

Lahore Medical & Dental College



Curricular Organization

4.1 Purpose and scope

The Operative Dentistry course at Lahore Medical and Dental College (LMDC) is structured for first-, second-, third- and final-year BDS students. The course covers the diagnosis, prevention, treatment and prognosis of diseases or trauma affecting teeth, together with restorative dentistry, endodontics, and crown and bridge work.

4.2 Sequence and progression

The curriculum progresses from introductory learning in first year to preclinical practice and supervised patient care in the later BDS years. First-year teaching introduces operative dentistry, dental structures, caries and prevention. Second- and third-year teaching develops the principles of tooth preparation, restorative materials, instrumentation and phantom-head exercises through lectures and departmental rotations.

Final-year teaching brings together restorative dentistry, endodontics, and crown and bridge work. Scheduled lectures, clinical rotations, demonstrations, tutorials and skills-laboratory sessions enable students to apply theory to clinical cases. Preclinical practice prepares students for supervised treatment, with performance recorded in the preclinical and clinical quota book.

4.3 Integration and teaching methods

Teaching links operative dentistry with dental anatomy, histology, physiology, occlusion and dental materials. Clinical learning connects caries, pulpal and periapical disease, periodontal considerations and restoration of function. Paediatric topics include developmental defects and dental trauma in primary and permanent teeth.

Teaching combines interactive lectures, small-group discussions, book reading, student presentations, clinical demonstrations, practical exercises and digital learning resources. These methods support active participation, independent preparation and the application of scientific knowledge to patient care.

4.4 Organisation of learning

Year-wise learning outcomes, schedules, rotation groups, faculty allocations and assessment formats structure course delivery. Students attend assigned sessions and follow faculty instructions and cross-infection control protocols. Clinical assessment includes positioning, chair-side manners and proficiency.

STANDARD 5: EDUCATIONAL CONTENTS

5.1 Core educational scope

Educational content covers restorative dentistry, endodontics, and crown and bridge work, supported by preventive care, diagnosis, treatment planning and professional practice.

5.2 Restorative dentistry and prevention

Students study dental caries, its aetiology and management, preventive measures, fissure sealants and fluoride application. Teaching includes hand and rotary instruments, principles of tooth preparation, isolation, pulp protection, liners and bases, and selection and manipulation of restorative materials.

The restorative component includes amalgam, composite and glass ionomer restorations; adhesion to enamel and dentine; finishing and polishing; assessment, repair and replacement of restorations; complex restorations; and restoration of endodontically treated teeth. Non-carious tooth-surface loss, dentine hypersensitivity, cracked teeth, bleaching, microabrasion, veneers, inlays and onlays are also addressed.

5.3 Endodontics

Content includes root canal anatomy, pulpal and periapical diagnosis, indications and contraindications for root canal treatment, instrument identification, rubber dam isolation, access cavity preparation, working-length determination, canal preparation, irrigation, obturation and radiographic interpretation.

Students also study endodontic emergencies and flare-ups, procedural accidents, retreatment, resorption, the endodontic–periodontal relationship and principles of endodontic surgery. Dental trauma teaching covers fractures and displacement injuries affecting primary and permanent teeth.

5.4 Crown and bridge work

Teaching includes patient assessment, abutment evaluation, treatment planning and principles of tooth preparation. Students learn the indications, limitations and preparation principles for metal, metal-ceramic, all-ceramic, partial-veneer, and post-and-core restorations.

Further content covers soft-tissue management, impression techniques, occlusal records, temporisation, crown try-in and cementation. Bridge design includes abutments, pontics, retainers, connectors and resin-bonded bridges, together with maintenance, recognition of failure and treatment planning for complications.

STANDARD 5: EDUCATIONAL CONTENTS

Practical learning and demonstration of achievement

5.5 Practical and clinical learning outcomes

By completion of the relevant teaching and supervised clinical experience, students should be able to take a dental history, perform an examination, interpret relevant radiographs, establish a diagnosis and formulate a treatment plan. They should select appropriate instruments and materials and explain the rationale for the proposed care.

Restorative skills include appropriate tooth preparation and placement of amalgam, composite and glass ionomer restorations; application of pulp-protection principles; and evaluation of the completed restoration. Endodontic skills include access preparation, working-length determination, canal preparation and obturation in the designated preclinical and supervised clinical setting. Crown and bridge skills include tooth preparation, impression taking, provisional restoration and evaluation of fit and occlusion.

5.6 Practical requirements and records

Preclinical exercises include Class I and Class II amalgam preparations, anterior and posterior composite restorations, glass ionomer mixing and rubber dam application. The final-year clinical quota includes 15 amalgam and 15 composite restorations, crown-preparation exercises, impression taking, temporary crowns, crown try-in and cementation, endodontic instrument identification, endoblock exercises and root canal treatment of an anterior tooth on a patient.

Students' work is recorded in the preclinical and clinical quota book. Clinical learning checklists distinguish activities performed and not performed, assessment results, feedback and confidence in performance. The checklists include evaluation by faculty and teaching assistants.

5.7 Assessment, feedback and learning resources

Assessment includes written tests, MCQs, SEQs, viva voce examinations, OSCE/TOACS formats, clinical tests, presentations, hands-on exercises and assignments. Midterm and send-up examinations consolidate learning; the send-up follows the university examination pattern. Internal assessment draws on written, practical and clinical performance.

The rotation clinical test includes a restoration and chair-side viva. Assessment considers history, diagnosis, treatment planning, chair-side manners, cross-infection control, patient and operator positioning, and clinical proficiency. Formative feedback follows clinical testing, while tutorials and small-group discussion of written papers help students identify learning needs.

Recommended resources include Sturdevant's Art and Science of Operative Dentistry, Fundamentals of Operative Dentistry, Endodontics: Principles and Practice, Harty's Endodontics in Clinical Practice, Contemporary Fixed Prosthodontics, Fundamentals of Fixed Prosthodontics, and recommended paediatric dentistry texts.

STANDARD 6: CURRICULAR MANAGEMENT

Lahore Medical and Dental College
Department of Operative Dentistry | BDS Programme

6.1 Faculty organisation

The Professor and Head of the Department serves as course director, supported by faculty contributors and facilitators for specific teaching areas. Clinical group allocations identify faculty in charge of restorative dentistry, endodontics, and crown and bridge work, an academic coordinator, and postgraduate staff assigned to student groups.

6.2 Teaching schedules and student groups

Year-wise schedules, learning outcomes, faculty allocations and rotations organise lectures, demonstrations, practical exercises, small-group discussions and clinical activities. The curriculum includes separate restorative, endodontic, and crown and bridge learning objectives and practical schedules.

Students are allocated to groups for laboratory and clinical sessions. They are instructed to report at the scheduled time, attend in their respective groups, follow teaching-faculty instructions and comply with cross-infection control protocols. Attendance is compulsory, and shortages are dealt with according to college rules and regulations.

6.3 Assessment arrangements

The academic assessment policy includes monthly written assessments, midterm examinations and a send-up examination. Midterm coverage is based on the modules taught. The final-year Operative Dentistry class test is conducted monthly, with topics notified and learning resources identified. Senior faculty conduct viva voce examinations during the session.

Clinical tests are conducted during the final-year departmental rotation and are followed by formative feedback. The send-up examination covers the complete Operative Dentistry course and follows the university examination pattern. Internal assessment incorporates written and clinical tests, presentations, hands-on exercises, assignments and credits.

6.4 Learning records and feedback

Clinical and preclinical work is recorded in the quota book. Learning checklists document whether activities have been performed, the mode of assessment, evaluation and student confidence. Clinical-test results and feedback are provided after the assessment.

Students and parents receive daily attendance reports and regular academic-performance reports. Results are uploaded to the e-portal and communicated to students and parents. Individual academic feedback is given during tutorials; MCQ and SEQ papers are discussed in small groups. Parents of students experiencing academic difficulty are contacted through parent-teacher meetings.