

FINAL PROFESSIONAL BDS SYLLABUS & COURSES

Prosthodontics

Operative Dentistry

Oral Maxillofacial Surgery

Orthodontics + Dental Radiology

Implantology

Gerodontology

Practice management

Tutorials and seminars

Case presentations

Clinical Assignments

Prosthodontics

Operative dentistry

- Conservative dentistry
- Crown & Bridge work
- Endodontics
- Paedodontics

Oral and Maxillofacial Surgery including exodontia

Orthodontics and Radiology

Op

Oral

Oral

PROSTHODONTICS

Introduction to scope of prosthodontics

Applied oral anatomy and physiology

Medical history

General and local examination

Diagnosis, prognosis, and treatment planning

Review of dental materials employed in prosthodontics

Proth

Partial Dentures

Classification

Indications

Advantages

Hazards

Components

Use of surveyors in partial denture construction

Designing partial dentures

Tooth preparation for partial dentures

Patient instructions

Pr.D

Intrad

Complete dentures

- General principles and guidelines
- Patients' expectations and limitations of prosthodontist
- Patient assessment
- Indications for pre-prosthetic surgery
- Impression techniques and materials for primary and secondary impressions
- Maxillo-mandibular relations
- Use of face-bow record
- Selection of teeth
- Trial
- Insertion
- Post insertion complaints and follow-up
- Patient instructions
- Laboratory procedures at various stages

Over -dentures

Immediate dentures

Repairs, relining and rebasing of prostheses

Prosthetics for dental implants

Maxillofacial prostheses

Recommended Books

- Boucher' prosthodontics
- Atlas of complete denture by John Hobkirk
- Fenn's clinical dental prosthetic
- McCracken's removable partial denture
- A colour guide to removable partial denture design.* Davenport JC, Basker RM, Heath JR, Ralph JP & Glantz P-O(2000)
- A clinical guide to removable partial dentures.* Davenport JC, Basker RM, Heath JR, Ralph JP & Glantz P-O (2000)
- Prosthetic treatment of the edentulous patient.* Basker RM, Davenport JC & Tomlin, HR (2002)
- Over dentures in general dental practice.* Basker RM, Harrison A, Ralph JP & Watson C (1993)
- Removable denture construction.* Bates JF, Huggett R & Stafford GD (1997)

Clinical Assignments

- Clinical cases for partial and complete denture construction

OPERATIVE DENTISTRY

Conservative Dentistry

Introduction to operative dentistry
 History taking and record keeping
 Reasons for restoration of teeth
 Clinical diagnosis and pathology of disease
 Application of radiography in operative dentistry
 Instruments and their usage
 Operator's environment and self protection
 Material used in restorative dentistry
 Field isolation
 Black's classification
 Principles of cavity preparations in class I-V cavities
 Fissure sealant and fissure restorations
 Direct tooth colored restorations
 Amalgam restorations
 Temporary restorations
 Dentinal pins and posts
 Restoration of endodontically-treated teeth
 Dental trauma and its restorative management
 Treatment of surface lesion
 Causes and management of tooth discoloration
 Direct filling gold, cast metal restorations and porcelain restorations
 Maintenance of restoration in long term
 Common complication / failures of restorative dentistry.

Clinical Assignments

Manage the patients in all type of restoration including pins and posts, principles of cavity preparations in practical, clinical study and handling of the restorative materials.

Recommended Books

Operative dentistry by M.A. Marzouk
 Kidd E and Smith BGN. *Pickard's Manual of Operative Dentistry*. 7th edition, 1996.
 Contemporary operative by JB Summit
 Art and science of operative Dentistry by Sturtevant
 Restorative dentistry by P Jacobson
 Kidd E and Joyston-Bechal S. *Essentials of Dental Caries*. 2nd edition, 1997.
Restorative Dentistry: An integrated approach. 1998.

Crown & Bridge

Terminology

Indications & contraindication of crown & bridge

Types of crowns, indications, contraindications, advantages + disadvantages

Diagnosis & treatment planning

Basic principles of preparation

Porcelain jacket crowns – indications & contraindications, clinical assessment and steps of preparation

Porcelain fused to Metal crown: indications and contraindications, clinical assessment, step of preparation

Full crowns: indications & contraindications, clinical assessment steps of preparation

Soft tissue management, electro surgery application

Post & core crowns, impression & impression materials,

Bridges: indication & contraindication & types of bridges, pontic designs, and basic principles, clinical procedures, resin bonded bridges

Laboratory technique for crown & bridge, porcelain veneer, inlays onlays, occlusion and causes of bridge failures

Clinical Assignments

Preparation of jacket crown & laboratory formation of crown

Preparation for bridge and its laboratory preparation

Insertions of the crowns and bridges.

Recommended Books

Inalys, crowns and bridges by Colin R Cowel

Introduction to metal ceramic technology by W. Partick Naylor

Contemporary fixed prosthesis by Stephen F. Rosenstiel

Fundamentals of tooth preparations by Jams C. Kessler

Grundy and Glyn Jones J. *A Colour Atlas of Clinical Operative Dentistry, Crowns and Bridges*. 2nd edition, 1992

Shillingburg *et al.* *Fundamentals of Fixed Prosthodontics*. 2nd edition (1981) 3rd edition (1997)

Smith BGN. *Planning and Making Crowns and Bridges*. 3rd edition, 1998

Schillingburg HT, Jacobi R and Brackett SE. *Fundamentals of Tooth Preparation*. 1988

Tay W-M. *Resin-bonded Bridges*. 1992.

Endodontics

Introduction and scope of endodontics

Normal anatomy of dental pulp

Pulpal reaction to caries, operative procedures and materials

Diagnosis and differential diagnosis of pulp disorders

Assessment for endodontic therapy

Role of radiography in endodontic

- Endodontics microbiology, prevention and infection control in dental clinic
- Sterilization in endodontics
- Application of rubber dam
- Endodontics instrument and standardization
- Therapeutic agents used in Endodontics
- Management of pain and anxiety, local anesthesia in endodontics
- Endodontic emergencies and their management
- Pulp capping, apexification
- Selection of cases, and treatment planning stages
- Rationale of endodontic treatment
- Access opening and anatomy of root canals
- Anatomical variations in individual tooth negotiation and preparation of root canals
- Shaping and irrigation of root canal system
- Endodontic cement sealers
- Obscuration techniques
- Traumatic injuries and their management
- Restoration of endodontically-treated teeth
- Non vital bleaching of teeth
- Over denture preparation of root treated teeth
- Single visit Endodontics
- Management of broken instrument in the root canal
- Perforations and their management
- Endo perio lesions and their management
- Surgical endodontics: a picectomy and root resections (hemi section / bisection) retrograde fillings and materials used for root end fillings
- Re-implantation and transplantation
- Endodontic implants and their significance
- Root resorption: types and management
- Methods of removal of old fillings and posts from the root canals
- Endodontic failure and treatment

Clinical Assignments

- Endodontic treatment of anterior teeth
- Restoration of root treated teeth (placement of pins and posts)
- Management of anterior trauma
- Management of endo-perio lesions.

Recommended Books

- Pitt Ford TR. *Harty's Endodontics in Clinical Practice*. 4th edition, 1997.
- Jacobsen PH Grossman's Endodontics
- Endodontics by Guttuman
- Gutman JL *et al. Problem solving in Endodontics*. 2nd edition, 1992
- Clinical endodontics BY L. Transtod.
- Cohen S and Burns EC. *Pathways of the Pulp*. 7th edition, 1998.
- Ingle's endodontics
- Stock and Nehammer. *Endodontics in Practice*. 2nd edition, 1990

Pedodontics

- Introduction, rationale, objective and future of pedodontics
- Prenatal counseling
- Child behavior and management
- General concept of growth and development
- Dentition: its development and speech
- Development distribution in dentition and surrounding structure
- Importance of 1st permanent molar
- Diagnosis and treatment planning
- Medical conditions specific to children
- Management of anxiety and pain
- Periodontal health care, periodontal disease in children, tooth brushing, oral habits
- Dental caries and child response, rampant caries, endodontics, prevention of dental caries
- Modification of cavity preparation in pedodontics
- Restorative materials in pedodontics
- Pit and fissure sealants
- Fluoride and its role in tooth development
- Hereditary disorders in pedodontics
- Traumatology, injury to primary and permanent teeth
- Pulp capping, pulp therapy for primary and young permanent teeth
- Pulpotomy, endodontics of primary teeth, radiology
- Space maintenance in primary dentition, crowning consideration in pedodontics
- Management of handicapped children
- Long-term dental care child patient
- Common complications faced in children.

Clinical Assignments

- Conservative pediatric dentistry
- Management of anterior trauma in children

Recommended Books

- Pedodontics by Fenn
- Pediatric dentistry by J.Welbury
- Pediatric dentistry by Kennedy

ORAL & MAXILLOFACIAL SURGERY

Basic principles of oral and maxillofacial surgery:

- Introduction to oral and maxillofacial surgery
- Scope of oral and maxillofacial surgery
- Sterilization & cross infection control
- Patient assessment
- Informed consent
- Patient confidentiality
- Instruments & armamentarium
- Principles of flap design, sutures & suturing techniques
- Techniques of biopsy & cytology
- Use of anti-microbials in oral and maxillofacial surgery
- Radiography for oral and maxillofacial surgery
- Use of imaging modalities in oral and maxillofacial surgery
- Treatment planning in oral and maxillofacial surgery

Local anesthesia & conscious sedation:

- Indications & contraindications in oral surgery
- Pharmacology of common agents used for local anesthesia & conscious sedation
- Surgical anatomy of the trigeminal nerve
- Injection techniques for administering local anesthesia in oral surgery
- Complications of local anesthesia
- Pharmacology of common agents conscious sedation & relative analgesia
- Techniques for administering conscious sedation & relative analgesia
- Complications of conscious sedation analgesia & their management.

General anesthesia

- Assessment of fitness for anesthesia including knowledge of normal & abnormal cardiovascular & respiratory signs,
- The principles of premedication, anesthetic & analgesia medication
- Techniques for endotracheal intubation, tracheostomy & criothyroidotomy
- Postoperative patient care after general anesthesia.

Exodontia

- Indications & contraindications
- Forcep extractions
- Principles of use of surgical elevators
- Surgical extraction
- Complications of tooth extraction.

Impacted cuspids & wisdom teeth

- Terminology
- Classification systems for impacted teeth
- Radiographic assessment
- Indications & contraindications for removal
- Surgical techniques
- Complications

Jaw cysts

- Classification of jaw cysts including odontogenic & non-odontogenic cysts,
- Salient histopathologic features of common jaw cysts
- Diagnosis
- Treatment of jaw cysts (marsupialization and enucleation).

Periapical surgery

Terminology

Indications & contraindications

Surgical techniques

Complications.

Perprosthetic surgery

Terminology

Goals of preprosthetic surgery

Specific hard and soft tissue procedures including their indications & advantages, complications.

Maxillary antrum

Surgical anatomy

Oro-antral fistula

Common pathological lesions & their management.

Spread of oral infection

Periapical abscess & cellulitis

Spread of oral infection through tissue spaces of the jaws & neck

Intracranial complications of oral infection

Principles of management of odontogenic infections.

Oral & maxillofacial trauma

Surgical anatomy of facial skeleton

Etiology and presentation

Head injuries, the Glasgow coma scale, the indications for surgical intervention.

Assessment of other associated injuries to the spine, thorax, abdomen etc

Emergency and definitive management of maxillo-facial trauma:

- soft tissue injuries of the head & neck
- dental injuries
- fractures of mandible
- fractures of mid-face & zygomatic complex, naso-ethmoid fractures

Complications of maxillofacial injuries

Temporomandibular joint:

Surgical anatomy

Pain & dysfunction

Internal derangement

Other acquired abnormalities

Congenital abnormalities especially ankylosis

Management principles

Complications of surgical intervention

Oncology

Oral neoplasia:

Tumors of the oral cavity & jaws & associated tissues, including odontogenic tumors, oral squamous cell carcinoma & lymphomas, the principles of operative treatment of the above including reconstruction.

The principles of radiotherapy & chemotherapy & their effects on orofacial tissues.

Salivary glands

All diseases of salivary glands including sialoadenitis, sialolithiasis,

Benign & malignant tumors

The mean of investigation, an understanding of operative treatment

Complications of surgical procedures

Orofacial pain

An understanding of common causes of orofacial pain, their diagnosis & management with special emphasis on trigeminal neuralgia.

Orthognathic surgery

Means of assessment

Diagnosis

Principles of surgical treatment

Postoperative care & follow-up.

Developmental anomalies

Cleft & palate; head & neck deformity,

Principles of dental & surgical management of the above.

Dental implants

Introduction

Patient assessment & options for implants placement

Surgical procedures for implant placement

Postoperative care & follow-up.

Management of medically compromised patients:

The presentation of systemic disease in the mouth, oral surgical management of medically compromised patients with special emphasis on:

- cardiovascular diseases
- respiratory disorders
- diabetes mellitus
- immunosuppression
- blood dyscrasias

Management of medical emergencies in oral surgery.

Clinical Assignments

Exodontia clinics

Out-door clinics in Oral & Maxillofacial Surgery

Minor oral surgery sessions

Operation theatre sessions

Ward work

Post

Min

The

Recommended Books

- J. Peterson, Tucker, Edward Ellis, Contemporary Oral and Maxillofacial Surgery
 P Banks, Killey's fractures of the middle third of the facial skeleton.
 P Banks, Killey's fractures of the mandible.
 Oral & Maxillofacial Surgery by John Peddler
 Minor Oral Surgery by Geoffrey L. Howe
 An outline of Oral surgery Part-I and II by Killey, Seward & Kay.
 Medical problems in dentistry by Scully & Cawson
 Oral & Maxillofacial Surgery by Laksin
 Oral & Maxillofacial Surgery by Kruger.
 Pain & Anxiety Control for the Conscious Dental Patient. Meechan JG, Robb ND, Seymour RA – Oxford University Press (1998)
 Colour Atlas of Dental Analgesia and Sedation. Roberts GL, Rosenbaum NL
 General Anaesthesia and Sedation in Dentistry. Hill CM & Morris PJ
 Handbook of Nitrous Oxide and Oxygen Sedation Clark MS & Brunick AL, Mosby (1999)
 Resuscitation Handbook. Basket PKF (1989)

ORTHODONTICS AND RADIOLOGY**ORTHODONTICS**

Introduction to orthodontics, Scope of orthodontic practice

Orthodontic problems

- Epidemiology of malocclusion
- Malocclusion and dentofacial deformity in society
- The development of orthodontic problems.

Ideal Occlusion in the permanent dentition

- Normal occlusion
- The development of occlusion, malocclusion
- Indications for orthodontic treatment.

Concepts of physical growth and development

- Growth pattern: Variability, and timings
- Theories of growth control
- Methods for studying the physical growth: measurement approaches, experimental approaches
- The nature of Skeletal growth
- Growth of the craniofacial complex, cranial vault, cranial base, maxilla (nasomaxillary complex), mandible

The Early stages of physical and social development

Prenatal influences on facial development

Infancy and early childhood

The primary dentition years: eruption of the primary teeth, maturation of oral function, physical development in the preschool years, social and behavioral development, learning and the development of behavior, stages of emotional and cognitive development.

The later stages of development

Late childhood; the mixed dentition years

Eruption of the permanent teeth

Space relationships in replacement of the incisors

Space relationships in replacement of canines and primary molars

Assessment of skeletal and other developmental ages

Adolescence; the early permanent dentition years

Initiation of adolescence: Timing puberty

Growth patterns in the dentofacial complex

Dimensional changes

Rotation of jaws during growth

Maturation and aging changes in the dental apparatus

Changes in teeth and supporting structures

Changes in alignment and occlusion

Facial growth in adults.

The Etiology of orthodontic problems

Possible causes of malocclusion

Developmental cause of malocclusion

Problems caused by trauma

Functional influences

Etiology in contemporary perspective

Classification of malocclusion

Orthodontic Diagnosis

The format of the assessment:

History

Clinical examination (extra-oral / intra-oral examination)

Reference models

Radiographic assessment: Cephalometric analysis; tracing a lateral skull radiograph, cephalometric landmarks, cephalometric analysis, descriptive analysis, measurement of skeletal relationships, dentoskeletal relationships, orthodontic classification systems, development of a problem list. The role of intra-oral and OPG views in orthodontic diagnosis.

Summarizing and recording your findings

Orthodontic Treatment Planning

From Problem List to Final Plan

Principles of treatment planning

Orthodontic triage: distinguishing moderate from severe problems

Treatment planning for orthodontic problems in the primary dentition

Treatment planning for orthodontic problems in the early mixed dentition

Treatment planning for orthodontic problems in adolescence (late mixed and early permanent dentition)

Treatment planning for orthodontic problems in adults

Limitations and Special Problems

Arch expansion versus extraction

Treatment planning for patients with skeletal discrepancies

Treatment planning in special circumstances

The Biologic Basis of Orthodontic Therapy

Periodontal and bone response to normal function

Periodontal ligament and bone response to sustained orthodontic forces

Deleterious effects of orthodontic forces

Skeletal effects of orthodontic forces.

Mechanical Principles in Orthodontic Force Control

Elastic materials and the production of orthodontic force

Design factors in orthodontic appliances

Anchorage and its control

The development of contemporary orthodontic appliances

Removable Appliances

Development of removable appliances

Indication for removable appliances

Components of removable appliances

Contemporary Fixed appliances

Bands for attachments

Bonded attachments

Characteristics of contemporary edgewise attachments,

Functional Appliances

Introduction

Mode of action

Indications for functional appliances

Types of appliances.

Treatment of Non-skeletal Problems in Preadolescent Children

Treatment for potential alignment problems

Crowding in the mixed dentition

Posterior cross bites

Incisor retrusion / protrusion, vertical problems.

Treatment of Skeletal Problems in Preadolescent Children

- Principles of growth modification treatment
- Appliances for growth modification
- Treatment for Class II jaw relationships
- Treatment for Class III jaw relationships
- Treatment for vertical and transverse problems
- Treatment for facial asymmetry

The First Stage of Comprehensive Treatment

- Alignment and Leveling
- Goals of the first stage of treatment
- Alignment
- Special Problems in alignment, leveling.

The Second Stage of Comprehensive Treatment

- Correction of molar relationship and space closure

The Third Stage of Comprehensive Treatment

- Finishing
- Root paralleling at extraction sites
- Torque of incisors
- Correction of vertical relationships
- Midline discrepancies
- Tooth size discrepancies
- Final "setting" of teeth
- Removal of bands and bonded attachments
- Positioners for finishing
- Special finishing procedure to avoid relapse.

Retention

- Rationale of retention necessary
- Removable appliances as retainers
- Fixed retainers
- Active retainers

Adjunctive Treatment for Adults

- The goals of adjunctive treatment
- Principle of adjunctive treatment
- Adjunctive treatment procedures

Special Consideration in Comprehensive Treatment of Adults

- Motivation for adult treatment
- Periodontal aspects of adult treatment
- Orthodontic appliance therapy

Combined Surgical and Orthodontic Treatment:

- Type of orthodontic surgical treatment
- Timing of treatment
- Special considerations in orthodontic surgical planning
- Integration of orthodontic and surgery
- Future directions

Cleft lip and palate and other facial anomalies

Role of orthodontist

Common orthodontic problems and principles of correction

Clinical Assignments

Removable orthodontics

Functional orthodontics

Fixed orthodontics

Recommended Books

Contemporary Orthodontics By William R. Profit

An introduction to orthodontics BY Laura Mitchell

A text book of orthodontics by W.J .Houston

Moyer's book of orthodontics

DENTAL RADIOLOGY

Introduction

Radiation biology

Hazards of radiation

Radiation protection - guidelines

Medic-legal issues

Radiographic anatomy of oral and maxillofacial region

Intra-oral views: periapical, bitewing, occlusal – indications, and interpretation

Extra-oral views: lateral, postero-anterior, occipitontental, sub-mentovertex, cephalometric view - indications, and interpretation

Ortho-pantomogram- indications, and interpretation

Radiographic diagnosis of common dental and oral pathological lesions

Sialography - indications and interpretation

Principles of computerized Tomography – applications in dentistry

Principles of magnetic resonance imaging – applications in dentistry

Principles of nuclear imaging- application in dentistry

Recommended Books

Fundamentals of dental radiology by Vimal K Sikri

Essential of dental assisting by Ann Ehrlich

Dental

Introduction

Radiation biology

Hazards of radiation

Radiation protection

Medic-legal issues

Radiographic anatomy

Intra-oral views

Extra-oral

Ortho-pantomogram

Radiographic diagnosis

Sialography

Principles of CT

Principles of MRI

Principles of nuclear

GERODONTOLOGY

- General factors involved in the process of aging
- Age changes in oral and dental tissues
- Medical considerations in geriatric subjects
- Psychological and behavioral considerations in geriatric patients
- Problems in the dental management of geriatric subjects
 - Attitude of the dentist
 - Common restorative procedures
 - Common surgical procedures

Clinical Assignment:

Restorative work on geriatric subjects

ORAL IMPLANTOLOGY

- Introduction and rationale of implants
- Medical evaluation of implant patient
- Diagnosis and assessment local as well as systemic
- Surgical techniques for implant placement
- Laboratory techniques
- Prosthetic rehabilitation

Clinical Assignment

Every effort shall be made to provide clinical exposure to oral implantology

Recommended Books

- Contemporary implant dentistry by C. Misch
- Prosthetic dentistry by Fern

PRACTICE MANAGEMENT

The students attend a course to understand private dental office to analyze and observe private dental practice. The students gain access to working of dental practice and learn a systemic approach to analyze and organize a dental practice and in order to prepare the "soon to be dentist" with the decision related to establishing a dental practice.