BACHELOR OF DENTAL SURGERY PROGRAMME

Semester 7

Faculty of Dental Sciences
University of Peradeniya
2025

Bachelor of Dental Surgery Programme

Course Book

Semesters 7

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CONTENTS

INTRODUCTION

The main aim of the Bachelor of Dental Surgery (BDS) is to impart the graduates with knowledge, skills and attitudes necessary to make a significant contribution towards promotion, restitution, preservation and maintenance of acceptable oral health and function, which are integral parts of overall health of an individual.

The first four semesters of the BDS study programme have provided the students with pre-requisite knowledge and skills necessary to commence the second phase of the programme from fifth to eighth semesters. This second phase intends to offer them with supervised hands-on clinical training in dentistry, to make them adequately skilled to proceed to the final stage of clinical training which aims to prepare them for independent practice as General Dental Practitioners.

The fifth semester intends to introduce the students to clinical training under three main clinical streams where the focus will be on an integrated approach to care rather than a discipline-based training. The five courses in the fifth semester are Operative Dental Procedures (ODP) [3101], Population Oral Health 1 (POH 1) [3102], Introduction to Adult Oral Health (IAOH) [3103], Clinical and Diagnostic Oral Sciences I (CDOS 1) [3104] and Child & Adolescent Oral Health Care 1 (CAOH 1) [3105].

During the fifth semester, the students will receive training in professional care on patients, as they begin to manage patients who are in need of basic preventive and operative interventions. Students will also receive further training on clinical skills in a Skills Lab under the course 'Operative Dental Procedures', while the clinical rotations in different clinical streams would provide them with sufficient clinical exposure. They will receive hands-on training under close supervision of the staff.

Upon successful completion of the requirements of the fifth semester, the students will move to the sixth semester where they will be further trained under four courses namely, Population Oral Health 2 (POH 2) [3201], Management of Adult Dental Diseases (MADD) [3202], Clinical and Diagnostic Oral Sciences 2 (CDOS 2) [3203] and Child & Adolescent Oral Health Care 2 (CAOH 2) [3204]. Clinical and practical training in these two semesters will mainly take place in designated clinics within the teaching units of AOH, CDOS and CAOH.

At the end of the sixth semester, a student is expected to acquire knowledge and skills necessary for management of patients with basic dental and oral health care needs.

The seventh semester aims to make the students be more competent in clinical skills as they follow a more integrated approach for patient care under three main clinical streams as courses in AOH, CDOS and CAOH, while they will also be introduced into basic statistics and research methodology which enable them to engage in a research project in the 9th semester. Thus, the courses in the seventh semester not only aim to enhance competence in clinical skills for patient care; but to provide a strong underpinning for self-directed learning and evidence-based dentistry. The four courses in the seventh semester are Adult Oral Health Care 1 (AOH 1) [4101], Clinical and Diagnostic Oral Sciences 3 (CDOS 3) [4102], Child & Adolescent Oral Health Care 3 (CAOH 3) [4103] and Basic Statistics & Research Methodology (BSRM) [4104].

Upon successful completion of courses in the seventh semester, the students will move to the eighth semester where they will undergo comprehensive clinical training further under three main streams, AOH, CDOS and CAOH. The three courses are Adult Oral Health Care 2 (AOH 2) [4201], Clinical and Diagnostic Oral Sciences 4 (CDOS 4) [4202] and Child & Adolescent Oral Health Care 4 (CAOH 4) [4203].

Students are expected to follow all appointments diligently, as the initial phase of clinical training (5th & 6th semesters) and the next level of more advanced skills acquisition would enable them to be competent in clinical skills before they proceed towards the final part of clinical training in the fifth year. Therefore, the training from 5th to 8th semesters will be crucial in acquiring clinical skills related to the practice of dentistry more independently during 9th and 10th semesters.

7TH SEMESTER COURSES

Course No: DS 4101
Course title: Adult Oral Health Care 1
Credits: 6
Pre-requisites: Should have followed all courses up to the end of 6th semester

Aims: This course aims to make the students be more competent in the management of adult oral and dental diseases/conditions by applying routine treatment methods as well as to introduce them to comprehensive treatment strategies in the overall restoration of the dental and oral status.

Intended learning outcomes:

On successful completion of learning the students should be able to:

- Have thorough knowledge and understanding of different treatment options available in the overall dental and oral care of an adult dental patient
- Be able to formulate comprehensive treatment plans for an adult patient
- Be able to explain the advantages and disadvantages of different approaches of treatment
- Be able to provide reasons justifying the selected treatment option for a given patient
- Be able to perform basic surgical procedures on patients
- Be able to provide necessary post-treatment follow-up and maintenance care for an adult dental patient.

Time Allocation (Hours): **Lectures:** 30 **Practical:** 30 **Clinical:** 135 **Self-learning:** 105

Lectures:	**Hours**
1. Preparation of denture bearing area prior to complete dentures	1
2. Relevance of existing dentures	1
3. Cast surveying	1
4. Principles of metal casting	1
5. Clinical protocol in partial denture construction	1
6. Removable partial dentures-designing	1
7. Removable partial dentures-mouth preparation	1
8. Removable partial dentures- management of free end saddle	1
9. Transition from natural to artificial dentition	2
10. Periodontal treatment planning for patients with complex treatment needs	1
11. Case selection for surgical periodontal therapy	1
12. Principles in periodontal surgery	1
13. Basic surgical procedures in periodontal therapy	1
14. Antimicrobials in periodontal therapy	2
15. Acute periodontal diseases/conditions	1
16. Introduction to indirect restorations	1
17. Classification of crowns	1
18. Patient assessment for indirect restorations	1
19. Principles of dental aesthetics and assessment of aesthetics	1
20. Principles of tooth preparation for indirect restorations	1
21. Impression materials and techniques of crown and bridgework	1
22. Provisional crowns and techniques	1
23. Laboratory techniques in crown and bridge	1

24. Cementation and post operative care	1
25. Endodontic complications and introduction to surgical endodontics	1
26. Designing of complete dentures -appearance	1
27. Designing of complete dentures-occlusal and muscle balance	1
28. Oral health care in aging population	1
Total	**30**
Practicals:	
1. Crown preparations/impression making and temporization on extracted/typodont teeth	30
2. Casting techniques	
Total	**30**
Clinicals:	
Management of adult patients with multiple restorative treatment needs (Restoration of space with removable partial dentures, management of moderate to advanced degree of periodontitis, endodontic treatment including endodontic complications, crowns and post retained crowns)	135
Requirement – All students should maintain a log book of cases under AOH courses from 7th semester onwards (AOH 1- AOH 4). Log book with all cases recorded will be assessed during the 10th semester under AOH 4.	
Total	**135**

Recommended References/ Prescribed Textbooks

1. Heasman, Preshaw& Robertson. 2004. Successful Periodontal Therapy A Non-Surgical Approach. 1st ed.
2. Warnakulasuriya & Tilakaratne. 2014. Oral Medicine & Pathology - A guide to Diagnosis and Management. 1st ed.
3. Edited by M O'Sullivan. 2004. Fixed Prosthodontics in Dental Practice. 1st ed.
4. Edited by D Bartlett and D Ricketts. 2007. Indirect Restorations. 1st ed.
5. Edited by R Wassell, A Naru, J Steele and F Nohl. 2008. Applied Occlusion. 1st ed.
6. David Bartlett and PA Brunton. 2005. Aesthetic Dentistry.1st ed.
7. JC Devenport, RM Basker, JP Ralph and PO Glantz. 2000. A clinical guide to removable partial dentures. 2nd ed.

Assessment		**Percentage Marks**
In-course	ICA 1 – 10% - Treatment planning of a partially dentate patient ICA 2 - 10% - Periodontal debridement of a quadrant (Sc+subgingival instrumentation) ICA 3 – 10% - Carry out a proximal restoration on a patient	
End-semester	Theory	30% - 3 SAQs
	Practical/Clinical	40% - 6 OSCEs/OSPEs

Course No: DS 4102
Course title: Clinical and Diagnostic Oral Sciences 3
Credit value: 6
Pre-requisites: Should have followed all courses up to the end of 6th semester

Aims: This course aims to provide an opportunity for students to acquire the knowledge and skills required for the diagnosis and basic management of oral potentially malignant disorders (OPMD) and oral cancer, temporomandibular disorders and oral manifestations of systemic diseases.

Intended learning outcomes:

On successful completion of learning the students should:

- Demonstrate knowledge in the causation, pathogenesis and natural history of temporomandibular disorders (TMDs) and to have sufficient skills in the management of TMDs
- Diagnose/detect/ suspect oral cancer, pre-malignant conditions, patients at risk or the presence of predisposing factors, and to be aware of their management procedures / advice patients with empathy
- Refer patients appropriately for definitive / advanced treatment of the above conditions
- Demonstrate knowledge of the causation, pathogenesis and natural history of oral manifestations of systemic diseases, be able to manage them at the primary care level and refer patients appropriately for advanced treatment.

Time Allocation (Hours): Lectures 30 **Practical** 30 **Clinical demonstrations** 10 **Clinical** 105, **Self-learning** 125

Lectures:	**Hours**
1. Etiology and pathogenesis of OPMDs and oral cancer	3
2. Clinical features of OPMDs and oral cancer	1
3. Clinico-pathological correlation of OPMD and oral cancer	2
4. Early diagnosis of OPMDs and oral cancer and diagnostic aids	1
5. Treatment of OPMD and oral cancer	4
6. Effects of radiation/ chemotherapy on oral tissues	1
7. Post-operative follow up of cancer patients	1
8. Rehabilitation of patients with OPMDs and oral cancer	1
9. Role of a dental surgeon in the management of OPMD/ oral cancer	1
10. Applied anatomy of the masticatory apparatus	1
11. Epidemiology, etiology and classification of TMDs	1
12. Clinical features of TMDs	1
13. Diagnostic criteria, imaging and other special investigations for TMDs	1
14. Treatment modalities for TMDs	2
15. Clinical features of oral manifestations of systemic diseases	2
16. Pathology of oral manifestations of systemic diseases	2
17. Oral manifestations of immune-mediated diseases	1
18. Etiology and pathogenesis of fibro-osseous lesions	1

19. Clinical features and management of fibro-osseous lesions	1
20. Oral pigmentation	1
21. Adverse effects of drug therapy on oral tissues	1
Total	**30**
Practical -Histopathology:	
1. OPMDs and oral cancer	30
2. Oral manifestations of systemic diseases	
3. Immune-mediated diseases	
4. Fibro-osseous lesions	
Total	**30**
Clinical demonstrations:	
1. OPMDs and oral cancer- diagnosis and early detection	10
2. TMDs	
Total	**10**
Clinical:	
1. OPMDs and oral cancer	105
2. TMDs	
3. Oral manifestations of systemic diseases	
Total	**105**

Recommended References/ Prescribed Textbooks

1. BW Neville, DD Damm, CM Allen and JE Bouquot. 2009. Oral and Maxillofacial Pathology. 3rd ed.
2. S Warnakulasooriya and WM Tilakaratne. 2014. Oral Medicine and Pathology. 1st ed.
3. A Ghom. 2006. Textbook of Oral Medicine. 1st ed.
4. TA Turvey, JR Scully, PD Whaite, BJ Costelo and RL Ruiz. 2009. Oral and Maxillofacial Surgery VolumeII. 2nd ed.
5. E Odell and R Cawson. 2008. Essentials of Oral Medicine and Pathology. 8th ed.

Assessment		**Percentage Marks**
In-course	ICA 1 – 15% - Clinical - Two (02) OSCE/OSPEs ICA 2 – 15% - Ten (10) MCQs	
End-semester	Theory	30% - 03 SAQs
	Practical/Clinical	40% - 06 OSCEs/OSPEs

Course No: DS 4103
Course title: Child and Adolescent Oral Health Care 3
Credits: 04
Pre-requisites: Should have followed all courses up to the end of 6th semester

Aims: This course aims to provide the students with knowledge and skills necessary in the diagnosis, treatment planning and in carrying out dental treatment procedures in child and adolescent patients and children with special health needs.

Intended learning outcomes:
On successful completion of the course the students should be able to:

- be able to demonstrate sufficient knowledge in common oral diseases and conditions in children and adolescents
- be able to diagnose common oral diseases and conditions in children and adolescents
- Be able to plan treatment for common dental/oral diseases and conditions in child and adolescent patients
- Be able to treat common dental/oral diseases and conditions in child and adolescent patients including simple malocclusions.
- Be able to manage common oral diseases in children with special health needs.

Time Allocation (Hours): Lectures: 15 **Clinical demonstrations:**15 **clinical:** 90 S**elf-learning:** 80

Lectures:	**Hours**
1. Endodontics in children	3
2. Complex restorative procedures in children	1
3. Oral lesions in children	1
4. Pharmacological management of the anxious child	1
5. Timing of orthodontic treatment	1
6. Implications of growth in orthodontics	2
7. Introduction to functional appliances	1
8. Management of patients with functional appliances	2
9. Fixed orthodontic therapy	1
10. Post orthodontic retention and stability	2
Total	**15**
Clinical demonstrations:	
1. Pulp therapy in primary teeth	15
2. Pulp therapy in permanent immature teeth	
3. Treatment of teeth with developmental anomalies	
4. Bite registration in functional appliances	
5. Designing, delivery of removable and functional appliances	
6. Fixed orthodontic appliances	
7. Orthodontic retainers	
Total	**15**

Clinical:	
1. Pulp therapy of deciduous teeth	90
2. Endodontics in immature permanent anterior teeth	
3. Pharmacological management of an anxious child	
4. Management of patients with class II malocclusions with growth modification appliances	
5. Management of patients with orthodontic retainers	
6. Fixed orthodontic appliances	
Total	**90**

Recommended References/ Prescribed Textbooks

1. JO Andreasen et al. 2011. Traumatic Dental Injuries: A Manual. 3rd ed.
2. R Welbury et al. 2012. Paediatric Dentistry. 4th ed.
3. AC Cameran and RP Widmer. 2013. Handbook of Pediatric Dentistry. 4th ed.
4. WR Proffit, HW Fields Jr. and DM Sarver. 2007. Contemporary Orthodontics. 4th ed.

Assessment		**Percentage Marks**
In-course	ICA 1 – 15% - Pulpectomy procedure of a primary tooth ICA 2 – 15% - Bite registration of a patient indicated for a functional appliance	
End-semester	Theory	30% -10 MCQs and 2 SAQs
	Practical	40% - 6 OSCEs/OSPEs

Course No: DS 4104
Course title: Basic Statistics and Research Methodology
Credits: 2
Pre-requisites: None

Aims: The course aims to give an understanding in basic statistics and research methodology required for a dental graduate to effectively engage in evidence-based dentistry and self-directed learning, and to carry out a basic research and disseminate reliable information.

Intended learning outcomes:
On successful completion of the course the students should be able to:

- Appreciate the value of evidence-based dentistry and the role of research
- Engage in evidence-based dentistry
- Demonstrate an understanding of the principles of biostatistics and research methodology as applied to the various fields of dentistry.

Time Allocation (Hours): **Lectures:** 20 **Discussions:** 10 **Self learning:** 70

Course content:

Lectures:	**Hours**
1. Scientific Information and evidence-based practice	1
2. Scientific method and the research process	2
3. Scales of measurement	1
4. Data reduction and presentation	1
5. Descriptive statistics in parametric and non-parametric methods	2
6. Probability and distributions	1
7. Hypothesis testing and inferential statistics	1
8. Comparing two means	1
9. Comparing proportions	1
10. Correlation and regression	1
11. Conceiving a good research question	1
12. Structure and function of research	1
13. Generalizability findings	2
14. Sampling and sample size	2
15. Measurements and sources of error	1
16. Research types and designs	1
Total	**20**
Discussions:	
1. Using scientific literature with open source reference management software	2
2. Calculation of measures of central tendency and dispersion	4
3. Principles of questionnaire design	2
4. Writing a research proposal	2
Total	**10**

Students have the flexibility in carrying out research project in community, laboratory and clinical setting.

Recommended References/ Prescribed Textbooks

1. S Boslaugh and PA Watters. 2012. Statistics in a Nutshell. 2nd ed.
2. SP Glasser. 2014 Essentials of Clinical Research. 2nd ed.

3. JE Mauch and N Park. 2003. Guide to the Successful Thesis and Dissertation. 5th ed.
4. R Kumar. 2014. Research Methods: a step-by-step guide for beginners. 4th ed.
5. MJ Campbell and TDV Swinscow. 1996. Statistics at Square One. 9th ed.
6. MJ Campbell. 2006. Statistics at Square Two: Understanding Modern Statistical Applications in Medicine. 2nd ed.
7. RW Pallegama and RO Thattil. 2014. Basic Statistics for Dental Students. 1st ed.
8. RW Pallegama and RO Thattil. 2016. Research Methodology Simplified: A Textbook for Students of Health Sciences with Instructions for self-learning and practice.

Assessment		**Percentage Marks**
In-course	ICA 1 - 05% - Quiz ICA 2 - 25% -10 MCQs	
End-semester	Theory	70% - 3 SAQs