

Department of Prosthodontics including crown and Bridge

Pre-Clinical Curriculum according to DCI and RGUHS

PG Pre Clinical Curriculum

D. Referrals

The bench work should be completed before the start of clinical work during the first year of the MDS Course

I. Complete dentures

1. Arrangements on adjustable articulator for
 - Class I
 - Class II
 - Class III
2. Various face bow transfers to adjustable articulators
3. Processing of characterized anatomical dentures

II. Removable partial dentures

1. Design for Kennedy's Classification (Survey, block out and design)
 - a. Class I
 - b. Class II
 - c. Class III
 - d. Class IV
2. Designing of various components of RPD
3. Wax pattern on refractory cast
 - a. Class I
 - b. Class II
 - c. Class III
 - d. Class IV
4. Casting and finishing of metal frameworks
5. Acrylisation on metal frameworks for Class I
Class III with modification

III. Fixed Partial Denture

1. Preparations on ivory teeth / natural teeth
 - FVC for metal
 - FVC for ceramic
 - Porcelain jacket crown
 - Acrylic jacket crown
 - PFM crown
 - 3/4th (canine, premolar and central)

- 7/8th posterior
 - Proximal half crown
- Inlay – Class I, II, V
 - Onlay – Pin ledged, pinhole
 - Laminates
2. Preparation of different die systems
 3. Fabrication of wax patterns by drop wax build up technique
 - Wax in increments to produce wax coping over dies of tooth preparations on substructures
 - Wax additive technique
 - 3-unit wax pattern (maxillary and Mandibular)
 - Full mouth
 4. Pontic designs in wax pattern
 - Ridge lap
 - Sanitary
 - Modified ridge lap
 - Modified sanitary
 - Spheroidal or conical
 5. Fabrication of metal frameworks
 - Full metal bridge for posterior (3 units)
 - Coping for anterior (3 unit)
 - Full metal with acrylic facing
 - Full metal with ceramic facing
 - Adhesive bridge for anteriors
 - Coping for metal margin ceramic crown
 - Pin ledge crown
 6. Fabrication of crowns
 - All ceramic crowns with characterisation
 - Metal ceramic crowns with characterisation
 - Full metal crown
 - Precious metal crown
 - Post and core
 7. Laminates
 - Composites with characterisation
 - Ceramic with characterisation
 - Acrylic
 8. Preparation for composites
 - Laminates
 - Crown
 - Inlay
 - Onlay
 - Class I
 - Class II
 - Class III
 - Class IV
 - Fractured anterior tooth
- IV. Maxillofacial prosthesis**
- Eye

- Ear
- Nose
- Face
- Body defects
 - Cranial
 - Maxillectomy
 - Hemimandibulectomy
 - Finger prosthesis
 - Guiding flange
 - Obturator

V. Implant supported prosthesis

1. Step by step procedures – **Surgical and** laboratory phase

VI. Other exercises

1. TMJ splints – stabilization appliances, maxillary and Mandibular repositioning appliances
2. Anterior disocclusion appliances
3. Chrome cobalt and acrylic resin stabilization appliances
4. Modification in accommodation of irregularities in dentures
5. Occlusal splints
6. Periodontal splints
7. Precision attachments – custom made
8. Over denture coping
9. Full mouth rehabilitation (by drop wax technique, ceramic build up)
10. TMJ appliances – stabilization appliances

ESSENTIAL SKILLS:

UG curriculum

I BDS PRE-CLINICAL PROSTHODONTICS AND CROWN AND BRIDGE

Practical: 100 Hours

1. Preparation of special trays
2. Preparation of temporary and permanent denture bases
3. Preparation of occlusion rims
4. Orientation of occlusion rims on articulator
5. Arrangement of teeth
6. Processing of complete dentures

II BDS

PRACTICAL EXERCISES 200 hours

1. Arrangement of teeth - Must Know
2. Surveying of partially edentulous models and preparing modified master cast - Desirable to Know
3. Preparing of wax patterns spruing, casting and finishing (in batches of students not more than 8)
- Desirable to Know
4. Preparation of plaster models of various preparation of teeth to receive retainers for FPD
- Desirable to Know
5. Prepare wax patterns for minimum of 3 unit FPD and investing, casting and porcelain facing (for Batch of 8 students) - Desirable to Know

IV BDS

Pre-Clinical Crown and Bridge – Central Incisor tooth preparation- 6nos

Department of Periodontology

PG Pre clinical Curriculum

S.NO	Year Wise	ACTIVITIES WORKS TO BE DONE
1.	Module 1 (First Year)	Orientation to the PG program Pre-clinical work (4 months) a. Dental 1. Practice of incisions and suturing techniques on the typodont models. 2. Fabrication of bite guards and splints. 3. Occlusal adjustment on the casts mounted on the

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		articulator 4. X-ray techniques and interpretation. 5. Local anaesthetic techniques. 6. Identification of Common Periodontal Instruments. 7. To learn science of Periodontal Instruments maintenance (Sharpening , Sterilization and Storage) 8. Concept of Biological width a. Typodont Exercise (i) Class II Filling with Band and Wedge Application (ii) Crown cuttings b. Medical 1. Basic diagnostic microbiology and immunology, collection and handling of sample and culture techniques. 2. Introduction to genetics, bioinformatics. 3. Basic understanding of cell biology and immunological diseases. Clinical work 1. Applied periodontal indices 10 cases 2. Scaling and root planning:- with Proper written history a. Manual 20 Cases
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UG Pre clinical Curriculum

TUTORIALS DURING CLINICAL POSTING;

1. Infection control
2. Periodontal instruments
3. Chair position and principles of instrumentation
4. Maintenance of instruments (sharpening)
5. Ultrasonic, Piezoelectric and sonic scaling – demonstration of technique
6. Diagnosis of periodontal disease and determination of prognosis
7. Radiographic interpretation and lab investigations
8. Motivation of patients- oral hygiene instructions

Students should be able to record a detailed periodontal case history, determine diagnosis, prognosis and plan treatment. Student should perform scaling, root planning local drug delivery and SPT. Shall be given demonstration of all periodontal surgical procedures.

DEMONSTRATIONS:

1. History taking and clinical examination of the patients
2. Recording different indices
3. Methods of using various scaling and surgical instruments
4. Polishing the teeth
5. Bacterial smear taking
6. Demonstration to patients about different oral hygiene aids

7. Surgical procedures- gingivectomy, gingivoplasty, and flap operations
8. Follow up procedures, post operative care and supervision

REQUIREMENTS:

Department of Oral and Maxillofacial Surgery

PG Pre clinical Curriculum

TEACHING / LEARNING ACTIVITIES:

The post graduate is expected to complete the following at the end of :

I Year

Study of applied basic sciences including practicals (wherever necessary), basic computer sciences, exodontia, seminars on basic topics, selection of dissertation topic, library assignment topic, attending O.T, ward rounds, Medical Record keeping, [REDACTED] preparation of synopsis and its submission within the six months after admission to the university as per calendar of events.

Department of conservative dentistry and endodontics

PG Pre clinical Curriculum

First Year

● Pre Clinical Work – Conservative and Endodontics

● Preclinical work on typhodont teeth

1. Class II amalgam cavities
 - a. Conservative preparation - 03
 - b. Conventional preparation - 03
2. Inlay cavity preparation including wax pattern and casting on premolars and molars – MO, DO, MOD - 02
3. Onlay preparation on molars including wax pattern and casting - 02
4. Full Crown

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- a. Anterior - 02
 - b. Posterior - 02
- (1 each to be processed)

● Pre Clinical work on natural teeth

1. Wax Carving of all permanent teeth
2. Inlay on molars and premolars MO, DO, and MOD including wax pattern and casting - 05
3. Amalgam cavity preparation
 - a. Conventional - 02
 - b. Conservative - 02
4. Complex amalgam on molar teeth - 02
5. Onlay on molars including wax pattern and casting - 02
(1 to be processed)
6. Full crown premolars and molars (metal, PFM & Ceramic) - 04
7. Full crown anterior (PFM, composite & Ceramic) - 03
8. Veneers anterior teeth - 02
9. Composite
 - a. Composite Filling (Class I,II,III & V) -05 (each)
 - b. Inlay (Class I & II) -02
 - c. Veneer -02
 - d. Diastema Closure -02
 - e. Angle Buildups -02

Endodontics:

1. Sectioning of all maxillary and mandibular teeth (vertical & horizontal).
2. Access cavity opening in relation to maxillary and mandibular permanent teeth.
3. Access cavity preparation, BMP and Obturation
 - a) Anterior (3 maxillary and 3 mandibular) - 06
 - Conventional prep - 02
 - Step back - 02
 - Crown down - 02
 - Obturation - 03
(2 lateral compaction and 1 thermoplasticized)
 - b) Premolar (2 upper and 2 lower) obturation 1 each - 04
 - c) Molar (3 upper – 2 first molars and 1 second molar
3 lower – 2 first molars and 1 second molar) obturation 1 each - 06
4. Post and core preparation and fabrication in relation to anterior and posterior teeth
 - a. Anterior 10 (Cast Post 5 and prefabricated post 5)
 - b. Posterior 05 (Cast Post 2 and prefabricated post 5)
5. Removable dies - 04

UG Pre clinical Curriculum:

7. PRE CLINICAL CONSERVATIVE DENTISTRY LABORATORY EXERCISES

1. Identification and study of handcutting instruments chisels, gingival margin trimmers, excavators and hatchet.
2. Identification and use of rotary cutting instruments in contra angle hand pieces burs (Micromotor)
3. Preparation class I and extended class I and class II and MOD's and class V amounting to 10 exercises in plaster models.
4. 10 exercises in mounted extracted teeth of following class I, 4 in number class I extended cavities 2, class II 4 in number and Class V 2 in number. Cavity preparation base application matrix and wedge placement restoration with amalgam.
5. Exercises on phantom head models which includes cavity preparation base and varnish application matrix and wedge placement followed by amalgam restoration.

Class I	5
Class I with extension	2
Class II	10
Class II Mods	2
Class V and III for glass ionomers	4
Class V for amalgam	2
6. Polishing of above restorations.
7. Demonstration of Class III and Class V cavity preparation. For composites on extracted tooth completing the restoration.
8. Polishing and finishing of the restoration of composites.
9. Identification and manipulation of varnish bases like Zinc Phosphate, Poly carboxylate, Glass Ionomers, Zinc Oxide, Eugenol cements.
10. Identification and manipulation of various matrices, tooth separators and materials like composites and modified glass ionomer cements.
11. Cast Restoration
 1. Preparation of Class II inlay cavity
 2. Fabrication of wax pattern
 3. Sprue for inner attachment investing
 4. Investing of wax pattern
 5. Finishing and cementing of class II inlay in extracted tooth.
12. Endodontics
 1. Identification of basic endodontic instruments
 2. Coronal access cavity preparation on extracted. Upper central incisors
 3. Determination of working length.
 4. Biomechanical preparation of root canal space of central incisor
 5. Obfuration of root canal spaces. Absens of coronal access cavity.
 6. Closure of access cavity

Department of orthodontics and dentofacial orthopedics

PG Pre clinical Curriculum

PRE – CLINICAL EXERCISES

(Should be completed within 3 months)

A general outline of the type of exercises is given here:

1. General Wire bending exercises to develop the manual dexterity.
2. Clasps, Bows and springs used in the removable appliances.
3. Soldering and welding exercises.
4. Fabrication of removable, habit breaking, mechanical and functional appliances, also all types of space maintainers and space regainers.
5. Bonwill Hawley Ideal arch preparation.
6. Construction of orthodontic models trimmed and polished.
7. Cephalometric tracing and various Analyses, also superimposition methods –
8. Fixed appliance typodont exercises.

- a) Training shall be imparted in one basic technique i.e. Standard Edgewise / Begg technique or its derivative / Straight wire etc., with adequate exposure to other techniques.
- b) Typodont exercise
 - Band making
 - Bracket positioning and placement
 - Different stages in treatment appropriate to technique taught
9. Clinical photography
10. Computerized imaging
11. Preparation of surgical splints, and splints for TMJ problems.
12. Handling of equipment like vacuum forming appliances and hydro solder etc.

Basic Pre-Clinical Exercise Work for the MDS Students:

1. Clasps:

Sl.No	Exercise	No.
1	¾ Clasps	1
2.	Triangular Clasps	1
3.	Adam's clasp	2
4.	Modification of Adam's – With Helix	2
5.	Southend Clasp	1

2. Labial Bows:

Sl.No.	Exercise	No.
1	Short labial bow (upper & lower)	1
2	Long labial bow (upper & lower)	1
3.	Split high labial bow	1

3. Springs:

Sl.No.	Exercise	No.
1	Double cantilever spring	1
2	Coffin spring	1
3	T spring	1

4. Appliances:

Sl.No.	Exercise	No.
1.	Hawley's retention appliance with anterior bite plane	1
2.	Upper Hawley's appliance with posterior bite plane	1
3.	Upper expansion appliance with expansion screw	1
4.	Habit breaking appliance with tongue crib	1
5.	Oral screen and double oral screen	1
6.	Lip bumper	1
7.	Splint for Bruxism	1
8.	Catalans appliance	1
9.	Activator	1
10.	Bionator	1
11.	Frankel-FR 1& 2 appliance	2
12.	Twin block	1
13.	Lingual arch	1
14.	TPA	1

15.	Quad helix	1
16.	Utility arches	1
17.	Pendulum appliance	1
18.	Canine Retractor(Marcotte & PG Spring)	1

5. Soldering exercises:

Sl.No.	Exercise	No.
1	Star/Comb/Christmas tree	1

6. Study model preparation:

7. Model analysis – Mixed and permanent Dentition:

8. Cephalometrics:

Sl.No.	Exercise
1	Lateral cephalogram to be traced in different colors and super imposed to see the accuracy of tracing
2	Vertical and Anterio-Posterior Cephalometric analysis
3	Soft tissue analysis – Holdaway and Burstone
4	Various superimposition methods

9. Basics of Clinical Photography Including Digital Photography:

10. Typodont exercises: Begg or P.E.A. method/Basic Edgewise:

Sl.No	Exercise
1	Teeth setting in Class-II division I malocclusion with maxillary anterior Proclination and mandibular anterior crowding
2	Band pinching, welding brackets and buccal tubes to the bands
3	Different Stages dependent on the applied technique

UG Curriculum

Definition, Need for retention, Causes of relapse, Methods of retention, Different types of retention devices, Duration of retention, Theories of retention.

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- I. Basic wire bending exercises Gauge 22 or 0.7mm
 1. Straightening of wires (4 Nos.)
 2. Bending of an equilateral triangle
 3. Bending of a rectangle
 4. Bending of a square
 5. Bending of a circle
 6. Bending of U.V.
- II. Construction of Clasps (Both sides upper/lower) Gauge 22 or 0.7mm
 1. 3/4 Clasp (C-Clasp)
 2. Full Clasp (Jackson's Crib)
 3. Adam's Clasp
 4. Triangular Clasp
- III. Construction of Springs (on upper both sides) Gauge 24 or 0.5mm
 1. Finger Spring
 2. Single Cantilever Spring
 3. Double Cantilever Spring (Z-Spring)
 4. T-Springs on premolars
- IV. Construction of Canine retractors Gauge 23 or 0.6mm
 1. U - Loop canine retractor
(Both sides on upper & lower)
 2. Helical canine retractor
(Both sides on upper & lower)
 3. Buccal canine retractor:
 - Self supported buccal canine retractor with
 - a) Sleeve - 5mm wire or 24 gauge
 - b) Sleeve - 19 gauge needle on any one side.
 4. Palatal canine retractor on upper both sides
Gauge 23 or 0.6mm
- V. Labial Bow
Gauge 22 or 0.7mm
One on both upper and lower

CLINICAL TRAINING DURING III YEAR B D S