clinical and basic medical sciences. This would, in the long run, ensure safe, holistic humane and appropriate service to the people.

For achieving this goal, the program has set the objectives of providing supervised educational experiences so that after completing the program, the residents should be able to:

- Master the specific competencies in terms of knowledge, skills and attitudes as appropriate for future practices in the specialty in a variety of settings showing increasing independence and responsibility.
- Demonstrate competencies in generic and medical humanity aspects
- Demonstrate habits of life-long learning

3. Basics of the Residency Program

3.1 The Essence of the Program

The postgraduate medical **and dental** education and training are important segments along the continuum of learning in medicine in which doctors go on to develop their competencies and capabilities following the completion of their basic medical **or dental** qualification. A key contemporary trend in postgraduate medical **and dental** education is a move to a model in which the emphasis has changed to focus on the *product* and the *expected learning outcomes*. A competency-based, outcome-oriented curriculum has become, to a large extent, the standard in postgraduate medical **and dental** education. Competencies are defined as the ability to use knowledge, skills and appropriate attitudes and personal qualities to solve clinical and basic medical science problems in a professional, ethical and proficient way for optimal academic patient and societal outcomes.

The Residency Program of the University is a competency-based program emphasizing on integration and contextualization in the curriculum. The program is of 5 years duration for the clinical faculties leading to the degree of Doctor of Medicine (MD) or

Master of Surgery (MS), For the Faculty of Basic Medical Sciences, it is of 2 to 4 years duration leading to the degree of Doctor of Medicine (MD), Master of Surgery (MS) or Master of Philosophy (MPhil) in different disciplines. Details of these programs are elaborated in Sections 4 and 5 of this document covering the clinical faculties and the Faculty of Basic Medical Sciences respectively.

All candidates joining the residency program work as full-time residents during the period of training and are given full-time responsibilities and assignments as well as the scope for participation in all relevant facets of educational process of the University.

3.2. Academic year

The program is divided into two phases. The period from the first day of March to the last day of February of the next year is regarded as 'one academic year'. Compiling Phase completion reports, holding Phase Final and Exit examinations and publishing results are completed by the second week of February of each academic year.

3.3. Admission Requirements

A. Pre-requisites for admission in Phase-A

- a) MBBS / BDS / equivalent degree as recognized by BMDC
- b) One year of internship / in-service training
- c) Completion of one year after internship / in-service training
- d) BMDC registration

MSc degree-holders from IPGMR in Anatomy, Pharmacology or Physiology (as recognized by BMDC) can apply for the residency programs in respective disciplines only.

Prerequisites 'b', 'c' and 'd' are not applicable to these MSc degree-holders.

B. The applicants should not be above 45 years of age on enrolment.

c.Candidates for residency in the clinical faculties have to sit for a written MCQ-based admission test on Basic Medical Sciences (Anatomy, Pharmacology,

Physiology, Biochemistry, Pathology, Microbiology etc.) and faculty-based topics. In case of the Basic Medical Sciences residency programs, the questions are selected from the subjects taught in the undergraduate medical courses.

Exam time: 180 minutes. Total marks: 200.

D. Direct enrolment of doctors into Phase- B of a residency program:

Candidates with FCPS / MD / MS in major disciplines can be enrolled directly into Phase- B of the clinical MD / MS residency program of respective sub-specialties in BSMMU. However, such candidates are not eligible for the Phase- B of the same discipline in which the above qualification was obtained.

Thus, candidates having FCPS / MD in Medicine can be enrolled in Phase- B of the MD residency program of any of the following disciplines- Neuromedicine, Cardiology, Gastroenterology, or similar programs as selected by the Academic Council depending on the availability of seats.

Similarly, candidates having FCPS / MD in Pediatrics can be enrolled in the Phase- B of the MD residency program of any of the following disciplines: Pediatric Gastroenterology, Pediatric Hemato-oncology, Pediatric Nephrology, Neonatology or similar programs as selected by the Academic Council depending on the availability of seats.

Candidates having FCPS / MS Surgery can only be enrolled in Phase- B of the MS residency program in any of the following disciplines: Neuro-surgery, Pediatric Surgery, Urology, Colorectal surgery, Cardio-Vascular & Thoracic Surgery or similar programs as selected by the Academic Council depending on the availability of seats.

E. Admission eligibility for foreign candidates:

- i) Foreign candidates have to collect an NOC ('No Objection Certificate') from their respective missions / embassies in Bangladesh and other relevant organizations and from WHO.
- ii) Their MBBS / BDS / equivalent certificate / degree requires recognition of equivalence from Bangladesh Medical & Dental Council (BMDC).
- iii) They must have an IELTS score of minimum 6.5 (relaxable)
- iv) They must submit their one-year Internship certificate.
- v) One year has to be passed after their internship.
- vi) Their training certificates (if any) obtained from foreign institutions shall have to be acceptable to the University.
- vii) The candidate's age should not be over 45 years at the time of enrolment.
- viii) Eligible candidates have to satisfy an interview board approved by the University.

3.4. Teaching and Learning

A good learning environment is fostered to ensure residents' learning opportunities. This includes environment for self-directed learning as well as recognizing the learning potential in all aspects of day-to-day work. The major part of learning in the residency program occurs as experiential on-the-job learning and self-directed learning. **Positive interactions with peers, faculties and support staff are fostered.**

According to the sequence set in the respective curriculum, residents are placed for specific time periods in the parent department and in other relevant departments in single or composite 'Block's for specific learning experiences. The learning opportunities that are utilized as appropriate include: large group learning sessions, small group learning sessions including training sessions on practical procedures, bedside and laboratory teaching, grand rounds, ambulatory care teaching, community-based learning including learning in physician's practice-settings, learning through teaching

and assessment activities by the residents, case presentations, seminars and journal clubs, assignments like reflective essay writing, drawing-labeling and lab activities, self-study etc. However, large group sessions make up a comparatively small part the program.

3.5. Supervision and Training Monitoring

Course Supervisors in the parent department and other relevant departments are responsible for supervision of learning throughout the program to ensure patient and / or laboratory safety, service delivery as well as the progress of the resident with learning and performance. They set the lesson plans based on the curriculum, undertake appraisal, review progress against the curriculum, give feedback on both formative and summative assessments as well as sign the logbook and portfolio. The residents are made aware of their limitations and are encouraged to seek advice and receive help at all times.

The Course Coordinator of each department coordinates all training and academic activities of the program in collaboration with the **Course Manager**. The **Course Director** of each faculty directs, guides and manages curricular activities under his / her jurisdiction and is the person to be reported to for all events and performances of the residents and the supervisors.

3.6. Assessment

Formative assessments including on-the-job assessments in workplace settings, in classroom and exam settings as well as global assessment of different competencies are carried out. Summative assessments follow. Multiple methods of assessment are applied. These methods are made as structured and objective as feasible by using specific customized test matrices, instructions, checklists, rating scales etc. A criterion-referenced approach is taken in different aspects of assessment.

3.7. Residency Agreement

Residents must abide by legislations governing the residency program of the University. Every resident must sign a 'Residency Agreement' accepting the legislations of the program at the time of enrolment.

3.8. Stipend and Benefits

A stipend, as determined by the University from time to time, is available to those residents who are not employed by the government or by any non-governmental organization.

4. Residency Programs of the Faculties of Medicine, Surgery and Dentistry

(MD: Doctor of Medicine, MS: Master of Surgery)

4.1. List of programs of the Faculty of Medicine:

	Discipline	Program		Discipline	Program
1.	Cardiology	MD	11.	Oncology	MD
2.	Dermatology	MD	12.	Pediatrics	MD
3.	Endocrinology	MD	13.	Pediatric Gastroenterology	MD
4.	Gastroenterology	MD	14.	Pediatric Hematology and Oncology	MD
5.	Hematology	MD	15.	Pediatric Nephrology	MD
6.	Hepatology	MD	16.	Physical Medicine	MD
7.	Internal Medicine	MD	17.	Psychiatry	MD
8.	Neonatology	MD	18.	Rheumatology	MD
9.	Nephrology	MD	19.	Transfusion Medicine	MD
10.	Neurology	MD			

4.2. List of programs of the Faculty of Surgery :

	Discipline	Program		Discipline	Program
1.	Anesthesiology	MS	7.	Orthopedic Surgery	MS
2.	Cardiovascular & Thoracic Surgery	MS	8.	Otolaryngology	MS
3.	Community Ophthalmology	MS	9.	Pediatric Surgery	MD
4.	Neurosurgery	MS	10.	Radiology and Imaging	MD
5.	Obstetrics & Gynaecology	MS	11.	Surgery	MS
6.	Ophthalmology	MS	12.	Urology	MS

4.3. List of programs of the Faculty of Dentistry:

	Discipline	Program		Discipline	Program
1.	Conservative Dentistry and Endodontics	MS	3.	Orthodontics	MS
2.	Oral and Maxillo-Facial Surgery	MS	4.	Prosthodontics	MS

4.4. Program outline

The program comprises two phases: Phase- A and Phase- B

Residency Program in clinical Faculties

Selection	Phase- A Exam	Phase- B Exam (Exit Exam)
▼	▼	▼
Phase – A (2 years)	Phase – B (3 years)	
Core Specialty Training Broad-based, multi-specialty foundation for advanced training	Advanced Specialty Training In-depth specialty/ specific training	
Generic skills / Medical Humanities		

4.4.1. Phase A: Core Specialty Training (2 years):

- Provides foundation training in broad specialties.
- Includes educational and clinical training components in relevant fields of Medicine, Surgery and other Medical and Life Sciences.
- Educational program :
 - Broad-based Clinical Sciences
 - Customized Basic Medical Sciences with meaningful integration
- Clinical training program :
 - The training period of Phase A are divided into Blocks, three months each
 - Disciplines or services that need shorter periods of placement are accommodated in one or more a Composite Blocks.

4.4.2. Phase B: Advanced Specialty Training (3 years)

- In-depth specialty-specific educational and training programs in this phase make the residents competent and prepare them for the specialty qualification.
- Educational program:
 - Specialty-specific clinical sciences
 - Customized Applied Basic Medical Sciences with meaningful integration
 - Research Methodology and Biostatistics and Medical Education

Clinical training program:

- Training period may be divided into blocks of 3 to 6 months duration (as per requirements of the disciplines).

4.4.3. Generic Skills and Medical Humanities Curriculum:

The Generic Skills Curriculum outlines the broad concepts, related learning objectives and associated theoretical knowledge, practical skills and attitudes required by, and commonly utilized by, all physicians, surgeons and dentists regardless of their specialty. It focuses on the medical humanities and covers the following curricular elements for all residents: **ethical issues, socio-economic issues, medico-legal issues, cost containment issues, communication skills, and skills of critical review of literature.** This curriculum spans Phase A and Phase B of the residency program. All teaching, learning and assessment associated with the Generic Skills Curriculum are undertaken in the context of a resident's everyday clinical practice and accommodate discipline-specific contexts and practice as required.

4.5. Assessment and Certification

The assessment for certification of the MD/MS degree of the University is comprehensive, integrated and phase-centered attempting to identify attributes expected of specialists for independent practice and life long learning. It keeps strict reference to the components, the contents, the competencies and the criteria laid down

in the curriculum. Assessment includes both **Formative Assessment and Summative (Phase final) Examinations.**

- Formative assessment is conducted throughout the training phases.
 - **Continuous (day-to-day) formative assessment** in classroom and workplace settings provides guide to a resident's learning and a faculty's teaching / learning strategies to ensure formative lesson / training outcomes.
 - **Periodic formative assessment** is quasi-formal and is directed to assessing the outcome of a block placement or academic module completion. It is held at the end of **Block Placement and Academic Module Completion**. The contents of such examinations include **Block Units** of the Training Curriculum and **Module Units** of the Academic Curriculum.

- End of Block Assessment (EBA):
 - End of Block Assessment (EBA) is undertaken after completion of each training block, assessing knowledge, skills and attitude of the residents.
 - Components of EBA are written examination, clinical examination (OSCE/OSPE/Mini-CEX), medical record review, logbook review and portfolio assessment.
 - Incomplete block training must be satisfactorily completed by undergoing further training for the block to be eligible for appearing in the next phase complete examination.

- Formative assessment for the course contents of Research Methodology and Biostatistics and Medical Education is done in the first year of Phase B. Residents getting unsatisfactory grade must achieve satisfactory grade by appearing the re-evaluation examination before sitting for the Phase B Final.

- Summative assessment is carried out after completion of each phase and is called Phase Finals. The Phase- A Final can be undertaken only after satisfactory completion of Phase A. The Phase- B Final can be undertaken only

after passing the Phase- A Final and after successful completion of Phase- B. The Phase- B Final is considered as the exit examination.

- The phase final examinations have the following components: written, clinical / practical, oral, logbook evaluation and portfolio assessment.
 - Each Resident must complete a research work culminating in a thesis. The research and thesis is assessed in the Phase- B Final.
 - The phase final examinations are held twice in a year, commencing from 16 January and 16 July each year.
- The phase final examinations are held centrally by the Office of the Controller of Examinations under the directives of the Offices of the Deans of the respective Faculties. Certificates and mark sheets are issued by the Office of the Controller of Examinations.

5. Residency Programs of the Faculty of Basic Medical Sciences

5.1. List of programs of the Faculty of Dentistry:

(MD: Doctor of Medicine, MS: Master of Surgery, MPhil: Master of Philosophy)

	Discipline	Program	Duration	Distribution of Phases
1.	Biochemistry	MD	3 Years	Phase- A, 2 years Phase- B, 1 Year
2.	Microbiology	MD	3 Years	Phase- A, 2 years Phase- B, 1 Year
3.	Pathology	MD	4 Years	Phase- A, 2 years Phase- B, 2 Years

	Discipline	Program	Duration	Distribution of Phases
4.	Pharmacology	MD	3 Years	Phase- A: 1½ years Phase- B: 1½ Years
5.	Physiology	MD	3 Years	Phase- A: 2 years Phase- B: 1 Year
6.	Virology	MD	3 Years	Phase- A: 2 years Phase- B: 1 Year
7.	Anatomy	MS	3 Years	Phase- A: 2 years Phase- B: 1 Year
8.	Clinical Pathology	M Phil	2 Years	Phase- A: 1 year Phase- B: 1 Year

5.2. Program outline

Phase- A of the residency programs of the Faculty of Basic Medical Sciences deals with the educational and training course contents of individual disciplines. Some 'generic issues and subjects' important for all disciplines are also covered in this phase, These issues and subjects, which do not comprise individual blocks by themselves, include common induction topics as well as Medical Education and Research Methodology and Biostatistics. This phase is divided into Part- 1 and Part- 2 or Year-1 and Year-2 excepting in MD Pharmacology. Each Part comprises Blocks and/or Modules.

In **Phase- B**, every resident has to carry out a research work that culminates in a thesis. The MD Pathology residents also go through some 'Block's dealing with educational and training programs in this phase.

Every discipline has a detailed curriculum for its residency program. Residents of each program are guided and supervised by the Supervisors and Course Coordinators and have their logbook and development portfolio completed.

In addition to the educational and training programs, Phase- B residents are involved in departmental administrative, academic (including teaching), laboratory reporting and other activities as assigned to them by the department from time to time. All these activities are supervised and monitored, and documentation and assessment of relevant activities are carried out using structured formats.

5.3. Assessment and Certification

Formative assessments of knowledge, skills and attitude of residents are made throughout the course in classroom and workplace settings. Periodic formative assessments are also done in End of Block Examinations. A logbook of each resident's activities is maintained which also carries the records of global rating attained by the resident through multifaceted evaluation. In addition, each resident produces a personal portfolio comprising relevant documents of her / his achievements and exposures during the course.

Summative assessment examinations are held at the end of each Part (or at the end of Phase- A in case of MD Pharmacology). These exams are called 'Part Finals' and 'Phase Finals' respectively. In case of MD Pathology, a Phase final examinations also applies to Phase- B. The Residency program of each discipline ends with a Thesis Defense and Comprehensive Oral Examination.

Assessments regarding the generic issues, Medical Education, Research Methodology and Biostatistics are made through formative examinations only. Residents have to get a satisfactory grade in these formative assessments before sitting for the summative exams.

Summative exams are held every six months so that residents who cannot qualify in one can avail the next. There is a “carry on” system from Part- 1 to Part- 2, but not from Phase- A to Phase- B.

Formative assessments throughout the course are carried out by the departmental faculty in specified formats using specific checklists and rating scales. The End of Block Exams are conducted by the respective Departmental Examination Committees under the supervision of the Course Director following the directives of the Dean of the faculty. The summative assessment exams (Part Finals and Phase Finals) are arranged centrally by the Office of the Controller of Examinations under the directives of the Office of the Dean. Certificates and mark sheets for the summative are issued by the Office of the Controller of Examinations. The End of Block Exams as well as the Part and Phase Finals use written, oral and practical (including OSPE) assessment methods.