

maxillofacial lesions. Mosby

Zakrzewska J and Harrison SD (2002) **Assessment and management of orofacial pain.** Elsevier

FOURTH YEAR BDS SUBJECTS

1. Prosthodontics
2. Orthodontics
3. Operative Dentistry including Paedodontics
4. Oral and Maxillofacial Surgery

CONTACT HOURS ALLOCATIONS

FOURTH PROFESSIONAL BDS

| <u>SUBJECTS</u> | LECTURES | PRACTICAL HOURS |
|--|-----------------|------------------------|
| Prosthodontics | 100 | 225 |
| Orthodontics | 100 | 200 |
| Operative Dentistry Including Pedodontics | 100 | 225 |
| Oral and Maxillofacial Surgery | 100 | 200 |
| Grand Total | 400 | 850 |

In addition to the above examination subjects, each student or group of students shall take an **Elective Project** and **Selective Project** during the 4th year BDS training. Upon selection of projects and necessary introduction and guidance, relating to projects will be given to students by the concerned tutor / supervisor. Subsequently, most of the work related to these projects will be undertaken / completed outside the normal working hours of the college during the vacations breaks of the year. These projects shall be completed before the end of the 5th year BDS training. There will be no formal university examination in the Elective and Selective Projects carried out by students. Details of these are given in the syllabus / subjects of 4th Year BDS.

SYLLABUS / COURSE DETAILS FOR:

PROSTHODONTICS:

Introduction:

It is the branch of dentistry that deals with the replacement of missing teeth and related mouth or jaw and other craniofacial structures by artificial appliances including bridges, dentures, obturators and maxillofacial prostheses or other artificial devices.

| Course / contents Details | Suggested Contacts Hours |
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| REMOVABLE PARTIAL DENTURES: | |
| Introduction: Terminologies and classification <ul style="list-style-type: none">• Components of a removable partial denture: Major connectors, Minor connectors, Rest and rest seats, Direct retainers, Indirect retainers, and tooth replacement• Principles of Removable Partial Design• Examination and evaluation of diagnostic data• Survey and design – in detail: Surveyor, Surveying, and Survey lines, Tripoding. Designing• Different designs of RPDs removable partial denture• Mouth preparation and master cast• Impression materials and procedures for removable partial dentures: Special reference to distal extension bases.• Preliminary jaw relation and esthetic try-in for some anterior replacement teeth.• Laboratory procedures for framework construction• Trial of the framework• Special impression procedures for tooth-tissue supported removable partial denture• Established occlusal relationships• Try-in and completion of the partial denture• Delivering the removable partial denture• Post insertion observations• Temporary and immediate removable partial denture• Complete denture opposing removable partial dentures• Other forms of the removable partial dentures e.g. sectional dentures, swing | 30 |

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| <ul style="list-style-type: none"> lock design • Relining, rebasing, and repairing the removable partial dentures. • Attachments for removable partial denture • Removable partial denture in maxillofacial prosthetics • Removable partial denture for the older adult. | |
| FIXED PARTIAL DENTURES: | |
| <ul style="list-style-type: none"> • Introduction to fixed prosthodontics • Fundamentals of occlusion • Articulators, their types and classifications • Inter occlusal records different materials used and techniques employed • Articulation of casts on semi adjustable articulators • Treatment planning for single tooth restorations • Treatment planning for the replacement of missing teeth • Fixed partial denture configurations • Principals of tooth preparations for retainer units • Preparations for full veneer crowns as retainer units • Preparations for partial veneer crowns as retainer units • Preparations of intracoronal restorations as retainer units • Preparations for extensively damaged teeth • Preparations for periodontally weakened teeth • Provisional restorations • Fluid control and soft tissue management • Impressions for fixed prosthodontics • Working casts and dies • Wax patterns • The functionally generated path technique • Investing and casting • Finishing and cementation • Esthetic considerations • All- ceramic restorations • Metal-ceramic restorations • Pontics and edentulous ridges • Solder joints and other connectors • Resin – Bonded fixed partials denture | 20 |

| COMPLETE DENTURES | 30 |
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| <p>Basic Anatomy and Physiology: Biomechanics of the edentulous state, Residual ridge resorption. Communicating with the patient: Understanding the patients Instructing the patient.</p> <p>Diagnosis and treatment planning for patients:</p> <ol style="list-style-type: none"> 1. With some teeth remaining 2. With no teeth remaining: Mental attitude, Systemic status. Local factor, the geriatric patient, and Diagnostic procedures, Articulators – discussion in detail, including historical perspective. Improving the patient’s denture foundation and ridge relation. <ul style="list-style-type: none"> ▪ Pre-operative examination ▪ Initial hard tissue & soft tissue procedure ▪ Secondary hard & soft tissue procedure ▪ Implant procedure ▪ Congenital deformities ▪ Postoperative procedure. <ul style="list-style-type: none"> • Rehabilitation of the edentulous patient <ol style="list-style-type: none"> 1. Impressions: <ul style="list-style-type: none"> ▪ Muscles of facial expression ▪ Biologic considerations for maxillary and mandibular impression including anatomy landmark and their interpretation. ▪ Impression objectives and principals ▪ Impression materials ▪ Impression techniques ▪ Maxillary and mandibular impression procedures ▪ Laboratory procedures involved with impression making 2. Biological consideration in jaw relation & jaw movements – craniomandibular relations. <ul style="list-style-type: none"> ▪ Mandibular movements ▪ Maxillo-mandibular relation including vertical and horizontal jay relations. ▪ Concept of occlusion | |

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| <ul style="list-style-type: none"> ▪ Gnathology <ol style="list-style-type: none"> 3. Record bases and occlusion rims. <ul style="list-style-type: none"> ▪ Materials & techniques ▪ Useful guidelines and ideal parameters ▪ Recording and transferring bases and occlusal rims 4. Relating the patient to the articulator. <ul style="list-style-type: none"> ▪ Hinge axis location techniques ▪ Terminal hinge axis and arbitrary hinge axis ▪ Face bow detailed discussion – types & uses ▪ Face bow transfer procedure 5. Recording maxillo – mandibular relation. <ul style="list-style-type: none"> ▪ Vertical relations ▪ Centric relation records ▪ Eccentric relation records 6. Tooth selection and arrangement. <ul style="list-style-type: none"> • Anterior teeth • Posterior teeth • Esthetic and functional harmony 7. Relating inclination of teeth to concept of occlusion. <ul style="list-style-type: none"> • Neurocentric concept' • Balanced occlusal concept 8. Trial dentures. 9. Laboratory procedures. <ul style="list-style-type: none"> • Wax contouring • Investing of dentures • Preparing of mold • Preparing & packing acrylic resin • Processing of dentures • Recovery of dentures • Lab remount procedures • Recovering the complete denture from the cast. • Finishing and polishing the complete denture • Plaster cast for clinical denture remount procedure | |
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| <p>10. Denture insertion</p> <ul style="list-style-type: none"> • Insertion procedures • Clinical errors • Correcting occlusal disharmony • Selective grinding procedure <p>11. Treating problems with associated denture use – detailed discussion</p> <p>12. Treating abused tissues</p> <p>13. Relining and re-basing of dentures</p> <p>14. Repair of dentures</p> <p>15. Immediate complete dentures construction procedure</p> <p>16. The single complete denture</p> <p>17. Tooth supported complete denture (over dentures)</p> <p>18. Sectional dentures</p> <p>19. Copy dentures</p> <p>Dental implants in complete dentures (Implant supported complete dentures).</p> | |
| <p>GERODONTOLOGY</p> <p>1. Management strategies for the dental care of the elderly.</p> <p>2. Dental and oral diseases and disorder in the elderly.</p> <p>3. Range of psychological and social factors involved with geriatric patients.</p> <p>4. Distinguish between normal and abnormal consequences of aging.</p> <p>5. Excessive tooth wear.</p> <p>6. Root dental caries.</p> | 4 |
| <p>IMPLANTOLOGY</p> <p>1. Rationale for dental implants</p> <p>2. Types(classification) of dental implants</p> <p>3. Science of osseointegration (factors affecting osseointegration)</p> <p>4. Indications and contraindications for dental implants</p> <p>5. Implant supported rehabilitation options for partially dentate and completely edentulous</p> <p>6. Medical conditions and their implications for implant supported prostheses</p> <p>7. Success criteria for dental implants</p> <p>8. Complication associated with dental implants and</p> | 4 |

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| their management | |
| OCCLUSION 1. Evolution of occlusal concepts with emphasis on : a. Bilaterally balanced occlusion b. Unilaterally balanced occlusion/ group function c. Mutually protected occlusion d. Canine guided occlusion e. Group function f. long centric/ freedom in centric 2. Determinants of occlusion | 4 |
| TEMPOROMANDIBULAR DISORDERS 1. Functional anatomy and physiology of the temporomandibular structures 2. Etiology of the temporomandibular disorders 3. Classification/types of temporomandibular disorders 4. Diagnosis of temporomandibular disorders 5. Management of temporomandibular disorders | 4 |
| MAXILLOFACIAL PROSTHODONTICS | 4 |

Clinical Assignments:

| Description of Work | Clinical Quota / No. of Cases |
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| Clinical and laboratory procedures involved in the fabrication of acrylic removable partial dentures for patients. | 12 |
| Clinical and laboratory procedures involved in the fabrication of cast removable partial dentures for patients. | 01 |
| Clinical and laboratory procedures involved in the fabrication of complete dentures for patients. | 08 |
| Clinical and laboratory procedures involved in the fabrication of a metal-ceramic full-coverage artificial crown for a patient. | 01 |
| Clinical and laboratory procedures involved in the fabrication of tooth-supported 3-units fixed partial dentures (FPD) for a patient. | 01 |

BOOKS / TEACHING & LEARNING AIDS:

REMOVABLE PARTIAL DENTURES:

Boucher's treatment of partially edentulous patients by Gavin P Renner

Carr AB, MaGivney GP & Brown DT (2004) McCracken's Removable Partial Prosthodontics 11th edition Mosby

Davenport JC, Basker RM, Helath JR, Ralph JP.(1989) Colour Atlas of Removable Partial Dentures, 1st edition, Wolfe Medical Publications.

Heartwell & Rahn AO. Syllabus of complete dentures.

Jenkins G & Gidden J Precision Attachments: A Link to Successful Restorative Treatment Quintessence Publishing Co Inc

Tyson KW, Yemm R & Scott BJJ (2006) Understanding Partial Denture Design University Oxford Press.

Walter JD. Designing Removable partial dentures.

Grasso & Miller's Removable Partial Dentures.

COMPLETE DENTURES:

Zarb GA, Bolender CL, Carlsson GE, (1997). Boucher's Prosthodontic Treatment for Edentulous Patient. 10th edition The C.V Mosby Company.

Hobkirk JA. Atlas of Complete Dentures. Wolfe Medical Publications.

Hopkins R. (1987) A Color Atlas of Preprosthetic Oral Surgery. Wolfe Medical Publications

McCord JF, Smith P & Grey N (2004). Treatment of Edentulous Patients Churchill Livingstone

Basker RM, Davenport JC. (2002) Prosthetic Treatment of the Edentulous Patient. 4th edition. Blackwell Publishing

Ghani F. A reappraisal of complete Denture Syllabus. 1997, KMC Bookshop, Khyber Medical College Peshawar (Pakistan).

Iwao H Principles and Practices of Complete Dentures Quintessence Publishing Co Inc

Morrow, Rudd and Eissman. Dental laboratory techniques

Fixed Partial Dentures (FPDS) / Crowns & Bridges:

Smith BGN, Howe LC. Planning and Making Crowns and Bridges. Informa Healthcare 2006.

Wassel RW et al. A clinical Guide to Crowns and other Extra-Coronal restorations. BDJ Books series. British dental association (BDA) London 2002.

Rosenstiel SF, Land MF & Fujimoto J (2006) Contemporary Fixed Prosthodontics 4th edition Mosby

Gurel G (ed) The Science and Art of Porcelain Laminate Veneers Quintessence Publishing Co. Inc.

Shillingburg HT, Hobo SA & Whitsett LD (1997) Fundamentals of Fixed Prosthodontics, 3rd Edition, Quintessence Publishing Co. Inc. Chicago.

Shillingburg. Atlas of Tooth preparation for crown and bridges. Quintessence Pub Co.

Tay WM. Resin Bonded Bridges: A Practitioners' Guide. Taylor & Francis. Ltd 1992.

Tillman's Principles of Crown and Bridge.

Dental Implants:

Drago CJ. Implant Restorations: A step by Step Guide. 2nd Ed. Blackwell

Munksgaard.

Misch C. Contemporary Implant Dentistry.

Occlusion and Temporomandibular Disorders (TMD):

Okeson JP (2005) Bell's orofacial pains: the clinical management of orofacial pain 6th edition. Quintessence Publishing

Bumann A, Lotzmann U, Mah J (2003) TMJ disorders and orofacial pain – the role of dentistry in a multidisciplinary diagnostic approach. Thieme New York

Carlsson GE and Magnusson T (2001) Management of temporomandibular disorders in the general practice of dentistry. Quintessence Publishing

Dawson PE (2006) Functional Occlusion: From TMJ to Smile Design Mosby

Gremillion H (2007) Temporomandibular disorders and orofacial pain, an issue of Dental Clinics 51-1 Saunders

Gross, Martin D. (1992) Occlusion in Restorative Dentistry: Technique & Theory. Churchill Livingstone

Okeson JP. Management of Temporomandibular Disorders.

Geriatric Dentistry:

Budtz-Jørgensen, Ejvind. Prosthodontics for the Elderly: Diagnosis and Treatment Quintessence Publishing Co Inc

Holm-Pedersen P & Walls A Textbook on Geriatric Dentistry 2nd edition Blackwell Publishing

Anderson J, Storer J. Immediate and Replacement Dentures. 3rd Edition. Blackwell Scientific Pub Co.

Esthetic Dentistry:

Irfan Ahmad. Anterior Dental Esthetics: A Clinical Guide. BDJ Book Series. BDA London.

Romano R (ed) The Art of the Smile: Integrating Prosthodontics, Orthodontics, Periodontics, Dental Technology, and Plastic Surgery in Esthetic Dental Treatment Quintessence Publishing Co Inc

E-learning Resources: CDs, DVDs, Videos and other Internet resources