

FINAL BDS CURRICULUM

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**THIRD AND FOURTH
ACADEMIC YEARS**

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Faculty of Dental Sciences
University of Peradeniya

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PART A

1. INTRODUCTION

The Final BDS Curriculum is of two years duration spanning the Third and Fourth (Final) academic years. During these two years students will learn about dental and oral diseases, clinical methods to detect, prevent and treat these diseases, and acquire sufficient skills to prevent and manage common diseases. The students are required to complete their para clinical programme before they enter the Final BDS course.

The new Final BDS curriculum has been designed with the main aim of integrating the various aspects of diseases which were previously taught in isolation as it were by the various departments that dealt with these aspects. Integration has been achieved by developing course units which are based on the diseases rather than on the departments of the faculty.

There are 48 course units in all and most of these will be completed during the Third Year. Final Year will be devoted mainly for acquiring clinical skills.

Evaluation will have In-course assessments as well as an end of course examination. The end of course examination will be in two parts, Part I which will be conducted at the end of the Third Year and Part II at the end of the Final Year.

2. HOW TO USE THIS BOOKLET

(For the benefit of students and teachers)

The whole Final BDS syllabus has been divided into 48 course units. Teaching and learning would be a matter of completing these course units. Students and teachers must familiarize themselves first with the contents and then the objectives of each course unit as described here. The detailed objectives of each course unit as described here. The detailed objectives would give a good idea of the depth of knowledge and skills that must be learnt and acquired and also the right attitudes one must develop. The list of lecture topics and clinical demonstrations would assist the student to follow the course conveniently and be aware of what is going on and the heads of departments and teachers to implement the programme. Details of the evaluation system would help the students to

prepare for the examination and also complete the in-course assessments at the correct time.

3. MAIN FEATURES OF THE NEW CURRICULUM

- 3.1. Horizontal integration – subject based course units
- 3.2. Vertical integration – Early introduction to clinicals will be carried out in the First Year in order to learn about the relevance of Basic Science subjects
- 3.3. Integration of theory and practical work
- 3.4. More time for clinical practice – Almost all lectures will be completed during the third year and the Final Year would be devoted mainly for clinical practice.
- 3.5. Enhanced In-course Assessments these will carry 30% of marks
- 3.6. Less Heavy Final Examination

4. LIST OF COURSE UNITS

Course units assigned to each department/division which would be responsible for their implementation is given below in the order in which they would be implemented;

4.1. Community Dentistry

4.1.1. Health Education/communication skills

4.1.2. Principles of Epidemiology

4.1.3. Medical statistics/Research methodology

4.1.4. Environmental Health

4.1.5. Individual and Public Health aspects of prevention

4.1.6. Ethics and Jurisprudence

4.1.7. Health care systems

4.1.8. General Dental Practice

4.2. Restorative Dentistry

4.2.1. Principles of Dental Materials

4.2.2. Management of caries

4.2.3. Basic Restorations I

4.2.4. Basic Restorations II

4.2.5. Endodontics

4.2.6. Advanced Restorations

4.3. Prosthetic Dentistry

4.3.1. Edentulous Patient

4.3.2. Complete Dentures

4.3.3. Partial Dentures

4.3.4. Maxillofacial Prosthesis

4.4. Oral Pathology

4.4.1. Pathology and Diagnosis of Caries

4.4.2. Diseases of Dental Pulp

4.4.3. Cysts of the Mouth and Jaws

4.4.4. Salivary gland disease

4.4.5. Osteodystrophies including giant cell lesions

4.4.6. Forensic Odontology

4.5. Oral Medicine

4.5.1. Principles of Oral Diagnosis

4.5.2. Medical Emergencies

4.5.3. Radiology

4.5.4. Medically compromised patient

4.5.5. Oro-facial pain

4.5.6. Oral Manifestations of systemic disease

4.5.7. Oral Ulcers and Mucocutaneous disorders

4.5.8. Temporo-mandibular Joint Disorders

4.6. Oral Surgery

4.6.1. Infection control

4.6.2. Minor Oral surgery

4.6.3. Infections of the Oro-facial Region

4.6.4. Maxillofacial Trauma

4.6.5. Oral Neoplasia

4.6.6. Developmental Anomalies of the Maxillofacial Region

4.6.7. General Anaesthesiology

4.7. Periodontology

4.7.1. Aetiology, pathogenesis and diagnosis of periodontal disease

4.7.2. Non-surgical management of periodontal disease

4.7.3. Surgical management of periodontal disease

4.8. Paedodontics

4.8.1. Management of child patient

4.8.2. Pulp therapy in the Primary Dentition

4.8.3. Management of Traumatized Teeth

4.8.4. Developmental anomalies of Teeth

4.9. Orthodontics

4.9.1. Occlusion, malocclusion and basic orthodontic diagnosis

4.9.2. Basic treatment planning and basics of removable appliance therapy

5. List of course units for Early Introduction to clinicals

These course units would be implemented during Second BDS course in the First Academic Year, and therefore do not belong in the Final BDS curriculum. However, as clinical departments/divisions would be responsible for their implementation the list of course units is mentioned here. Details of these course units appear in page.....

	Course Unit	Relevant Module in Basic Sciences	Responsibility
1	Disease of Dental Hard Tissues including Fluorosis	Structure of Enamel, Dentine, Cementum, Morphology of Teeth	Restorative/Paedodontics
2	Disease of the Periodontium	Anatomy of the Periodontium	Periodontology
3	Diseases of the Oral Mucous Membrane	Structure of the Oral Mucous Membrane, Nutrition	Oral Medicine
4	Oro-facial Infections	Fascial spaces of the head and neck	Oral Surgery
5	Lymph node enlargement, Diseases of Lymphatic System	Lymphatic drainage of Head and Neck	Oral Surgery
6	Diseases of Salivary glands	Anatomy and Physiology of Salivary glands	Oral Surgery/ Oral Medicine
7	Cleft Lip and Palate	Embryology, Development of face and mouth	Oral Surgery
8	Developmental anomalies of teeth	Development of teeth	Paedodontics

9	Facial pain, anaesthesia	local	Physiology of innervations of teeth, oral cavity & face	Oral Surgery/ Oral Medicine
1 0	Abnormalities of proliferation	cell	Histology and cell proliferation	Oral Medicine
1 1	Variations of malocclusion	occlusion	Jaw relationship, occlusion	Orthodontics
1 2	Health communication skills			Community
1 3	Environmental awareness			Community
1 4	Edentulousness		Age changes of oral & para oral tissues	Prosthetics

6. Teaching / Learning Methods

Methods employed for teaching/learning would be lectures, small group discussions, tutorials, clinical/laboratory demonstrations, clinical/laboratory practice, video sessions clinico pathological conferences, project work and self learning exercises. Details of these are given under each course unit.

6.1. Lectures

Lectures under the topics given in the course units would be delivered mainly in the Third Academic Year from 8.00 am - 9.00 am and 1.00 pm - 2.00 pm everyday. Some departments/divisions may need additional lectures in the Final Year.

Total number of lectures (one hour duration) - 405

6.2. Clinical/Laboratory Demonstrations

Every lecture will have a clinical/laboratory aspect which will be learnt in clinic/laboratory. The theory and practical aspects will be integrated employing a rotation appointment system.

6.3. Clinical/Laboratory practice

Students will learn the skills by engaging in clinical/laboratory work, attending on patients, constructing appliances etc. A system of clinical appointments will be worked out for this purpose details of which are given below;

Two types of appointments will be worked out; (1) Rotation and (2) Block. In the Rotation Appointment System students will change departments/divisions daily while in the Block Appointment students will work in a given department/division continuously for a given period of time.

6.3.1.Third Year Appointments

Morning

A rotation appointment will be worked out from 9.00 am till 12 noon mainly to learn what are called primary skills eg: how to handle instruments etc. Students will do this appointment in the following departments/divisions.

- a. Prosthetics
- b. Restorative
- c. Oral Surgery
- d. Orthodontics
- e. Periodontology

Community Dentistry will have a block appointment of 4 weeks

Afternoon

Almost every lecture has clinical/laboratory aspect which needs to be taught in the clinic/laboratory and as these two aspects have to be integrated a rotation appointment will be worked out from 2.00 pm till 4.00 pm for all clinical departments/divisions except Community Dentistry.

6.3.2.Final Year Appointments

Morning

There will be a block appointment from 8.00 am - 12.00 noon in the clinical departments/divisions except Orthodontics. Duration of these appointments is as follows:

Prosthetics	6 weeks
Restorative	6 weeks
Oral Surgery	6 weeks
Oral Pathology	3 weeks
Oral Medicine	4 weeks
Periodontology	4 weeks
Paedodontics	4 weeks

Orthodontics will have a rotation appointment.

Afternoon

There will be a rotation appointment from 2.00 pm – 4.00 pm in all clinical departments/divisions.

7. Evaluation

The process of evaluation with consists of an in-course assessment system and an end of -course examination. Details of in-course assessments system are given in page

End – of – course examination has two parts; Part I which will be held at the end of the Third Academic Year and Part II which will be held at the end of the Final Academic Year.

7.1. Final BDS Part I Examination

Final BDS Part I Examination will be held at the end of the 3rd Academic Year and will have the following components;

7.1.1. Theory		Duration	
Marks		/Type	
Paper I	Community Dentistry	2 ½ hours	60
Paper II	Dental Materials	1 ½ hours	40
	6 SAQ		
	* Prosthetics	2 SAQ	
	* Restorative	4 SAQ	(6 SAQ)
Paper III	Prosthetics I	1 hour	3 hours
25	Restorative I	1 hour	(12 SAQ)
25	Oral Surgery I	1 hour	25

7.1.2. Clinical

Community Dentistry	10 spots	15
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7.2. Final BDS Part II

Examination will be held at the end of the Final Year and will have the following components;

1.	Theory Paper I	Prosthetics II	1 ½ hours		40
			1 Essay 4 SAQ		
2.	Restorative II		1 ½ hours	3 hours	40
			1 Essay 4 SAQ		
Paper II	Oral Surgery II		1 ½ hours		40
			1 Essay 4 SAQ		
	Oral Medicine		1 ½ hours	3 hours	40
			1 Essay 4 SAQ		
Paper III	Oral Pathology		1 ½ hours		40
			1 Essay 4 SAQ		
	Periodontology		1 ½ hours	3 hours	40
			1 Essay 4 SAQ		
Paper IV	Paedodontics		1 ½ hours		40
			1 Essay 4 SAQ		
	Orthodontics		1 ½ hours	3 hours	40
2. Clinical					
OSCE I	Prosthetics		10 Spots	1 hour	
30	Restorative		10 Spots	& 40 mts	30
OSCE 2	Oral Surgery		10 Spots		30

	Oral Medicine	10 Spots	2 ½ hours	30
	Oral Pathology	10 Spots		30
OSCE 3	Periodontology	10 Spots		30
	Orthodontics	10 Spots	2 ½ hours	30
	Paedodontics	10 Spots		30

3. Practical

Prosthetics	1 hour	25	
Restorative	1 hour	25	
Oral Surgery	1 hour		25

Pass Marks, Distinction and Honours

Pass mark in each discipline would be 50% and a score of 70% would be given a distinction in the discipline.

In the Final BDS Part I Examination pass mark will operate only for Community Dentistry and Dental Materials. Marks scored in Prosthetics, Restorative and Oral Surgery will be carried forward to the Final BDS Part II Examination.

Honours would be awarded for those who score, in the aggregate marks of all subjects as given below;

2 nd Class lower division	-	60 – 64%
2 nd Class upper division	-	65 – 69%
1 st Class	-	70% and above

Marks Distribution

Subject	Final BDS Part I In Course		Final BDS Part II		
	Theory	Clinical	Theory	OSCE	Practical
Prosthetics	25	30	40	30	25
Restorative	25	30	40	30	25
Oral Surgery		25	30	40	30
Total	150				

Dental Material	40			-	-	-	-
Community	60	15	25	-	-	-	100
Oral Medicine			30	40	30	-	100
Oral Pathology			30	40	30	-	100
Periodontology			30	40	30	-	100
Orthodontics				30	40	30	-
100							
Paedodontics				30	40	30	-
100							
Total							1090

INCOURSE ASSESSMENT SYSTEM

SUBJECT	TYPE	TIME	MARKS
Prosthetics	Long Case, Laboratory	3 rd & 4 th Year	30
Restorative	Patients, Clinical	3 rd & 4 th Year	30
Oral Surgery 30	Patients	3 rd & 4 th Year	
Oral Medicine	Clinical	4 th Year	
Oral Pathology 30	Pathology Project on selected Subjects eg. Cysts	3 rd & 4 th Year	
Community	Field Project, Viva	3 rd Year	25
Periodontology	Patients, Viva	4 th Year	30
Paedodontics	Patients, Viva	4 th Year	30
Orthodontics	Project Viva	4 th Year	30

Part B

COURSE UNIT HEALTH EDUCATION (4.1.1)

Pre requisite knowledge:

Basic awareness of dentistry and medicine acquired during the 2nd and 3rd BDS programs

Content

Principles of health communication and their application in individual health motivation and public education.

Objectives:

Knowledge:

On completion of the course the student must be able to:

1. List the aims of health education
2. Explain the basis for integrating oral and general health education
3. Explain the difference between formal and informal health education
4. Explain the concepts of needs, wants, demands, and perceptions in health care.
5. Describe the various aspects of learning theory and the process of behaviour change.
6. Describe the components of the belief systems, motivation systems, and normative systems operating within the framework of Health Belief Moels and the Health Action Model.
7. Describe the uses and limitations of mass media, small group instruction and individual motivation in health education.
8. Describe the steps in planning and implementing a health education program
9. Describe the basic principles involved in the preparation of good health education material.

SKILLS

On completion of the course the student must be able to successfully undertake the motivation of individual patients in the clinic, and also possess the skills and competencies required to plan and execute a public education programme in community context.

ATTITUDES

At the end of the course the student must appreciate the fact that changing human behaviour is a complex difficult undertaking demanding perseverance and skill comparable to that required in carrying out sophisticated clinical procedures.

At the end of the course the student must be motivated to give primacy to effective patient communication in every encounter with a patient.

Lecture topics

Basic aspects of Health Education

Health Action Model (HAM) and Health behaviours

Preparation of Health Education materials

Time One hour per lecture

Field and Clinical experience Preventive Dentistry Clinics (5 sessions - including

One preparatory tutorial)

Family visit (1 session)

Time 19 hours

* **Note :** It is essential that this programme should be complemented by an emphasis on health education and good patient communication in all the clinical units where students interact with patients.

COURSE : PRINCIPLES OF EPIDEMIOLOGY (4.1.2)

Pre requisite knowledge - Basic understanding of pathology and clinical features of common oral lesions

Content

Principles of epidemiology, types of epidemiological studies and measurement of common dental and oral diseases.

OBJECTIVES

1. Knowledge

On completion of the course the students should be able to

- 1.1. Describe the models of health
- 1.2. Describe the factors that contribute to health and sickness in individuals and in society
- 1.3. Define epidemiology and explain its uses
- 1.4. Describe the different types of epidemiological studies including their advantages and disadvantages Eg. Observational, descriptive, analytical, cohort, case control, cross sectional, experimental, clinical trials
- 1.5. Define the various measures of morbidity and mortality - Eg. Rate, prevalence, incidence, severity, mortality
- 1.6. Describe the scales of measurement - Eg. Nominal, ordinal, ratio & interval
- 1.7. Explain the terms "validity" and "reliability" of a test
- 1.8. Explain the terms "sensitivity" and "specificity" as measures of validity of a test
- 1.9. Describe the clinical methods, criteria and indices used for measuring dental caries, periodontal disease, oral hygiene, dental fluorosis, oral cancer/pre cancer, malocclusion, maxillo facial trauma and oral and facial deformities cancer/pre cancer and dental fluorosis
- 1.10. Describe the global patterns for dental caries, periodontal disease, oral cancer/pre cancer and dental fluorosis, maxillofacial trauma and orofacial deformities.

1.11. Describe the patterns of oral disease in Sri Lanka

1.12. Describe the occurrence of oral disease patterns in relation to social, economic behavioural and demographic variables.

2. SKILLS

At the end of the course the students should be able to

2.1. Screen individuals using the WHO basic methods for oral health surveys

3. ATTITUDES

At the end of the course the students should be motivated to

3.1. Appreciate the impact of socio-economic, political and environmental factors on human health

3.2. Appreciate the value of epidemiological data for the dentist

Lecture Topics

Introduction to basic concepts in community dentistry

Epidemiology and its uses

Types of epidemiological studies

Measurement of dental caries

Indices of periodontal disease

Global oral disease patterns

Oral disease patterns in Sri Lanka

Epidemiology of dental caries

Epidemiology of periodontal disease

Epidemiology of oral cancer/pre cancer

Epidemiology of dental fluorosis including fluoride toxicity

Occurrence and distribution of maxillofacial trauma and oro-facial disfunction

Time one hour per lecture topic

Clinical practice - use of WHO basic methods for oral health surveys

Time 3 hours/student

COURSE UNIT : MEDICAL STATISTICS AND RESEARCH
METHODOLOGY (4.1.3)

Pre requisite Knowledge

Before entering the course the students should have a knowledge of the different types of epidemiological studies and methods of measuring disease.

Contents:

Basic statistics, questionnaire design, survey methods

OBJECTIVE

Research methodology

Knowledge

At the end of the course the students should be able to

1. Discuss the importance of sampling in study design
2. Describe the different methods of sampling and their advantages and disadvantages
3. Describe the principles of questionnaire design and attitude measurement
4. Describe the different types of surveys based on questionnaires and their advantages and disadvantages
5. List the different types of question design that can be included in a questionnaire
6. Describe the various sources of error in research design
7. Explain the procedures for training and calibration of examiners
8. Describe the steps involved in carrying out a survey

Statistics

Knowledge

At the end of the course the students should be able to explain the following statistical concepts and methods

1. Variables
2. Methods of diagrammatically representing data eg. Bar chart, pie chart, histogram, graph, frequency polygon
3. Normal distribution
4. Mean, median, mode, variance, standard deviation, standard error, range, their advantages and disadvantages and computation.
5. Regression and correlation
6. Significance testing using t test and χ^2 test

3. SKILLS

At the end of the course the student should be able to

- 3.1. Design and conduct a simple scientific investigation in relation to a given public health issue.
- 3.2. Collect data either by examination or using a questionnaire, systematically analyze the data present the findings in terms of a report.

Lecture Topics

Responsibility

Questionnaire design and attitude measurement Community	1 hour
Oral health survey methods including sampling Community	1 hour

Statistics 1 2 hours
Statistics 2 2 hours
Statistics 3 2 hours
Statistics 4 2 hours

SKILLS

Discussion with supervisor

2 hours/group (3 in a group)

Project work

Evaluation:

Theory Essay Type - End of course
Viva

Skill - Project in course - Marks given
OSCE

COURSE UNIT - ENVIRONMENTAL HEALTH (4.1.4)

Pre requisite knowledge

Socio behavioural and environmental factors involved in the prevention of diseases studied in the General Medicine Program.

Basic perspectives on the global challenge to health and the environment as acquired in the 2nd BDS Course unit.

Content

Impact of environmental factors on the health and quality of life of populations both locally and globally.

OBJECTIVES

KNOWLEDGE

On completion of the course the students should be able to:

1. Explain the meaning of environment in terms of the many different facets that make up this concept.
2. Describe the global challenges to health and the environment arising from demographic issues, poverty, resource use, and macroeconomic policies.
3. Discuss environmental issues surrounding food and agriculture, water, energy, industry, human settlements and basic services.

4. Describe transboundary and international issues in environmental health.
5. Describe current health and environmental concerns in economic development.
6. Identify local environmental issues in Sri Lanka in the context of current global environmental concerns.
7. Describe the environmental factors affecting the oral health of an average family in Sri Lanka.
8. Discuss the role of health professionals in the advocacy of environmental issues

SKILLS

At the end of the course the student must be able to accurately elicit the environmental factors influencing the health of individuals and families by interview and observation.

ATTITUDES

At the end of the course the student should be motivated to keep abreast of Environmental issues throughout his/her professional life and join with other parties in campaigning for the conservation of the environment.

LECTURE TOPICS

Health and the Environment (2 Lectures)

Time : Two hours of lectures - First term third year

Field Practice

Family visit - Throughout 3rd year

Time : 3 hours

Evaluation- End of course theory
Essay type

**COURSE UNIT : INDIVIDUAL AND PUBLIC HEALTH ASPECTS
OF ORAL DISEASE PREVENTION (4.1.5)**

Pre requisite knowledge

Before entering the course the student have a knowledge of aetiology and epidemiology of dental caries, periodontal disease and oral cancer.

Contents:

Current approaches in the prevention and control of dental caries, periodontal disease and oral cancer/pre cancer

OBJECTIVES:

1. Knowledge

At the end of the course the students should be able to:

- 1.1. Define primary, secondary and tertiary prevention and explain the concepts of primary and secondary prevention in relation to common oral diseases.
- 1.2. Explain the concept of population, secondary prevention and high risk strategies for prevention of common oral disease
Prevention of dental caries

- 1.3. Describe the modes of action fluoride in the prevention of dental caries
- 1.4. Describe, compare and contrast topical fluorides used in caries prevention
- 1.5. Describe compare and contrast systemic fluoride used in caries prevention
- 1.6. Describe the role of fissure sealants in caries prevention
- 1.7. Describe the effects of fluoride toxicity
- 1.8. Explain the role of diet in the aetiology of dental caries and dietary control in the prevention of dental caries.
- 1.9. Explain the role of oral hygiene in the prevention of dental caries

Prevention of periodontal disease

- 1.10. Explain the concepts of periodontal disease progression
- 1.11. Explain the principles of non surgical periodontal therapy
- 1.12. Describe all aspects of plaque control both mechanical and chemical including brushing techniques, devices for tooth cleaning, composition of dentifrices and anti plaque and anti calculus agents
- 1.13. Describe the role of diet and nutrition, tobacco avoidance, hormonal factors and intercurrent disease in prevention of periodontal disease
- 1.14. Explain the role of periodic professional calculus removal
- 1.15. Understand the socio-behavioural and cultural aspects of plaque control
- 1.16. Explain health and social policies in periodontal disease prevention

1.17. Explain the role of different sectors, agencies and manpower types in facilitating periodontal disease prevention

Prevention of oral cancer/pre cancer

1.18. Explain prevention in the context of common risk factors relevant to all cancers eg. tobacco, diet etc.

1.19. Explain the role of habit avoidance with special reference to tobacco consumption - importance of primary socialization.

1.20. Explain the role of habit intervention including behaviour modification

1.21. Describe the health education strategies at individual and community level

1.22. Describe the principles, techniques and the implementation of screening programme for early detection of pre cancer

1.23. Explain the health and social policies directed at cancer control

1.24. Explain the role of different sectors and agencies including govt., NGOs profession, schools etc. in cancer control

1.25. Explain the importance and the relevance of minimum intervention approaches for oral disease control

2. SKILLS

At the end of the course the students should be able to

2.1. carryout the application of topical fluorides and fissure sealants in individuals

2.2. educate and advice individuals and the community on the importance of habit intervention and behaviour modification for prevention of common oral disease

3. ATTITUDES

At the end of the course the students should appreciate:

The importance of behaviour modification in the prevention of common oral diseases

LECTURE TOPICS

Modes of action of fluorides in the prevention of dental caries and fluoride toxicity

Prevention of dental caries - systemic fluoride therapy -
1
Topical fluoride therapy- 1
Diet and oral hygiene - 1

Minimum intervention in caries control - 1
Current concepts of periodontal disease - 1
Prevention of oral cancer - 1

Time : One hour per lecture topic
Clinical practice : clinical preventive dentistry

Time : 3 hours per week

Title **Medical ethics and Jurisprudence**
(4.1.6)

Pre requisite knowledge Clinical Examinations – Knowledge and skills

Course Contents
Hippocratic oaths
International code of medical ethics
Interpersonal relationships with patients and colleagues
Accurate and detailed maintenance of patients records

with

The need and importance of such records
Binding contracts with patients (Implied)
Malpractice and willful negligence
Unprofessional behaviour and misconduct

patients
The expert witness
Court procedure requirements

Objectives

The student should

1. Be able to treat a patient and not merely the disease or condition he/she is presented with.
2. Have requisite knowledge of the medico legal requirements in clinical practice.
3. Work and conduct himself/herself in such a manner so as not to bring the profession into practice.
4. Show concern and empathies with the patient.
5. Give priority to what is in the best interest of the patient.

Learning Methods assignments

Lectures, handout, reading

should

Students clinical encounters with patients
be individually supervised and monitored by
academic staff of respective clinical
departments

Demonstration of, and implementation of,
correct
record keeping practices.

Visit/visits to courts in order to observe
court
procedure with regard to the expert witness

The course should be best conducted by the forensic department of the University or by the JMO Kandy during clinical years Part I & Part II.

Evaluation
recording

Incourse - by the academic supervisors observations during clinical attachments (preferably on appointment books)

End of course assessments - Oral examination which will include jurisprudence as well (15 minutes)

Marks to be added to Final BDS Part II

COURSE UNIT HEALTH CARE SYSTEM (4.1.7)

Pre requisite knowledge

An understanding of the aetiology prevention and treatment of the principle oral and dental diseases and their occurrence and distribution.

Contents

The planning and organization of services for the provision of dental care, the various systems in existence and their structure, function and shortcomings.

Objectives

Knowledge

On completion of the course the student should be able to:

1. Describe the organization of dental services in Sri Lanka and analyze its limitations.
2. Describe the main organizational structures within which dental care is provided in other parts of the world and their relative advantages and disadvantages.
3. Explain the different methods used to estimate manpower requirements.
4. Describe the different manpower types both professional and auxiliary, medical and dental, used in the provision of oral health services and their respective distribution and roles in the organizational structure.
5. Discuss the various economic aspects that may have a bearing on dental care including dental expenditure, systems of financing, clinical audit, conflicts between health and economic development, and various agents in health care financing.
6. Describe current trends in health care provision by the public and private sectors and modalities for the provision of services to specific groups including high risk groups.
7. Discuss the principles of primary health care and their application to oral health care.

8. Explain the limitation of traditional curative approaches to disease control.
9. Discuss the philosophy of public health and multisectoral influences on community health.
10. Comment on the potential for improving the provision of services to the consumer in the future with increased productivity and the more efficient utilization of health manpower.

Skills Not relevant

Attitudes

At the end of the course the student must be motivated to take an active interest in the evolution of dental services in Sri Lanka, and play an active role as a dentist in bringing about progressive reforms enabling the provision of a better service to the community.

Lecture Topics

Philosophy of public health and basic concepts in Community Dentistry

1. Organization of dental care delivery system
 - Dental manpower
 - Dental auxiliaries
 - Primary health care
 - Dental economics
 - Utilization of dental services

Time One hour per lecture topic

Field Practice

Visits to the following health care facilities and health authorities:
 Hospital dental clinic and School dental clinic
 Armed services dental clinic
 Regional dental surgeon

PHI and Primary health care worker
 Maternal and child health clinic
 Dental therapist training school
 Time : 40 hours

3rd year through out

Evaluation End of course theory

COURSE UNIT IN GENERAL DENTAL PRACTICE (4.1.8)

Pre requisite knowledge

A broad familiarity with the theory and practice of clinical dentistry as might be achieved by the end of the 11th term of the BDS course.

Contents

Establishing, organizing and successfully running a General Dental Practice in Sri Lanka so as to provide job satisfaction and adequate monetary returns to the dentist while providing a good service to patients.

Objectives

Knowledge

By the end of the course the student must be able to:

1. Discuss the various factors that must be taken into account when taking a decision whether or not to go into General Dental Practice.
2. Discuss the pros and cons of General Dental Practice as against other careers for a dental surgeon in Sri Lanka.
3. Describe the practical steps that will have to be taken and the problems that may have to be overcome when establishing a General Dental Practice in Sri Lanka after graduation.
4. Describe the various accounting, business, and marketing aspects of establishing and running a General Dental Practice.
5. Describe the various elements of clinical infrastructure including operatory concepts and clinic organization that are essential for an attractive and efficient general dental practice.
6. List the structural and functional features of a successful general dental practice which provides professional fulfillment and monetary reward to the dentist and high quality care to the patient.

7. Describe the factors which account for patient satisfaction in general dental practice including those relating to personality and communication.
8. Discuss how the demands of an ideal general dental practice can be reconciled with ground realities and constraints in Sri Lanka.
9. Discuss the use of auxiliaries in general dental practice, including arrangements for laboratory services and the application of the 'team concept'
10. Discuss ethical issues of particular relevance to General Dental Practice.
11. Describe the role of good management in general dental practice.
12. Describe the characteristic features of solo practice, group practice, and locum practice and the factors

Skills

By the time the student graduates he/she must possess the confidence and skill to establish and run a general dental practice in Sri Lanka either alone or in partnership with others.

Attitudes

At the end of the course must appreciate the critical importance of the 'patient factor' in a successful general dental practice the need for efficiency in ensuring a satisfactory monetary return and have a vision of how it is possible to contribute to the public good through general dental practice.

Lecture Topics (invited lectures by eminent GDP's or GP's)

Establishing a General Dental Practice in Sri Lanka

Running a General Dental Practice in Sri Lanka (Clinical aspects)

Running a General Dental Practice in Sri Lanka (Management aspects)

Running a General Dental Practice in Sri Lanka (Financial aspects)

Running a General Dental Practice in Sri Lanka (Ethical aspects)

Time: One hour per lecture

Field Experience:

Two day vacation clerkship with selected General Dental Practitioners in different parts of the island arranged in coordination with the College of General Dental Practitioners of Sri Lanka.

Time : Approximately 16 hours per student (8 hours per day spread over 2 days during vacation)

Clinical Experience:

Obtained through the various clinical course units of the BDS course.

COURSE UNIT - DENTAL MATERIALS (4.2.1)

Pre requisite knowledge

Before entering the course the student must have a basic knowledge of physics, chemistry and biology.

Contents

The composition, method of manufacture, manipulation, properties, critique and selection of dental materials.

Objectives

1. Knowledge

On the completion of the course the student should be able to:

- 1.1. List the main requirements of dental materials
- 1.2. Describe the basic scientific principles in relation to
 - 1.2.1. Mechanical properties
 - 1.2.2. Thermal properties
 - 1.2.3. Rheological properties
 - 1.2.4. Light colour and esthetics
 - 1.2.5. Polymers
 - 1.2.6. Metals
 - 1.2.7. Alloys
 - 1.2.8. Ceramics

1.2.9. Composites

1.2.10. Corrosion and electrodeposition

1.2.11. Surface properties and adhesion

1.3. Describe the cements and filling materials

1.3.1. Cements based on Phosphoric acid

1.3.2. Organometallic chelate cements

1.3.3. Poly alkenoate cements

1.3.4. Polymer - ceramic composites

1.3.5. Bonding techniques to enamel and dentine

1.3.6. Amalgam

1.3.7. Endodontic materials

1.4. Describe impression materials

1.4.1. Non elastic impression materials

1.4.2. Hydrocolloid impression materials

1.4.3. Elastometric impression materials

1.5. Describe materials for dental prostheses

1.5.1. Polymeric denture base materials

1.5.2. Tissue conditions and soft liners

1.6. Describe crown and bridge materials

- 1.6.1. All ceramic restorations
- 1.6.2. Alloys for crowns and bridges
- 1.6.3. Porcelain fused to metal restorations

1.7. Describe laboratory materials and procedures

- 1.7.1. Cast and die materials
- 1.7.2. Waxes
- 1.7.3. Investment materials
- 1.7.4. Principles of casting and faults in casting
- 1.7.5. Soldering and welding
- 1.7.6. Abrasion and polishing

1.8. Describe the dental materials used in the practice of

- 1.8.1. Orthodontics
- 1.8.2. Oral Surgery
- 1.8.3. Periodontology

2. Skills

On completion of the course the student should be able to:

- 2.1. Select the appropriate dental materials for a given situation
- 2.2. Manipulate dental materials properly to get the best results

3. Attitudes

At the end of the course unit the student should be motivated to

- 3.1. Appreciate the need to select the appropriate materials for a given situation.
- 3.2. Appreciate the need to manipulate dental materials properly in order to obtain best result.
- 3.3. Recognize the importance of selecting safe and cost effective materials with good short and long term results.
- 3.4. Operate with minimum wastage of expensive and inexpensive dental materials.

Teaching Methods

1. Lectures

Lecture Topic	No. of Lectures
1. Basic scientific principles	06
2. Cements and filling materials	07
3. Impression materials	04
4. Materials for dental prosthesis	03
5. Crown and bridge materials	02
6. Laboratory materials and procedures	06
7. Miscellaneous materials	<u>02</u>
	30

Lecture topic 3,4 & 6 to be done by prosthetics

2. Clinical demonstrations

1. Basic scientific principles. Demonstrations to be done at the Materials Laboratory - Faculty of Engineering
2. Cements and filling materials - 3 sessions
3. Impression materials - 1 session 2 of lecture per week
4. Materials for dental prosthesis - 1 session

5. Crown and bridge materials - 1 session
6. Laboratory materials and procedures - 2 sessions

Timing

2nd year whole year

Evaluation

Final Part I Examination

1. OSCE
2. Theory Paper

RESTORATIVE DENTISTRY (4.2.2)

COURSE UNIT - MANAGEMENT OF CARIES

Pre requisite knowledge

Before entering the course unit the students must have basic knowledge about dental anatomy and histology and the aetiology, microbiology, pathology of dental caries and operative dentistry I.

Contents

History, examination, special investigations in relation to diagnosis of caries, and its management including prevention and treatment.

Objectives

On completion of the course the student should be able to

1. Knowledge and understanding
 - 1.1. Describe the important features of a history relevant to caries
 - 1.2. Describe the method of assessment of caries risk
 - 1.3. Describe the susceptible sites for caries and the carious process in enamel and dentine
 - 1.4. Describe the clinical features of caries
 - 1.5. Classify carious lesions according to site, size, nature and activity

- 1.6. Describe the signs and symptoms of caries
- 1.7. Discuss its differential diagnosis list the causes of 'toothache'
- 1.8. Describe the clinical and laboratory investigations relating to diagnosis of caries and caries activity
- 1.9. Describe the criteria for operative management of caries
- 1.10. Describe the principles of operative management of caries
- 1.11. Describe the prevention of caries.

2. Skills

On completion of the course student should be able to:

- 2.1. Perform accurate and meaningful history taking in relation to caries
- 2.2. Assess caries risk of a patient
- 2.3. Conduct clinical examination to detect carious lesions
- 2.4. Perform relevant special investigations
- 2.5. Diagnose and classify carious lesions according to caries activity
- 2.6. Formulate a treatment plan
- 2.7. Gain access to caries
- 2.8. Remove carious tissue
- 2.9. Temporise carious lesions

3. Attitudes

- 3.1. Appreciate the need for prevention of caries
- 3.2. Appreciate the need to establish rapport with patients having symptoms and demonstrate kindness and sensitivity towards them.
- 3.3. Appreciate the importance of the concept of minimal destruction of tooth substance in the management of caries.

Lecture Topic	Responsibility
01. Introduction and etiology of dental caries Dentistry	Restorative
02. The carious process – clinical aspects	“
03. Classification of caries	“
04. Appreciate the importance of the concept of Minimal destruction of tooth substance in the Management of caries	“
05. Assessment of caries risk	“
06. Symptoms of caries	“
07. Management of caries	“
08. Prevention of caries Dentistry	Community

Clinical Demonstrations

01. History taking and examination
02. Clinical features of caries
03. Bitewing and periapical radiography
04. Vitality testing
05. Treatment of caries – E.S.D.

RESTORATIVE DENTISTRY (4.2.3)

COURSE UNIT - BASIC RESTORATIONS 1

Pre requisite Knowledge

Before entering the course the student must have a basic knowledge about dental anatomy and histology.

Content

The operator and the environment, positioning of patient, moisture control, hand instruments rotary instruments ancillary instruments and equipment in restorative dentistry.

Knowledge

At the end of the course students should be able to

1. Describe the dental ' team '
2. Describe the positioning of the patient, layout of instruments and proper illumination.
3. Describe how moisture control is achieved.
4. Describe the techniques of eye, and soft tissue protection in restorative dentistry.

5. Describe the basic hand instruments with their uses and handling.
6. Describe the rotary instruments and their uses.
7. Describe burs and stones with indications of their usage.
8. Describe the sterilization and routine maintenance of hand and rotary instruments.
9. Describe the ancillary and disinfection instruments and equipment used in restorative dentistry.

Skills

At the end of the course the students should be able to

1. Position the patient, instruments and assistant operator for restorative treatment.
2. Obtain moisture control with different techniques.
3. Identify, select and use appropriate hand instruments and rotary instruments
4. Maintain rotary instruments.

Attitudes

At the end of the course the students should have been motivated to

1. Work with correct technique and appropriate instruments
2. Appreciate the safe usage of sharp and rotary instruments.
3. Appreciate the need to perform routine maintenance of instruments for maximum efficiency.

Learning Methods

Clinical demonstration/Clinical Practice Class	Responsibility	No. of
-------------------------------------------------------	-----------------------	---------------

- | | | |
|--------------------------------------------------|-------------|-------------------|
| 1. Positioning of patient and instrument student | Restorative | 3 hours/
group |
| 2. Restorative hand instruments and their | “ | |
| 3. Rotary instruments and their uses | “ | |
| 4. Methods of moisture control | “ | |

Laboratory Practice/phantom head work simulated

- | | | |
|------------------------------------------------|-------------|---------------------------|
| 1. Restorative hand instruments and their uses | Restorative | 15 hours/student
group |
| 2. Rotary instruments and their uses | ” | |
| 4. Simulated maintain control | | |

Lecture Topics	Responsibility	No. of Lect.
-----------------------	-----------------------	---------------------

- | | | |
|----------------------------------|-------------|---|
| The operator and the environment | Restorative | 2 |
| Control of moisture | Restorative | 1 |
| Hand instruments | Restorative | 2 |
| Rotary instruments | Restorative | 2 |

RESTORATIVE DENTISTRY (4.2.4)

COURSE UNIT - BASIC RESTORATION II

Pre requisite Knowledge

Before entering the course the student must have a basic knowledge about dental anatomy and histology, caries, basic restorations I and dental materials.

Content

Clinical decision making, in restorative dentistry, principles of cavity preparation and restoration of pit and fissure and approximal caries of posterior and anterior teeth with amalgam and tooth coloured restorative materials.

Objectives

1. Knowledge and understanding

At the end of the course the students should be able to

- 1.1. Describe the major decisions which have to be made when planning restorative treatment.
- 1.2. State the objectives of restoring teeth
- 1.3. Describe the factors that determine cavity design
- 1.4. Describe in detail the principles of cavity design.
- 1.5. Describe how pain and pulpal trauma is minimized in restorative dentistry
- 1.6. Describe in detail the treatment options for management of carious lesions.
- 1.7. Describe the advantages of different restorative materials used for anterior and posterior teeth.
- 1.8. Describe in detail the principles and techniques of cavity preparation for amalgam and tooth coloured materials.
- 1.9. Compare and contrast the cavity design for amalgam and tooth coloured restoration.
- 1.10. Describe the instruments and accessories required for single and multi surface basic restorations.
- 1.11. Describe the problems associated with treatment of a large carious cavity.
- 1.12. Describe the treatment options for restoration of a large carious lesion.
- 1.13. Describe the accessories and the technique of pin restoration.

2. Skills

On completion of the course unit the student should be able to

- 2.1. Arrive at a definitive diagnosis regarding caries and pulp status and make treatment decisions.
- 2.2. Select the appropriate restorative materials and liners
- 2.3. Prepare cavities following current principles
- 2.4. Apply linings and bases

2.5. Restore teeth with amalgam and tooth colour materials.

3. Attitudes

At the end of the course the student should be motivated to,

- 3.1. Recognize the importance of preserving tooth substance and vitality while preparing cavities.
- 3.2. Appreciate the importance and the need for perfection of all stages for a restoration.
- 3.3. Appreciate patients fear of pain and employ pain control precautions.

Lecture Topics	No. of Lectures
1. Principles of cavity preparation and design	3
2. Management of pit and fissure caries	3
3. Management of approximal caries of posterior teeth	2
4. Management of approximal caries of anterior teeth	2
5. Pin restoration (accessory methods)	2

Learning Methods

Clinical demonstrations	No. of Classes
1. Examination and diagnosis of caries and pulpal status	
2. Access to caries	
3. Single surface cavity preparations	
4. Multi surface cavity preparations	
5. Placement of lining	
6. Placement of matrixes and matrix holders	
7. Packing of restorative materials	

8. Finishing of restorations

RESTORATIVE DENTISTRY (4.2.5)

COURSE UNIT - ENDODONTICS

Pre requisite Knowledge

Before entering the course unit the students must have a basic knowledge of Dental Anatomy, Microbiology and completed the course units on Basic Restorations, Diseases of Dental Pulp.

Content

The diagnosis, case selection, instruments, materials, techniques, practice and complications of endodontic therapy.

Objectives

1. Knowledge and Understanding

On completion of the course unit the student should be able to

- 1.1. Describe the important aspects in the clinical history of a patient that are relevant to endodontic diagnostic and treatment planning.
- 1.2. Describe the clinical features of reversible and irreversible pulpitis.
- 1.3. Describe the clinical features of a non vital tooth.
- 1.4. Describe the special investigations in endodontic practice
- 1.5. List the indications for endodontic therapy
- 1.6. List the contra indications for endodontic practice
- 1.7. Describe the instruments used in endodontic practice
- 1.8. Describe the materials used in endodontic practice
- 1.9. Describe the management of endodontic emergencies
- 1.10. Describe in detail the morphology of the root canal system of permanent teeth relevant to endodontics
- 1.11. Describe the principles and requirements of an access cavity preparation
- 1.12. Describe the methods of estimation of working length of root canal
- 1.13. Describe the standard techniques of preparation of the root canal
- 1.14. Describe the common faults and complications that may occur during preparation of root canals
- 1.15. techniques of obtaining root canals
- 1.16. Describe the diagnosis and management of root resorption
- 1.17. Describe the diagnosis and management of perio endo lesions
- 1.18. Describe the diagnosis and management of common endodontic complications
- 1.19. List the indications and describe the procedures of surgical endodontics
- 1.20. List the indications for an apicectomy

1.21. Describe in detail the technique of apicectomy with retrograde root filling

2. Skills

On completion of the course unit the student should be able to

- 2.1. Diagnose the status of the pulp and plan endodontic treatment
- 2.2. Perform relevant special investigations
- 2.3. Request and prepare appropriate endodontic instruments and materials
- 2.4. Prepare the access cavity
- 2.5. Estimate the working length/s of root canals
- 2.6. Prepare the root canal/canals
- 2.7. Obturate root canal/canals at the appropriate time
- 2.8. Assess success of endodontic therapy
- 2.9. Diagnose and manage common endodontic complication and accidents
- 2.10. Select appropriate patients and perform apicectomy

3. Attitudes

At the end of the course unit the student should be motivated to

- 3.1. Recognize the importance of correct diagnosis of pulp status
- 3.2. Importance of saving teeth by endodontic therapy which otherwise would be extracted.
- 3.3. Appreciate the necessity to perform each step of a long procedure to perfection in order to obtain good results.

3.4. Appreciate the need to follow up patients in order to ensure long term success.

Teaching Methods

1. Lecture Topics Lectures	Responsibility	No.	of
1. Endodontic diagnosis and treatment planning	Restorative		2
2. Endodontic instruments and materials	"		2
3. Root canal morphology and access cavity preparation	"	2	
4. Preparation of root canals	"		2
5. Obturation techniques	"	1	
6. Common complication and problems in Endodontics	"		2
7. Surgical endodontics	"	2	
8. Root resorption and perio endolesion	"		1

Clinical Demonstrations Classes

	No. of
1. Vitality testing	
2. Working length estimation	
3. Access cavity preparation group	3 hours/
4. Preparation of root canals	
5. Obturation of root canals	
6. Quality assessment	
7. Apicectomy	

COURSE UNIT - ADVANCED RESTORATIONS (4.2.6)

Pre requisite knowledge :

Before entering the course the student must have a basic knowledge of occlusion, basic dental laboratory procedures and completed the course units on basic restorations and endodontics.

Content:

The case selection, treatment planning, practice and laboratory procedures of, crowns veneers, inlays and bridges.

Objectives

On completion of the course the student should be able to;

- 1.1. Describe the general factors, which have to be considered when planning crowns and bridges, patients attitude, expectations, oral hygiene, habits, general health occlusion.
- 1.2. Describe the clinical assessment of individual teeth for crowns and bridges.
- 1.3. Describe the principles of retention and resistance in crown and bridge tooth preparations.
- 1.4. Describe the different gingival preparations.
- 1.5. Describe the types of inlays, crowns and veneers and their indications.
- 1.6. Describe the periodontal considerations in crown and bridge work.
- 1.7. Describe the occlusal considerations with terminology and definitions.
- 1.8. Describe the selection of impression materials and techniques used in crown and bridge work.
- 1.9. Describe the selection of materials used to construct crowns and bridges with specific indications and advantages.
- 1.10. Describe the procedure of construction of temporary crowns, the try in and cementation and finish of crown and bridges, the clinical techniques of anterior jacket crowns, the clinical techniques of veneering, the clinical techniques of post retained crowns, the clinical techniques of posterior crowns, the clinical techniques of pin restorations and core build ups, the components and terminology of bridges.
- 1.11. Describe the types of bridges with indications and limitations.

- 1.12. Describe the types and selection of retainers for conventional bridges
- 1.13. Describe the clinical techniques of construction of conventional bridges.
- 1.14. Describe the maintenance, failures and repair of crown and bridges.

2. SKILLS

On completion of the course the student should be able to:

- 2.1. Select patients suitable for crown and bridges.
- 2.2. Perform relevant special investigations.
- 2.3. Select the appropriate design, materials and tooth preparations for crowns and bridges.
- 2.4. Prepare crown and bridge tooth preparations on teeth of patients/phantom head
- 2.5. Take impressions of preparations
- 2.6. Assess the quality and short comings of constructed crowns and bridges
- 2.7. Cement and finish crown and bridges
- 2.8. Review, diagnose and treat complications arising from crowns and bridges.

3. ATTITUDES

At the end of the course the student should be motivated to:

- 3.1. Recognize the importance of case selection in crown and bridge work
- 3.2. Appreciate the cost of crown and bridge work
- 3.3. Maintain the highest level of quality in crowns and bridges
- 3.4. Appreciate the need to follow up patients with crowns and bridges to ensure long term success.

Teaching methods

1. Lectures

Lecture Topics	No. of Lectures
1. General principles and case selection	3
2. Occlusal and periodontal considerations	1
3. Impression materials and techniques	1
4. Try in and cementation	1
5. Restoration of anterior teeth	2
6. Restoration of posterior teeth	2
7. Restoration of space	3
8. Maintenance, failures and repairs	-
	<u>15</u>

2. Clinical demonstrations/practice

1. Occlusal assessment and recording for crown and bridge work
2. Tooth preparations for anterior crowns
3. Tooth preparations for posterior crowns
4. Tooth preparation for bridges
5. Impression techniques of crown and bridge work
6. Trial and quality assessment
7. Cementation and finishing of crowns and bridges

3. Laboratory practice

1. Jacket crown preparation
2. Post crown preparation
3. Full crown preparation
4. $\frac{3}{4}$ crown preparation
5. 3 unit fixed - fixed bridge preparation on anterior teeth

Timing

4th year 1st year an 2nd terms

Evaluation

Final Examination

1. OSCE
2. Theory paper

COURSE UNIT ON EDENTULOUS ELDERLY PATIENT (4.3.1)

Pre requisite Knowledge

Structure and function of the oro-masticatory apparatus, physiology of muscles, joints, neuromuscular coordination, importance of nutrition.

Content:

Physiopathology of the edentulous mouth, changes in mandibular position, facial height following tooth loss. Age changes in tone, muscle joints, effect on nutrition, psychosocial aspects of edentulous.

Objectives

1. Knowledge

At the end of the course the student should be able to

- 1.1. List the common medical problems in the edentulous elderly patients eg. Diabetes hypertension, Ischaemic heart disease
- 1.2. Describe the disadvantages and problems due to the difficult in masticating food in the edentulous patient.
- 1.3. Describe the structural and functional changes in the oral cavity following tooth loss.
- 1.4. Describe the changes in facial height due to Edentulous ness and the problems caused by such changes.
- 1.5. Describe the adapted movements and positions of the mandible due to edentulousness and effects of these on these on the oro-masticatory apparatus.
- 1.6. Describe the effects of age changes and edentulousness on alveolar bone, T/M joint muscles of mastication
- 1.7. Describe the psycho-social effects of Edentulousness
- 1.8. Describe the epidemiology of Edentulousness

2. SKILLS

At the end of the course the student should be able to

- 2.1. Interview an edentulous patient and find out the problems he/she experience due Edentulousness
- 2.2. Examine an edentulous patient and detech the changes in jaw position, facial height and mandibular movements.

- 2.3. Examine the edentulous patient and detect the extent of alveolar bone loss, masticatory muscle atrophy.
- 2.4. Examine an edentulous patient and detect T/M joint pathology due to Edentulousness
- 2.5. Interview/examine an edentulous patient and find out psych-social problems he/she has due to Edentulousness

3. ATTITUDES

At the end of the course the student should be able to

- 3.1. Appreciate the need to manage elderly patients with kindness and understanding
- 3.2. Appreciate the need to view Edentulousness as a disease that requires treatment.

Learning Methods

Lecture Topics Lectures	Responsibility	No.	of
1. Physiology of the oro-masticatory Apparatus – revision	Oral Physiology		1
2. Medical problems in the elderly Edentulous patients	Oral Medicine	1	
3. Adaptation for mastication and Mandibular posture in Edentulousness	Prosthetics	1	
4. Changes in mucosa bone, joints muscles	Oral Biochemistry		1
5. Effects of Edentulousness on nutrition	Oral Biochemistry	1	
6. Psycho-social aspects of edentulousness	Prosthetics		1
7. Epidemiology of Edentulousness	Community	1	

Clinical Classes

1. Mandibular posture and movements in Edentulous patients	Prosthetics		1
2. Changes in alveolar bone, T/M joints and masticatory muscles in edentulous patients	Prosthetics		1

Evaluation

Theory	Essay type question viva Viva	-	End of course
Clinical	OSCE	-	End of course
Timing	First term, third year		

COURSE UNIT - COMPLETE DENTURES (4.3.2)

Developed by the Working Group in Prosthetic Dentistry

Pre requisite Knowledge

Before entering this course unit student should have a knowledge of Gross Anatomy, Dental Anatomy and Dental material science.

Content:

Applied anatomy and physiology construction of accurate master casts, designing construction of acrylic dentures and adjusting them on recall visits.

OBJECTIVES

1. Knowledge and understanding

On completion of the course unit the students should be able to

- 1.1. Describe the anatomy of the denture bearing tissues and the anatomical and physiological factors that influence denture stability
- 1.2. Describe the method of examination of an edentulous patient and collect data necessary to plan treatment
- 1.3. List the conditions which may necessitate mouth preparation prior to the construction of dentures and describe how these are carried out.
- 1.4. Describe the clinical procedure of recording jaw relations.
- 1.5. Discuss the importance of try in stage of dentures.
- 1.6. Describe the procedure of fitting the finished dentures.

SKILLS - Clinical Dental Prosthetics

On completion of the course unit the student should be able to

- 2.1. Carry out the clinical examination and investigation, collect and record the relevant data of the edentulous patient.
- 2.2. Prepare the mouth prior to the construction of complete dentures where necessary. Eg. Alveolar plasty, frenectomy
- 2.3. Record the impressions of the upper and lower denture bearing tissues.
- 2.4. Record the jaw relations, using wax bite blocks design the denture, select teeth and instruct the technician.
- 2.5. Check the trial denture where necessary and give instructions to the technician.
- 2.6. Deliver the finished denture and give instructions to the patient on proper use.
- 2.7. Manage patients in short term and long term follow up to assess success of dentures.

3. Prosthetic Laboratory Technique

- 3.1. Cast impression and obtain primary cast.
- 3.2. Construct special trays on the primary cast.
- 3.3. Construct record blocks
- 3.4. Transfer the jaw relations to the articulator and mount the casts.
- 3.5. Carry out the setting up of teeth
- 3.6. Carry out flasking, packing and processing of acrylic dentures
- 3.7. Deflask, trim and polish processed dentures
- 3.8. Reline and rebase dentures
- 3.9. Repair fractured dentures and carry out addition of teeth to existing partial dentures
- 3.10. Copying of existing dentures.

4. ATTITUDES

Student should have been motivated to

3.	Impression taking - preliminary	“		1
4.	Border moulding technique (Master Impression)	“	1	
5.	Recording the jaw relations including face Bow recording	“		1
6.	Trying the denture in the mouth	“		1
7.	Delivering the finished denture	“		1
8.	Recall appointments and carrying out the Adjustments	“		1
9.	Relining rebasing and repairs	“	1	

Laboratory Techniques - Demonstrations and Practice Classes

Classes	No.	of
1. Casting of impressions		
2. Construction of special trays		
3. Construction of record blocks		
4. Mounting the casts on the articulator including adjustable Articulator		
5. Setting up of teeth	4 (total)	
6. Flasking, packing and processing of trial dentures		
7. Trimming and polishing		
8. Repairing the fractured dentures		
9. Relining and rebasing of denture		
10. Denture copying		

COURSE UNIT : partial dentures (4.3.3)

Developed by the working group in Prosthetic Dentistry

Pre requisite knowledge

Before entering this course unit student should have a knowledge of gross anatomy, Dental Anatomy and Dental Material Science

Content:

Applied anatomy and physiology, impression taking, construction of accurate master casts, designing, construction, fitting and adjustment of partial dentures.

Objectives:

Knowledge and understanding

On the completion of the course unit the student should be able to

- 1.1. Describe the anatomy of the denture supporting tissues and anatomical and physiological factors that will influence denture, support, stability and retention.
- 1.2. Describe the changes that occur in the oral cavity following partial loss of the Dentition.
- 1.3. Describe the method of examination of a partially edentulous patient and collect relevant data for treatment planning.\

- 1.4. Describe the preparations of the mouth needed prior to the construction of removable partial dentures.
- 1.5. Describe the impression techniques for partially edentulous patients including the special techniques
- 1.6. Describe the technique of model surveying in designing partial dentures.
- 1.7. Describe the component parts of partial dentures
- 1.8. Describe the laboratory procedure of preparing the wax pattern and metal casting.
- 1.9. Describe the procedure of recording the jaw relationship and selection of teeth.
- 1.10. Describe the laboratory procedures of transferring the jaw relation to the articulator and setting up of teeth.
- 1.11. Describe the importance and procedure of try in stage of partial dentures.

4. ATTITUDES

Students should have been motivated to;

- 4.1. Appreciate the proper assessment of partially edentulous jaws and anticipate the problems in the construction of satisfactory dentures.
- 4.2. Appreciate the significance of accurate impression of partially edentulous jaws.
- 4.3. Appreciate the importance of aesthetics during the designing of removable partial dentures.
- 4.4. Appreciate the harmful effect of the partial dentures on the oral structures.

Lecture Topics

1. Introduction to partial denture prosthetics
2. Applied anatomy in relation to facial and intra oral changes following partial loss of the dentition.
3. General principles of partial denture retention support and stability
4. Occlusion in partially edentulous patients

5. History taking and examination.
6. Impression taking (Primary and master) and casting
7. Model surveying
8. Designing of partial dentures and duplication of casts
9. Preparation of wax patterns on investment casts invest the wax pattern and cast in metal
10. Recording the jaw relationship and selection of teeth
11. Transfer the records to the articulator
12. Setting up of the teeth
13. Trying in dentures
14. Flasking and packing
15. Finished dentures fitting and advice
16. Denture complaints
17. Immediate dentures
18. Relining, rebasing, repair and additions
19. Partial dentures with free and saddles
20. Overlay and onlay dentures

Clinical Demonstrations

1. History taking and examination
2. Selection of trays
3. Impression taking - Preliminary
4. Recording the master impression
5. Recording the jaw relationship including the face bow recording and transfer
6. Trying the denture in the mouth

7. Delivering the finished denture
8. Recall appointments and carrying out the adjustments.
9. Relining, rebasing and repair

Laboratory demonstrations

1. Casting the impressions
2. Construction of special trays
3. Duplication of casts
4. Cast surveying
5. Designing and preparation of wax patterns
6. Investing the wax patterns and casting
7. Constructing of record blocks
8. Mounting the cast on the articulator
9. Setting up of teeth
10. Flasking, packing and processing of trial dentures
11. Repair the fractured dentures
12. Relining and rebasing of partial dentures

COURSE UNIT : MAXILLO FACIAL PROSTHESIS (4.3.4)

Developed by the working group in Prosthetic Dentistry

Pre requisite knowledge

Before entering this course unit student should have a knowledge of gross anatomy and Physiology of the maxillofacial region, Dental anatomy and dental material sciences, constructions of dentures and basics of implantology, causes of maxillofacial defects.

Content:

Applied anatomy and physiology, Examination and treatment planning of patients with maxillo -facial defects. Designing of maxillo-facial prostheses, Impression taking, construction of master cast, construction, fitting of maxillofacial prostheses and adjusting them on recall visits.

Objectives

1. Knowledge and understanding

On the completion of the course the student should be able to

- 1.1. Describe the anatomy of the surrounding tissues of the maxillofacial region.
- 1.2. Describe the causes of oral and facial defects and their classifications.
- 1.3. Describe the method of examination of the patients with maxillofacial defects.
- 1.4. Describe the assessment of the maxillofacial defects and the indications for preparation of the mouth prior to construction of prostheses.
- 1.5. Describe the different designs of maxillofacial prosthesis (Eg. Hollow box obturator, speech bulb) and their component parts.
- 1.6. Describe the impression techniques for the patients with maxillofacial defects.
- 1.7. Describe the laboratory construction of maxillofacial prosthesis.
- 1.8. Describe the procedure of try in stage of the prostheses.
- 1.9. Describe the indication for functional impression technique for speech bulbs.
- 1.10. Describe the technique of fitting the finished prostheses, checking the seal of the prostheses and list the instructions to be given to the patient.

2. SKILLS

On completion of the course unit the student should be able to

- 2.1. Carryout the clinical examination and investigation, collect and record the relevant data of a patient with maxillofacial defect.
- 2.2. Carry out or manage for the preparation of the mouth prior to the impression taking procedure.
- 2.3. Record the impression of a patient with simple cleft of the hard palate.
- 2.4. Design a simple obturator.
- 2.5. Check trial prosthesis and give the instructions to the technician where necessary.

- 2.6. Deliver the finished prosthesis and give instructions to the patient on proper use.
- 2.7. Manage patients in short term and long term follow up to assess the prosthesis.

4. ATTITUDES

- 4.1. Appreciate the need for rehabilitation of patients in order to help the patients to lead a useful life in society.
- 4.2. Appreciate the need for proper assessment of the patient with maxillofacial defect and anticipate the problems in the constructions of prosthesis.
- 4.3. Appreciate the psychology of the patients with maxillofacial defects and demonstrate kindness towards them.
- 4.4. Appreciate the importance of aesthetics and oral functions during the designing of the prosthesis.
- 4.5. Appreciate the need to keep abreast with recent advances in maxillofacial prosthesis.

Lecture Topics Lectures	Responsibility	No. of
1. Introduction to maxillofacial prostheses	Prosthetics	01
2. Causes and types of maxillofacial defects and applied anatomy in relation to facial and oral defect	Oral Surgery	02
3. General principles of retention, support And stability of maxilo facial prostheses	Prosthetics	01
4. History taking and examination of the Patients.	Prosthetics	01
5. Preparation of the mouth for M.F.P.	Oral Surgery	01
6. Impression taking (Preliminary, Master)	Prosthetics	01
7. Designing of an obturator	Prosthetics	01
8. Trying the prostheses in the mouth Finished prostheses fitting and advice Adjusting the prostheses at recall visits	Prosthetics	01

Clinical demonstrations and clinical practice		Responsibility	
No. of Classes			
1.	History taking and examination	Prosthetics	03
2.	Impression taking, preliminary	“	“
3.	Construction of special impression trays	“	“
4.	Recording the master impression and Functional impression for speech bulb	“	“
5.	Trying the prostheses in the mouth	“	“
6.	Fitting the finished prostheses recalling and Carry out the adjustments.	“	“

COURSE UNIT ON PATHOLOGY AND DIAGNOSIS OF CARIES
(4.4.1)

Pre requisite Knowledge

Before entering the formal course unit the students should have knowledge of the following broad subject areas;

1. Tooth morphology of deciduous and permanent dentition
2. Dental Histology - Enamel, Dentine, Cementum and Dental Pulp
3. Tooth eruption including delayed eruption

4. Constitutes and physiology of saliva
5. Calcium and phosphate metabolism
6. Biochemistry of plaque, fluid, dextrans, levans and carbohydrate fermentation

Contents

Aetiology and pathology of dental caries

Microbiology of dental caries

Diagnosis of dental caries

Radiology in the diagnosis of dental caries

Assessment of caries susceptible individuals and groups at high risk

OBJECTIVES

At the end of the course the student should be able to:

1. Cognitive Domain

- 1.1. Describe the aetiology of dental caries, theories of caries and critically evaluate the various theories
- 1.2. Describe the relationship between Diet and Dental Caries
- 1.3. Describe the deposits on teeth and other oral structures and their relationship to dental caries
- 1.4. Describe the pathology of incipient carious lesion in enamel

- 1.5. Describe the pathology of late carious lesion in enamel
- 1.6. Describe the pathology of caries in dentine
- 1.7. Describe the pathology of caries in cementum (root surface caries)
- 1.8. Describe the effects of Dental Caries on the pulp before caries reaches the pulp
- 1.9. Describe the pathological basis of secondary caries

- 1.10. Outline the ultrastructure of the carious lesion in Enamel/Dentine/Cementum
- 1.11. Describe the immunology of caries
- 1.12. Describe the clinical features carious lesions
- 1.13. Describe the radiological features of dental caries in intraoral periapical and bitewing x-rays
- 1.14. List the carious susceptibility test and describe the theoretical basis
- 1.15. Describe the microbiological basis of dental caries

2. SKILLS

At the end of the course the student should be able to;

- 2.1. Be able to obtain sample of dental deposits, plaque and saliva from the patient for laboratory investigation
- 2.2. Identify microscopic features of caries, dentine and cementum
- 2.3. Be able to detect carious lesions clinically
- 2.4. Be able to detect caries in intra oral periapical X-rays and bitewing X-rays
- 2.5. Be able to assay for Lactobacillus counts, strept, mutans assay, crevicular fluid analysis etc. in the management of dental caries.
- 2.6. Be able to recognize cariogenic microorganism on culture plates;

3. ATTITUDES

At the end of the course the student should be motivated to;

- 3.1. Appreciate the vulnerability of the human dental pulp in the presence of a carious environment.
- 3.2. Should be able to appreciate the need for careful clinical examination in order to properly diagnose caries

3.3. Appreciate dental caries as a microbiological disease and the importance of patient education with regard to this concept

	Lecture Topics	Responsibility	No. of Lectures
1	Aetiology and Pathology of Dental Caries in enamel, dentine, cementum	Oral Pathology	2
2	Microbiology of Dental Caries	Microbiology	1
3	Clinical Features of Dental Caries	Restorative	1
4	Radiological features of Dental Caries	Radiology	1
5	Histological features of Dental Caries	Oral Pathology	1
6	Assessment of caries susceptibility	Restorative	1
7	Reaction to caries in dentine & pulp	Oral Pathology	1

Clinical Demonstrations

1	Clinical features of caries	Restorative	1
2	Histological features of caries	Oral Pathology	1
3	Radiological features of caries	Radiology	1
4	Caries susceptibility tests	Restorative	1

COURSE UNIT ON CYSTS IN THE MOUTH AND JAWS (4.4.3)

Pre requisite Knowledge:

Base knowledge of inflammation, development of teeth and oro-facial structures, examination of swellings.

Classification

Content: Aetiology and pathogenesis, clinical radiological, histopathological features and treatment of cysts in the mouth and jaws.

OBJECTIVES:

1. Knowledge and understand

On completion of the course the student should be able to:

- 1.1. Classify the cysts of the mouth and jaws according to the WHO classification
- 1.2. Describe the aetiology and pathogenesis of cysts mentioned in 1.1.
- 1.3. Describe the clinical features of cysts mentioned in 1.1.
- 1.4. List the special investigations and the information that could be obtained from these investigations in order to arrive at a diagnosis.
- 1.5. Describe the histopathological features of cysts mentioned under 1.1. and their clinical relevance.
- 1.6. Describe the procedures which may be performed to obtain material from cysts or histopathological and laboratory investigations.
- 1.7. Describe the treatment of cysts mentioned in 1.1.
- 1.8. Describe the sequelae and complications of cysts and their management.

2. SKILLS

On completion of the course the student should be able to:

- 2.1. Interview and obtain a relevant clinical history of a patient who has a cyst
- 2.2. Carry out a clinical examination and record the findings in the accepted format
- 2.3. Decide on relevant special investigations and carry out/arrange for same
- 2.4. Interpret results of special investigations including radiographs

- 2.5. Recognize histopathological features of cysts mentioned in 1.1.
- 2.6. Arrive at a diagnosis and draw up a treatment plan
- 2.7. Treat by enucleation, excision or marsupialization small cyst in the jaws and soft tissue and carry out initial management of complications such as infection
- 2.8. Undertake postoperative management and follow up of patients who have been treated for cysts mentioned in 1.1.

ATTITUDES

At the end of the course students should be motivated to:

- 3.1. Appreciate the need to keep abreast of recent findings about origin and management of cysts
- 3.2. Appreciate the need for adequate histopathological investigations of cysts in view of possibility of malignant transformation

Learning Methods

	Lecture topics	Responsibility	No. of Lectures
1	Classification, aetiology and pathogenesis of cysts of the mouth and jaws	Oral Pathology	02
2	Clinical features and diagnosis of cysts	Oral Surgery	02
3	Histopathological features of cysts	Oral Pathology	01
4	Treatment of cysts and their sequelae and complications	Oral Surgery	02

Clinical/Laboratory Classes

1	Macroscopic and microscopic Appearance of cysts	Oral Pathology	02
2	Clinical features and biopsy methods of cysts	Oral Surgery	01
3	Radiological features of cysts	Radiology	01
4	Diagnosis and treatment planning cysts	Oral Surgery	01
5	Treatment of cysts	Oral Surgery	01

Video Presentation

1	Diagnosis and treatment of cysts	Oral Surgery	
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COURSE UNIT ON SALIVARY GLAND DISEASE (4.4.4)

Prerequisite Knowledge

Anatomy, physiology and histology of salivary glands, physiology of saliva, pathology of inflammation infection neoplasia, degeneration, examination of lumps, interpretation of radiographs.

Content:

Aetiology, pathogenesis, clinical features, investigations, histopathological changes and treatment of salivary gland disease, viral bacterial fungal infections, obstructive diseases Sjorgen's syndrom an related conditions, degenerative conditions eg: ameloidosis.

OBJECTIVES

1. Knowledge

At the end of the course the students should be able to

- 1.1. List common salivary gland diseases under an accepted classification eg: inflammatory, obstructive, neoplastic, degenerative
- 1.2. Describe the aetiology and pathogenesis of common salivary gland diseases listed in 1.1.
- 1.3. Describe the clinical features of salivary gland diseases
- 1.4. Discuss the differential diagnosis of common salivary gland diseases
- 1.5. List the special investigations necessary for diagnosis and describe the information that could be obtained from them
- 1.6. Describe the technique of special radiological investigations and their interpretation in the diagnosis of salivary gland disease
- 1.7. Describe the biopsy techniques for salivary gland disease
- 1.8. Describe the histopathological features of salivary gland diseases listed in 1.1
- 1.9. Describe the treatment of salivary gland diseases mentioned in 1.1.

2. SKILLS

At the end of the course the students should be able to

- 2.1. Interview a patient and record a history relevant to diseases mentioned in 1.1.
- 2.2. Examine a patient and record the clinical findings relevant to diseases mentioned in 1.1.
- 2.3. Decide on special investigations necessary for diagnosis and carry out/arrange for same
- 2.4. Collect discharge of pus from orifices of salivary glands for bacteriological investigations
- 2.5. Measure salivary flow rate and interpret findings
- 2.6. Assist radiologist to carry out sialography when necessary
- 2.7. Interpret radiographs, sialographs, bacteriological and other reports of patients with salivary gland disease
- 2.8. Identify histopathological features of salivary gland diseases listed in 1.1.
- 2.9. Diagnose common salivary gland disease mentioned in 1.1.
- 2.10. Treat/arrange for treatment of patients with salivary gland disease

3. ATTITUDES

At the end of the course the students should be motivated to:

- 3.1. Appreciate the need for thorough investigation and histopathological diagnosis of salivary gland disease in view of the possibility of misdiagnosing serious diseases
- 3.2. Appreciate the need for special biopsy techniques when neoplasia is suspected as indiscriminate methods could cause serious complications

Learning Methods

	Lecture topics	Responsibility	No. of Lectures
1	Classification of salivary gland disease (SGD)	Oral Pathology	01
2	Aetiology and pathogenesis of salivary gland disease (SGD)	Oral Pathology	01
3	Histopathological features of salivary gland disease (SGD)	Oral Pathology	02
4	Clinical features of salivary gland disease	Oral Surgery	01
5	Clinical features of salivary gland disease (Non-surgical)	Oral Medicine	01
6	Changes in the oral cavity due to salivary gland disease (SGD)	Oral Medicine	01
7	Biopsy techniques for salivary gland disease (SGD)	Oral Surgery	01
8	Radiological and other special investigation for salivary gland disease	Radiology/ Oral Medicine	01
9	Surgical management of salivary gland disease (SGD)	Oral Surgery	01
10	Non surgical management of salivary gland disease (SGD)	Oral Medicine	01

Clinical/Laboratory Classes

1	Clinical features of salivary gland disease (SGD)	Oral Surgery	01
2	Clinical features of salivary gland disease (SGD)	Oral Medicine	01
3	Biopsy technique for salivary gland disease (SGD)	Oral Surgery	01
4	Histopathology of salivary gland disease (SGD)	Oral Pathology	03
5	Sialography for salivary gland disease (SGD)	Radiology/ Oral Medicine	01
6	Surgical treatment of salivary gland disease (SGD)	Oral Surgery	01
7	Non-surgical treatment of salivary gland disease (SGD)	Oral Medicine	01

COURSE UNIT ON OSTEODYSTROPHIES (4.4.5)

Pre requisite knowledge

Before entering the formal course units the students should have a knowledge of the following broad subject areas:

1. Tooth morphology of deciduous and permanent dentition
2. Biology of bone as a dynamic tissue - Development, Histology, Physiology and Biochemistry
3. Pathology of Hyperplasia, Hypertrophy and Disturbances of mineral metabolism eg: osteoporosis, osteomalacia, rickets and renal osteodystrophy.
4. Endocrinology of bone
5. Principles of genetics

Contents:

1. Diseases affecting membrane bone eg: Cleido Cranial Facial Dysostosis
2. Diseases affecting cartilage bone eg: Achondroplasia
3. Diseases affecting bone forming cells eg: Osteogenesis Imperfecta
4. Diseases affecting bone removing cells eg: Osteopetrosis
5. Diseases of facial skeleton including jaws eg: Fibrous Dysplasia of Bone Cherubism
6. Endocrine diseases of bone eg: Hyperparathyroidism
7. Pagets disease of bone

8. Other bone diseases peculiar to the tooth bearing area eg: Central Giant Cell Granuloma
9. Hypophosphatasia

OBJECTIVES

At the end of the course the student should be able to:

1. Cognitive Domain

- 1.1. Describe the etiology, clinical features, radiological findings and pathology of cleido cranial facial dysostosis, osteogenesis imperfecta, osteopetrosis, fibrous dysplasia of bone, cherubism, hyperparathyroidism, Pagets disease of bone, Central and the peripheral giant cell granuloma of bone, hypophosphatasia
- 1.2. Discuss differential diagnosis for the conditions listed in 1.1.
- 1.3. Be able to describe the principles of treatment for the following conditions.
 - Cleido Cranial facial dysostosis
 - Fibrous dysplasia of bone
 - Cherubism
 - Hyperparathyroidism
 - Pagets Disease of bone
 - Giant cell granulomas

2. SKILLS

At the end of the course unit the students should be able to:

- 2.1. Interview a patient and obtain a relevant history in relation to conditions mentioned in 1.1.
- 2.2. Examine a patient and record the findings.
- 2.3. Decide on appropriate special investigations and perform/arrange for same

- 2.4. Interpret the haematological biochemical and radiological findings of the condition listed in 2.1.
- 2.5. Identify histopathological features of conditions mentioned in 1.1.
- 2.6. Treat/arrange for treatment of conditions mentioned in 1.1.

3. ATTITUDES

At the end of the course the student should be motivated to:

- 3.1. Appreciate the need for continuing education in the field of osteodystrophies
- 3.2. Appreciate the effects of obvious facial deformity arising from the osteodystrophies
- 3.3. Appreciate the importance of correct histopathological diagnosis of osteodystrophies so that diagnosis of serious diseases such as malignancies will not be missed

Learning Methods

	Lecture topics	Responsibility	No. of Lectures
1	Aetiology and Pathogenesis of osteodystrophies and giant cell lesions	Oral Pathology	02
2	Histopathology of Osteodystrophies and giant cells lesions	Oral Pathology	01
3	Clinical features of osteodystrophies and giant cell lesions	Oral Surgery	02
4	Radiological diagnosis of osteodystrophies and giant cell lesions	Radiology	01

5	Management of osteodystrophies and giant cell lesions	Oral Surgery	02
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Clinical/Laboratory Demonstration

	Lecture topics	Responsibility	No. of Lectures
1	Histopathological features of Osteodystrophies and giant cell lesions	Oral Pathology	01
2	Clinical Features of osteodystrophies and giant cells lesions	Oral Surgery	01
3	Radiological Features of Osteodystrophies and giant cell lesions	Oral Medicine	01
4	Treatment of Osteodystrophies and giant cell lesions	Oral Surgery	01

Evaluation

Theory	Essay Type Question Viva	- End of course
Clinical Laboratory	OSCE Project in course	- End of course

COURSE UNIT - PRINCIPLES OF ORAL DIAGNOSIS (4.5.1)

(Developed by the working group of Oral Medicine)

Pre requisite Knowledge

Before entering this course the students must have basic knowledge of the role of the clinical history, clinical examination and special investigations in medical diagnosis and general medical and surgical conditions relevant to dentistry.

Content:

The art of history taking and interpretation, methods of extra oral and intraoral clinical examination, special investigations applicable to dental and oro-facial disorders.

OBJECTIVES

On completion of the course the students should be able to

- 1.1. List the important aspects in the clinical history of a patient that are relevant to diagnosis and treatment planning
- 1.2. List the medical conditions which are relevant to orofacial diagnosis and treatment planning
- 1.3. List and describe clinical features seen in the head and neck region which are due to systemic diseases
- 1.4. Describe technique of interviewing a patient to obtain a relevant clinical history

- 1.5. Describe the methods of clinical examination of the head and neck, and oral cavity
- 1.6. List the clinical, radiological and laboratory special investigations applicable to oro-facial diagnosis
- 1.7. Describe the role and significance of special investigations in oral diagnosis
- 1.8. Describe how a diagnosis could be arrived based on data collected using the above methods

2. SKILLS

On completion of the course unit the students should be able to demonstrate skills required to:

- 2.1. Interview a patient and obtain a clinical history and record it in the following format; Socio/economic data, chief complain, H/O, PDH, PMH
- 2.2. Examine the head and neck and oral cavity and record the findings in an accepted format
- 2.3. Examine other relevant areas of the body to obtain additional clinical information

ATTITUDES

At the end of the course the students should be motivated to:

- 3.1. Recognize the need for correct diagnosis for satisfactory and safe treatment of patients' complaint
- 3.2. Appreciate the importance of obtaining and recording an accurate history from patient

- 3.3. Realize the importance of carrying out and recording the information obtained from a thorough clinical examination as described in earlier sections.
- 3.4. Appreciate his/her own limitations in the ability to diagnose and the need to refer patients to more competent person.

Teaching Methods

	Lecture topics	Responsibility
1	Art of history taking & their interpretation	Oral Medicine
2	Principles of clinical examination	Oral Medicine
3	Role of special investigations and arriving at a diagnosis	Oral Medicine

Clinical/practical classes

1	Clinical examination of head and neck region	Oral Surgery
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COURSE UNIT : MEDICAL EMERGENCIES IN DENTAL PRACTICE (4.5.2)

Pre requisite knowledge

Knowledge of General Medicine, Hypersensitivity reactions (basic immunology) and Pharmacology

OBJECTIVES

1. Knowledge

At the end of the course the student should be able to

- 1.1. List the common medical emergencies that may arise in a dental practice
- 1.2. List the underlying causes for the emergencies listed in 1.1.
- 1.3. Describe the consequences of the emergencies listed above if immediate treatment care is not instituted.

- 1.4. Describe the clinical features of each of the medical emergencies listed in 1.1.
- 1.5. Describe a scheme for the management of each of the emergencies mentioned above, explaining the rationale where appropriate
- 1.6. Describe precautionary measures that should be taken to prevent emergencies which may occur as a result of carelessness/negligence of the part or dental and other staff

2. SKILLS

At the end of the course the student should have the skill to:

- 2.1. Recognize immediately any of the medical emergencies listed above in a patient under his care
- 2.2. Train his/her staff and assistants (in his/her further practice) in the management of medical emergencies
- 2.3. Set in motion, in the event of an emergency, the scheme for the management of the particular emergency as described in 11.5 above and successfully revive the patient.
- 2.4. Communicate effectively with medical staff to seek help and to transfer patient (s) to their care if necessary
- 2.5. Take necessary precautionary measures to prevent emergencies that may occur as a result of negligent actions of the staff

3. ATTITUDES

At the end of the course the student should

- 3.1. Display a sense of responsibility towards the safety of his/her patient
- 3.2. Appreciate the need to be while attending on patients (and other times too it possible) to readily recognize any of the medical emergencies listed in 1.1. above

- 3.3. Show appreciation of the need to have basic equipment and drugs readily available in the dental clinical for the management of common medical emergencies
- 3.4. Give importance to the maintenance of the emergency equipment referred to above in 3.3. in satisfactory working condition
- 3.5. Give importance to the replenishment of the stock of pharmacological agents that have been consumed or expired
- 3.6. Appreciate the need to conduct periodic drills in the management of common emergencies in the clinic
- 3.7. Be sufficiently motivated to update oneself with current knowledge in the management medical emergencies in dental practice

Teaching Methods (Responsibility - Oral Medicine)

1. Reading Assignment: Selected text books and articles
2. Lecture on the management of medical emergencies in dental practice - 1 hr
3. Video film on management of medical emergencies in dental practice - ½ hr
4. Discussion class: Drawing up of schemes for management of the common medical emergencies
5. Practical class: Mock drills of
 1. Management of vasovagal syncope
 2. Cardiopulmonary resuscitation
 3. Early Management of MI/Angina
 4. Management of epileptic attack

5. Diabetic coma management
6. Anaphylaxis management
7. Other emergencies management

Evaluation

1. In-course assessment
2. Theory question in Oral Medicine paper at Final BDS Examination
3. OSCE - simulated patient in medical emergency - management skills tested
4. Viva-voce examination

COURSE UNIT ON RADIOLOGY (4.5.3) **(Developed by the working group of Oral Medicine)**

Pre requisite knowledge:

Before entering this course unit the students are expected to have the following knowledge:- 1) Anatomy of the head and neck region including dental anatomy 2) Hard tissue histology and 3) Basic physics and chemistry

Broad Objectives:

At the end of the course the student should have:

1. A knowledge of the hazards of radiation and principles of radiation safety in clinical practice.

2. A knowledge of various imaging techniques available for oral diagnosis as follows:
 - 2.1. Techniques of intraoral radiography at detailed level
 - 2.2. Techniques of extra oral radiography including tomography, computerized tomography, magnetic resonance imaging etc. at an elementary level
3. Skill to produce good intraoral radiographs using appropriate techniques.
4. The ability to interpret radiographs in order to arrive at the diagnosis of a given orofacial condition

Specific Objectives:

1. Knowledge

The student should be able to:

- 1.1 List the various imaging techniques available for orofacial diagnosis
- 1.2. Describe the nature of X-irradiation and its hazards
- 1.3. Describe how these hazards may be minimized

- 1.4. Describe on an elementary level how X-rays are generated by a dental X-ray machine
- 1.5. Describe the chemical properties of X-ray films and basic chemical characteristics of developer and the fixer and their effect on exposed x-ray films
- 1.6. Describe the differences in images produced by different tissues of the body on a radiograph, when exposed
- 1.7. Describe how pathological processes alter radiographic images of orofacial tissues
- 1.8. Describe the technique of processing an exposed X-ray film

- 1.9. Describe how the variables in exposure and processing techniques may adversely affect the quality of the image produced on a radiograph
- 1.10. Describe how the adverse effects mentioned in 1.9 above can be avoided
- 1.11. List the indications for intraoral periapical, occlusal and bitewing radiography
- 1.12. Describe the techniques of intraoral periapical, standard occlusal and bitewing radiography including the bisecting angle and paralleling techniques and chair position for these procedures
- 1.13. List the clinical indications for the different extraoral plain radiographs of the skull and jaws including cephalometry, tomography, pantomography
- 1.14. Describe the principles of contrast radiography including sialography and temporomandibular joint arthrography

2. SKILLS

At the end of the course the student should be able to:

- 2.1. Write a request for radiological investigation on prescribed forms, giving necessary clinical details
- 2.2. Employ necessary safety practices in ' taking ' an intraoral radiograph
- 2.3. Correctly position the patient on the chair for the purpose of radiographic exposure
- 2.4. Correctly place the film in the patient's mouth at the appropriate location of the radiograph being taken
- 2.5. Advise the patient on the handling of the film
- 2.6. Take radiographs employing techniques such as bisecting angle and paralleling methods of periapical, bitewing and occlusal radiographs
- 2.7. Process an exposed intraoral film through correct developing, and fixing procedures

- 2.8. Arrange to obtain an opinion of a radiologist where necessary
- 2.9. Identify normal anatomical features and artifacts on radiographs
- 2.10. Interpret radiographic appearances such as radiolucency radiopacity etc. in relation to oro-facial lesion

3. ATTITUDES

The student should be motivated to:

- 3.1. Show concern for the radiation safety of operator, staff and patients, while taking radiograph
- 3.2. Appreciate the need to avoid unnecessary exposure of patients to radiographs by determining the absolute indications and by following accurate technique

Teaching Methods

1. Lectures

	Lectures	Responsibility
1	Nature of radiation and X-ray generation	Radiology
2	Hazards of radiation and principles of radiation safety	Radiology

3	Daignostic imaging techniques and principles of the application of radiology in oro-facial diagnosis	Radiology/ Oral Medicine
4	Radiological appearances of tissues in health and disease	Radiology
5	Underlying pathological basis of radiological appearance	Oral Pathology
6	Use of intraoral radiograph in Restorative Dentistry	Rest. Dentistry
7	Use of radiographs in oral surgical diagnosis and management of facial fractures	Oral Surgery
8	Use of radiographs in orthodontic diagnosis	Orthodontics
9	Use of radiographs in periodontal diagnosis and therapy	Periodontology

2. Clinical Classes/Audio-visual Teaching/Practical Classes

1	Video film on Radiation Protection	Radiology
2	Video film on “ Radiological Optics ”	Radiology
3	Video film in Intraoral periapical radiography	Radiology
4	Practical classes on intraoral radiography	Radiology
5	Practical classes on processing exposed introral films	Radiology
6	Demonstration of sialography	Radiology
7	Practical classes on pantomography	Radiology
8	Demonstrations on identification and interpretation of f radiographys	Radiology
9	Writing requests for radiological investigations	Radiology

COURSE UNIT: MANAGEMENT OF MEDICALLY COMPROMISED PATIENTS (4.5.4)

Pre requisite Knowledge

Knowledge of general medicine, general surgery, pharmacology

Content:

General diseases and conditions which complicate dental treatment, their diagnosis, prevention and management of complications during dental treatment

OBJECTIVES

1. Knowledge

At the end of the course the student should be able to

- 1.1. Explain the concept of medically compromised status
- 1.2. List the important medical conditions and conditions which are not diseases/disorders (eg: pregnancy) that may render a patient susceptible to complications during or as a result of dental treatment
- 1.3. Describe how a dental patient should be screened to detect a medically compromised status
- 1.4. List and describe the possible complications/problems that may arise in a medically compromised patients in dental practice
- 1.5. Describe how each complication/problem mentioned in 1.4 can be prevented or minimized
- 1.6. Describe how each of the complication/problem can be managed

2. SKILLS

At the end of the course the student should be able to

- 2.1. Take an adequate medical history and perform an assessment of the general fitness of a patient presenting for dental treatment
- 2.2. Effectively communicate if necessary with a physician to ascertain a patient's medical status in so far as it is relevant to the dental management
- 2.3. Implement/arrange precautionary measures required to prevent/minimize complications/problems in a medically compromised patient

- 2.4. Detect a complication/s in a medically compromised patient as soon as it/they occur (s) or is/are about to occur during attendance at the dental clinic
- 2.5. Manage the patient in situation referred to in 2.4 above by instituting measures aimed at reducing/countering the complication/s
- 2.6. Seek and arrange without undue delay medical care for the patient in situations mentioned in 2.4 and 2.5

3. ATTITUDES

At the end of the course the students should be motivated

- 3.1. Appreciate dental surgeon's responsibility to prevent/minimize complications/problems that may arise as a result of dental treatment
- 3.2. Appreciate the need to place the safety of the patient above any other consideration to update his/her current understanding /knowledge of medically compromising disorders and dental management of patients with such disorders

Teaching Methods

	Lectures	Responsibility
1	The medically compromised patient	Oral Medicine
2	Management of medically compromised patient in dental practice	Oral Medicine
3	Clinical demonstrations Fitness assessment of Dental Patients	Oral Medicine

COURSE UNIT ON ORO-FACIAL PAIN (4.5.5)

Pre requisite Knowledge

1. Knowledge of the sensory nerve supply of the Head and Neck region
2. Knowledge of the physiology of perception of pain ad sensory stimuli
3. Pharmacology of drugs used for control of pain

OBJECTIVES

1. Knowledge

At the end of the course the student should be able to

- 1.1. Define oro-facial pain
- 1.2. List the conditions that give rise to pain in the oro-facial region
- 1.3. Describe the clinical features of common conditions that cause pain in the oro-facial region
- 1.4. Describe the process of diagnosis of the conditions mentioned in 1.3 above
- 1.5. List the special investigations that may be required for the dignosis of the conditions listed in 1.3 and describe the information that may be obtained from them
- 1.6. List the different modalities available for the treatment (management) of the conditions listed in 1.3
- 1.7. Describe in detail the medical management of conditions listed in 1.3

2. SKILLS

At the end of the course the student should be able to

- 2.1. Conduct an interview with a patient complaining of oro-facial pain and extract relevant information from him/her by employing appropriate questions
- 2.2. Perform a clinical examination of the patient and elicit physical signs in the oro facial region relevant to the complaint
- 2.3. Arrive at a provisional diagnosis of conditions mentioned under 1.3 using the information obtained in 2.1 and 2.2. above
- 2.4. Arrange or carry out necessary clinical laboratory and radiological examinations and interpret the result
- 2.5. Interpret as far as possible the results of the investigations referred to in 2.4 to arrive at a reasonable final diagnosis of the oro facial pain in conjunction with the information referred to in 2.3
- 2.6. Refer the patient to an appropriate specialist when necessary or when one or more of the above steps in 2.1 – 2.5 is/are not feasible.
- 2.7. Treat/arrange the treatment for conditions mentioned in 1.3 employing treatment modalities mentioned in 1.8.
- 2.8. Detect/suspect the presence of serious illness which may present as oro facial pain eg. I.H.D

ATTITUDES

At the end of the course the student should be motivated to

- 3.1. Show concern for the patient with regard to his/her complaint and handle the patient with empathy.
- 3.2. Take into consideration patient's socio-economic status when prescribing treatment for his/her pain condition.
- 3.3. To engage in further self education in new developments in the subject of oro-facial pain

Teaching methods

	Lectures	Duration	Responsibility
1	Causes of oro-facial pain and clinical features of the main oro-facial pain conditions	1 hour	Oral Medicine
2	Diagnosis of oro-facial pain and management of the important oro-facial pain conditions.	1 hour	Oral Medicine
3	Management (Treatment) of oro-facial pain	1 hour	Oral Medicine
	Clinical classes Clinical demonstration in history taking and clinical examination of patients with oro-facial pain conditions	1 hour	Oral Medicine
	C.4. Discussion classes		
4.1	Role of history in oro-facial pain diagnosis	1 hour	Oral Medicine
4.2	Role of laboratory investigations	1 hour	Oral Medicine
4.3	Treatment modalities for the important oro-facial pain conditions	1 hour	Oral Medicine

COURSE UNIT ON ORAL MANIFESTATIONS OF SYSTEMIC DISEASES (4.5.6)

A. Pre requisite knowledge

Knowledge of General Medicine, General Pathology and Basic Immunology

B.1. Knowledge

At the end of the course the student should be able to

- 1.1. List the common/important systemic disorders that produce manifestations in oro-facial region
- 1.2. List the important diseases belonging to the following group of disorders that may produce oral manifestations: Gastrointestinal disorders, Nutritional deficiencies, Endocrine/Metabolic disorders, haematological disorders, skeletal disorders, Immunological diseases and sexually transmitted disorders
- 1.3. Describe the important oral manifestations of the diseases that were listed in 1.2 belonging to the groups of disorders mentioned therein
- 1.4. Outline the role of the dental surgeon in the overall management of the patient when oral manifestations suggestive of a systemic disorder is encountered in a patient not known to have had the disease previously
- 1.5. List simple investigations, that may be carried out for ruling out confirming the presence of systemic disorder
- 1.6. Describe the treatment that may be needed and/or feasible to control/alleviate the oral manifestations of a systemic disorder

2. SKILLS

At the end of the course the student should be able to

- 2.1. Identify main oral manifestations listed in 1.3
- 2.2. Arrange or carry out simple investigations referred to in 1.5 above

- 2.3. Prescribe/carry out treatment referred to in 1.6 above
- 2.4. Refer the patient to an appropriate specialist if a systemic disorder is suspected

3. ATTITUDES

At the end of the course the student should be motivated to

- 3.1. To appreciate the important of detecting systemic diseases in patients oral manifestations
- 3.2. To update himself/herself on the advances in knowledge regarding systemic diseases that produce oral manifestations

Teaching Methods

Lectures with visual AIDS (Clinical pictures)

	Lectures	Responsibility	Duration
1	Oral Manifestations of Gastronintestinal disorders	Oral Medicine	30 Minutes
2	Oral Manifestations of Nutritional disorders	Oral Medicine	30 Minutes
3	Oral Manifestations of Endocrine/metabolic disorders		
4	Oral Manifestations of haematological disorders	Oral Medicine	30 Minutes
5	Oral Manifestations of skeletal disorders	Oral Medicine	1 hour
6	Oral Manifestations of Immunology	Oral Surgery	1 hour
7	Oral Manifestations of STD	Oral Medicine	1 hour (Invited teacher Venereologis t

Clinical Demonstration

1	Clinical features of oral manifestations of systemic diseases	Oral Medicine	1 hour
2	Method of systematic examination to detect systemic disease	Oral Medicine	1 hour

Discussion classes/Tutorials

With visual aids/colour

	Topic	Responsibility	Duration
1	Oral Manifestations of GIT and Nutritional disorders - clinical features	Oral Medicine	1 hour
2	Oral Manifestations of Endocrine/metabolic disorders - clinical features	Oral Medicine	1 hour
3	Oral Manifestations of Haematological disorders - clinical features	Oral Medicine	1 hour
4	Clinical features of Dermatological/Immunological/STD disorders	Oral Medicine	hour

Evaluation

1. In-course assessment by MCQ examination
2. OSCE with photographs depicting oral manifestations
3. Viva-voce examinations

4. Questions in Theory Paper (essay) at the Final BDS (Part II)

COURSE UNIT : ORAL ULCERS AND MUCOCUTATEOUS (4.5.7)

Pre requisite knowledge

1. Structure and function of skin and mucosa, i.e., eye genitalia and mouth
2. Basic immunology and immunopathology
3. Basic dermatology
4. General Medicine
5. Pharmacology : analgesics and corticosteroids

1. Knowledge

- 1.1. Give a classification of ulcers of the mouth
- 1.2. Describe the clinical features of different types of ulcers that occur in the mouth
- 1.3. Describe the microbiological aspects related to oral ulcers
- 1.4. Describe the dermatological aspects related to oral ulcers
- 1.5. Describe the clinical features of ulcers restricted to oral mucosa
- 1.6. Describe the clinical features of the ulcerative conditions mentioned under 1.3 and 1.4
- 1.7. List the investigations needed and describe

2. SKILLS

- 2.1. Interview a patient with oral mucosal ulceration and record the information
- 2.2. Conduct a comprehensive oral and/or general examination of a patient with oral ulceration and record the clinical findings
- 2.3. Distinguish the significant clinical features of malignant ulcers from the non malignant types
- 2.4. Interpret the important findings of the investigations which facilitate in arriving at a diagnosis of the conditions mentioned under 1.3 to 1.4
- 2.5. Describe the management of the conditions mentioned under 1.3 to 1.5

3. ATTITUDES

At the end of the course the student should

- 3.1. Appreciate the fact that serious illness or malignancy may present as oral ulceration
- 3.2. Be sufficiently motivated to take early/prompt action to establish a diagnosis of the oral ulcerative conditions
- 3.3. Empathize with patients who present with oral ulceration
- 3.4. Be conscious of the possibility of cross - infection when dealing with patients presenting with ulcerative disease of the mouth
- 3.5. Recognize the need to refer patients with oral ulceration to the specialist for management

Teaching Methods

1. Lecture Topics : 1 hour duration		Responsibility
1.1	Classification of oral ulcers and ulcers restricted to mouth	Oral Medicine
1.2	Oral ulcerative disease of microbial origin	Oral Medicine
1.3	Dermatological conditions which affects skin and mucosa	Oral Medicine

2. Clinical Classes /Demonstrations		Responsibility
2.1	Clinical features of different types of oral ulcers	Oral Medicine
2.2	Biopsy procedures	Oral Medicine
2.3	Decision making in selecting appropriate laboratory investigations	Oral Medicine

3. Tutorial	
3.1	Problem oriented clinical case discussions

4. Evaluation

4.1	Questions in theory examinations
4.2	OSCE with patients/clinical photographs
4.3	Viva-voce examination

COURSE UNIT ON TEMPOROMANDIBULA JOINT (TMJ) DISORDERS (4.5.8)

Pre requisite knowledge

1. Anatomy and biomechanics of TMJ
2. Principles of occlusion
3. Pathophysiology of pain
4. Pharmacology: analgesics, anxiolytics and antidepressants

OBJECTIVES

Knowledge

At the end of the course the student should be able to

1. Discuss the aetiological factors implicated in TMJ disorders
2. List and classification TMJ disorders
3. Describe the basis of primary and heterotrophic pain

4. Describe the signs and symptoms of different types of TMJ disorders
5. Discuss the differential diagnosis of TMJ disorders
6. List the special investigations that may be required in investigating patients with TMJ disorders and describe the informations that could be obtain from those investigations
7. List the treatment modes available for management of patients with TMJ disorders
8. Discuss the basis of therapeutic management of patients with TMJ disorders
9. Discuss the basis of appliance therapy in managing patient's with TMJ disorders

SKILLS

At the end of the course student should be able to

1. Interview a patient with TMJ disorders and record the information
2. Conduct a comprehensive examination of the head & neck in patients with TMJ disorders and record the clinical findings
3. Identify the existence of Para functional habits in patients with TMJ disorders and to initiate habit intervention programmes
4. Decide on appropriate investigations carryout/arrange for same and interpret the reports
6. Arrive at a tentative diagnosis utilizing information obtained by methods in 1,2,3,4
7. Categorize the patients into groups who need therapeutic and/or appliance intervention
8. Differentiate primary pain disorders from heterotrophic pain disorders using diagnostic block injections (inferior alveolar)
9. Prescribe NSAID in the management of patients with TMJ disorders

10. Refer the cases to the specialist when indicated

ATTITUDES

At the end of the course the student should be motivated to

1. Appreciate the importance of updating his/her knowledge related to modern concepts of aetiology diagnosis and management of patients with TMJ disorders
2. Appreciate the need to refer patients for management
3. Appreciate the importance of establishing a close report with the patient to win his/her confidence, an important aspect in managing patients with psycho-somatic disorders
4. Appreciate the need for long term follow up of patients with little success in certain instances
5. Empathies with those who are suffering from chronic pain disorders

Learning Methods

1. Lecture Topics : 1 hour each Responsibility

1. Aetiology of TMJ disorders and occlusion Oral Medicine
2. Clinical features of TMJ disorders including special investigations Oral Medicine
3. Management of patients with TMJ disorders Oral Medicine

2. Clinical Demonstrations Responsibility

1. Patients with muscular disorders Oral Medicine
2. Patients with disc interference disorders Oral Medicine
3. Patients with chronic hypomobility disorders Oral Medicine
4. Use of local anaesthetic blocks to differentiate primary pain from heterotrophic pain Oral Medicine

2. Discussion Classes/Tutorials	Responsibility
1. Aetiology, clinical features and investigations in TMJ disorders	Oral Medicine
2. Management of patients with TMJ disorders	Oral Medicine
3. Application of advanced radiological techniques to view the TMJ (slide class)	Oral Medicine

Evaluation: End course
 Knowledge : Essay type questions
 Viva
 Skills: OSCE

Timing : 2nd Term – 4th year

COURSE UNIT - INFECTION CONTROL (4.6.1)

Pre requisite knowledge

Before entering this course unit students must have a knowledge of the microbes which cause cross infection and hospital infections, mechanisms of contamination, methods of sterilization and immunization.

Content

Microbiology of cross infection, mechanism of cross infection, diseases caused by cross infection, prevention of cross infection in clinics and wards, disposal of contaminated material, self protection and immunization.

OBJECTIVES

1. Knowledge

On completion of the course unit students should be able to

- 1.1. List the micro-organisms which cause cross infection in clinics and wards

1.2. Describe the mechanisms of contamination and cross infection

1.3. List the diseases that are caused by cross infection

- 1.4. Describe the methods of sterilization of instruments and linen that could be practiced in dental clinics and hospital wards
- 1.5. Describe the use of disposable material and methods of disposal of contaminated material
- 1.6. Describe the precautions that could be taken for protection of clinical staff against cross infection

2. SKILLS

On completion of the course unit students should be able to demonstrate the skills

- 2.1. Interview a patient and determine/suspect that he/she is a carrier of an infection that may be transmitted during investigation/treatment procedures eg. HIV, Hepatitis B
- 2.2. Using suitable methods sterilize instruments and linen that will be used for investigation/treatment of a patient
- 2.3. Use disposable material where appropriate; needles, scalpel blades, suture needles and suture material etc. and dispose of them using correct methods
- 2.4. Take adequate precautions to protect clinical staff from cross infections
- 2.5. Use correct and safe methods in handling, cleaning, sterilizing and disposing contaminated material

3. ATTITUDES

Students should have been motivated to;

- 3.1. Recognize the need to treat every patient as a carrier of a dangerous infection and to take appropriate protective measure
- 3.2. Recognize the potential danger to the community in indiscriminate disposal of contaminated material and take adequate protective measures in this regard
- 3.3. Recognize the need to keep abreast with recent advances in the pathology of cross infections and in its prevention

	Lecture Topics	Responsibility
1.	Microbiology of cross infections	Microbiology
2.	Mechanisms of contamination and cross infection	Oral Surgery
3.	Diagnosis of diseases caused by cross infection	Oral Medicine
4.	Aseptic technique in clinics and wards	Oral Surgery
5.	Use of disposable materials in clinical practice	Oral Surgery
6.	Disposal of contaminated material	Oral Medicine

7. Protection of clinical staff against cross infection Oral Medicine

Clinical /Practical

1. Methods of sterilization in clinics wards and practice of asepsis including use of disposable materials Oral Surgery
2. Disposal of contaminated material Oral Medicine

COURSE UNIT ON MINOR ORAL SURGERY (4.6.2)

Pre requisite knowledge

General Medicine, General Surgery, Pharmacology, students should have completed the course units on Cariology, Infection control and principles of oral diagnosis.

OBJECTIVES

1. Knowledge

At the end of the course the students should be able to

- 1.1. List the diseases and conditions where minor oral surgery may be required in the treatment of the patient

- 1.2. Describe the techniques of local anaesthesia that is required in minor oral surgery
- 1.3. List the indications and contraindications for local anaesthesia in minor oral surgery
- 1.4. Describe the techniques of exodontias using forceps and elevators
- 1.5. Describe the principles of flap design and the techniques of raising intra oral muco periosteal flaps
- 1.6. Describe the techniques of removal of bone using burs and chisel and mallet
- 1.7. Describe the principles of closure of flaps using sutures
- 1.8. Describe the removal of impacted and unerupted teeth, broken teeth, buried teeth and roots of teeth
- 1.9. Describe the removal of small benign tumour and tumour like lesion that arise in the oral mucous membrane
- 1.10. Describe the technique of closure of oro-antral fenestration and fistula, fraenectomy and operculectomy
- 1.11. List the complications of local anaesthesia and minor oral surgery and their management
- 1.12. Describe the arrangement of equipment in a dental clinic where minor oral surgery in performed
- 1.13. Describe the distribution and interaction of personnel who form a team for efficient functioning in an oral surgery clinic
- 1.14.

2. SKILLS

At the end of the course the students should be able to

- 2.1. Interview, examine and investigate a patient and detect indication for minor oral surgery and local anaesthesia
- 2.2. Plan treatment taking into considerations the local diagnosis, general condition of the patient and available facilities
- 2.3. Carry out infiltration and block anaesthesia using appropriate drugs for minor oral surgical procedures and test for effectiveness

- 2.4. Carry out extraction of teeth using dental forceps and elevators
- 2.5. Design and raise muco-periosteal flaps suitable for minor oral surgery procedures listed under 1.8, 1.9 & 1.10
- 2.6. Remove bone using burs and chisel and mallet
- 2.7. Close muco-periosteal flaps using appropriate suturing methods
- 2.8. Remove sutures at the appropriate time, at the correct stage of wound healing
- 2.9. Remove mesio-angularly impacted wisdom teeth, broken teeth, buried roots
- 2.10. Carry out frenectomy, Operculectomy and removal of small benign soft tissue masses and small intra bony cysts and granulomas
- 2.11. Detect postoperative complications due to local anaesthetic or surgery and manage or arrange for management of same
- 2.12. Take local measures to stop post operative bleeding and initiate for investigation and further management
- 2.13. Use the correct dental chair position for maximum comfort for patient and convenience and efficiency for operator

3. ATTITUDES

At the end of the course the students should be motivated to

- 3.1. Demonstrate sensitivity and concern for patient's fear of pain
- 3.2. Choose the simple and less expensive methods of treatment when they are as effective as more complex and expensive methods

Learning Methods

	Lectures	Responsibility	No. of Duration
1.	Assessment of the exodontias patient	Oral Surgery	2
2.	Indications for extraction of teeth	Oral Surgery	1
3.	Local Anaesthesia Techniques	Oral Surgery	3
4.	Extraction Techniques	Oral Surgery	4

5.	Complications of local anaesthesia and their management	Oral Surgery	2 2
6.	Complications of extractions including haemorrhage & their management	Oral Surgery	2
7.	Use of elevators	Oral Surgery	2
8.	Designing of muco periosteal flaps	Oral Surgery	1
9.	Removal of bone suturing technique	Oral Surgery	1
10	Removal of impacted third molar	Oral Surgery	2
.			
11	Removal of impacted canine	Oral Surgery	1
.			
12	Removal of buried teeth & roots	Oral Surgery	1
.			
13	Removal of benign soft tissue lumps	Oral Surgery	1
.			
14	Frenectomy, operculectomy	Oral Surgery	1
.			

Clinical Demonstrations		Responsibility	No.of Classes
1.	Assessment of patient and recording of data	Oral Surgery	1
2.	Local Anaesthesia technique	Oral Surgery	2
3.	Extraction technique	Oral Surgery	3
4.	Use of elevators	Oral Surgery	1
5.	Removal of impacted teeth	Oral Surgery	1
6.	Excision of soft tissue mass	Oral Surgery	1

Timing

1st and 2nd Terms Third Year

Evaluation

Theory In course
 End of course - Essay

Clinical In course Practical Examination
 OSCE

COURSE UNIT - INFECTIONS OF THE ORO-FACIAL REGION (4.6.3)

Developed by the Department of Oral Surgery

Pre requisite knowledge

Prior to entering this course unit students must have a knowledge of the pathology of inflammation and infection, the microbiology of infection, clinical methods of examination of swellings and pharmacotherapy of infection.

Content

Aetiology, pathogenesis clinical and treatment of odontogenic infections, viral infections of the oral and para oral tissues, infections of salivary glands, spread of infections and its complications and other common infections of the face that simulate odontogenic infection;

OBJECTIVES

1. Knowledge and understanding

On Completion of the course unit the students should be able to;

- 1.1. Describe the aetiology and the pathogenesis of odontogenic infections; alveolar abscess, cellulites, periocoronitis, osteomyelitis, alveolar osteitis
- 1.2. List the viral infections of the oro-facial region and describe their aetiology and pathogenesis
- 1.3. Outline the aetiology & pathogenesis of non odontogenic infections in the oro facial region which may be clinically similar to odontogenic infections; actinomycosis, carbuncle, erysipelas, maxillary sinusitis, tonsillitis, orbital cellulites, otitis media
- 1.4. Describe the aetiology and pathogenesis of infections of the salivary glands
- 1.5. Describe the clinical features of infections mentioned under 1.2, 1.3 and 1.4
- 1.6. Explain how odontogenic infections spread and describe the clinical features
- 1.7. List the special investigations and the information they would provide, which may be necessary for confirmation of diagnosis of infection/s mentioned under 1.2, 1.3 and 1.4
- 1.8. Describe the treatment of odontogenic infections and infections of salivary glands

- 1.9. Outline the principles of treatment of viral infections and other infections that may be similar to odontogenic infections
- 1.10. Describe the complications of spread of odontogenic infections and their management

2. SKILLS

On completion of the course unit the students should be able to demonstrate the skills necessary to;

- 2.1. Interview a patient with an infection in the oro-facial region and record a relevant history of the disease
- 2.2. Conduct a clinical examination of the patient, determine the clinical features and record same
- 2.3. Decide what special investigations are necessary to confirm a diagnosis and perform/arrange for same
- 2.4. Decide on a suitable method of draining an abscess and perform/arrange for same
- 2.5. Decide on antibiotic and other drugs regimen suitable for a patient with an odontogenic infection and prescribe same
- 2.6. Recognize the need for urgent treatment in patients with spreading infections, initiate early treatment and summon specialist for management

3. ATTITUDES

Students should have been motivated to;

- 3.1. Take appropriate measures to safeguard self and prevent cross infection when managing a patient with an infection
- 3.2. Appreciate patients fear of pain and take precautions to cause least pain when managing patients with infection
- 3.3. Anticipate complications and be ready to deal with same when managing patients with oro-facial infections

	Lecture Topics	Responsibility (Department)
1.	Aetiology and pathogenesis of bacterial infections of the oro facial region	Oral Pathology
2.	Aetiology and pathogenesis of viral infections of the oro facial region	Oral Pathology
3.	Clinical features of odontogenic infections and their differential diagnosis	Oral Medicine
4.	Special investigations in the diagnosis of infections in the oro facial region, microbiological, ABST, Radiological imaging etc.	Oral Medicine
5.	Drainage of an alveolar abscess	Oral Surgery

Evaluation

Evaluation will be carried out at an end of course examination

Knowledge - Essay type questions
 Clinical/Practical - OSCE

Timing: 1st term in the Final year

COURSE UNIT - MAXILLO-FACIAL TRAUMA (4.6.4)

Developed by the Department of Oral Surgery

Pre requisite knowledge

Before entering this course unit students should have a knowledge of applied anatomy of the facial skeleton, clinical and radiological features of fractures of bones, principles of treatment of soft tissue injuries and fractures, emergency management of trauma and healing of wounds and fractures

Content

Causation and epidemiology of maxillo-facial fractures, clinical and radiological features of fractures, treatment and emergency management of maxillo facial fractures and their complications.

OBJECTIVES

1. Knowledge

On completion of the course unit the students should be able to

- 1.1. Describe the causation of maxillo-facial injuries and discuss the epidemiology of these injuries
- 1.2. Describe the clinical and radiological features of dento alveolar fractures, fractures of the mandible, fractures of the middle third of the facial skeleton and dislocated temporo-mandibular joint
- 1.3. List the special investigations necessary to diagnose and plan treatment of fractures mentioned in 1.2 and describe the information that may be gathered from these investigations
- 1.4. Describe the management of fractures mentioned in 1.2
- 1.5. List the complications of fractures mentioned in 1.2 and describe their diagnosis and management
- 1.6. Describe the diagnosis and management of emergencies in a patient admitted to a hospital with maxilla-facial injuries
- 1.7. Describe the post operative management of patients with maxillo-facial injuries

2. SKILLS

On completion of the course unit the students should be able to demonstrate the skills necessary to;

- 2.1. Recognize life threatening emergencies in patients with maxillo-facial injuries and initiate treatment and/or summon appropriate specialist
- 2.2. Interview a patient with maxillo-facial injuries and record a relevant history
- 2.3. Conduct a physical examination of a patient with maxillo-facial injuries and record the findings
- 2.4. Interpret findings from radiographs and other special investigations and perform/arrange for same
- 2.5. Interpret findings from radiographs and other special investigations
- 2.6. Carry out on models, simple wiring techniques used in fracture fixation
- 2.7. Remove fixations and test for fracture healing
- 2.8. Diagnose complications of maxillofacial fractures and treat/arrange for treatment of same

3. ATTITUDES

Students should have been motivated to;

- 3.1. Appreciate the need to detect early the life threatening emergencies in maxillofacial injuries
- 3.2. Appreciate the importance of maintaining accurate clinical records of patients with maxillofacial injuries in view of medico-legal implications
- 3.3. Appreciate the importance of deciding on simple methods of fixation of fractures when they are as effective as complex methods

	Lecture Topics	Responsibility
1	Applied anatomy of the maxillo-facial region relevant	Oral Surgery

2	Causation and epidemiology of maxillo-facial fractures	Oral Surgery
3	Clinical features of fractures of the mandible	Oral Surgery
4	Clinical features of fractures of the middle third of the facial skeleton	Oral Surgery
5	Radiological investigations in maxillo-facial injuries	Oral Surgery
6	Management of mandibular fractures	Oral Surgery
7	Management of fractures of the middle third of the facial skeleton	Oral Surgery
8	Emergency management of maxillo-facial injuries	Oral Surgery
9	Post operative management of maxillo-facial injuries	Oral Surgery
10	Medico-legal aspects of maxillo-facial injuries	Oral Surgery

Clinical /Practical Classes

	Lecture Topics	Responsibility
1	Clinical features of maxillofacial injuries	Oral Surgery
2	Radiological features of maxillo-facial injuries	Oral Surgery
3	Treatment of maxillo-facial injuries	Oral Surgery
4	Wiring techniques on models	Oral Surgery

COURSE UNIT ON ORAL NEOPLASIA (4.6.5)

Developed by Department of Oral Surgery

Pre requisite knowledge

Prior to entering the Oncology Course students are required to have an understanding of the following;

1. General Pathology of neoplasia
2. Principles of clinical methods of examination of patients with swellings and lumps
3. Principles of management of neoplasia

OBJECTIVES

1. Knowledge

At the end of the course the student should be able to;

- 1.1. Define the words oncology, neoplasia and premalignancy and list the common neoplasms and premalignant lesions and conditions that occur in the oral and para oral tissues
- 1.2. Describe the aetiology, pathogenesis and histopathology of the diseases listed in 1.1.
- 1.3. Describe the clinical features of the diseases mentioned in 1.1 and describe how benign and malignant neoplasms differ clinically
- 1.4. Explain the pathological basis of the clinical features mentioned under 1.3
- 1.5. List the non neoplastic conditions which clinically/histopathologically resemble the diseases mentioned in 1.1.
- 1.6. List the special investigations that help in the diagnosis of diseases mentioned in 1.1. and describe the information obtainable from the investigations

- 1.7. Describe the principles of biopsy taking as applied to diseases mentioned in 1.1.
- 1.8. Describe the principles of management of the diseases listed in 1.1 and explain the pathological basis of treatment methods employed.
- 1.9. List the complications of treatment of malignant neoplasms and describe diagnosis and principles of management of the complications
- 1.10. List and discuss the factors that determine the prognosis of oral neoplasms

2. PSYCHOMOTOR

Students should be able to

- 2.1. Interview a patient who has a disease listed in 1.1 and obtain and record a relevant history of the disease and past medical and dental diseases
- 2.2. Conduct a clinical examination of the patient and determine and record the clinical features
- 2.3. Decide what special investigations are necessary for confirmation of diagnosis and arrange/perform same
- 2.4. Perform an incisional biopsy of lesions/conditions listed under 1.1., under local anaesthesia and send the specimen with relevant information to the pathologist
- 2.5. Recognize histopathological features of lesions/conditions listed in 1.1 and suggest a histopathological diagnosis
- 2.6. Interpret the reports and results of special investigations
- 2.7. Arrive at a diagnosis taking into consideration the clinical findings and results of special investigations
- 2.8. Suggest a treatment plan taking into consideration, the clinical findings results of special investigations and available resources
- 2.9. Write a letter referring the patient to a consultant for advice/treatment
- 2.10. Prepare patient for surgery under general anaesthesia
- 2.11. Assist at surgical operation
- 2.12. Deliver post-operative care

3. AFFECTIVE

Students should have been motivated to;

- 3.1. Keep abreast with recent concepts in aetiology, pathogenesis and treatment modalities of neoplasia in the oral/para oral tissues
- 3.2. Take all necessary action to detect pre cancer, cancer and other malignancies early and initiate treatment without undue delay
- 3.3. Empathize with patient and family when dealing with terminally ill patients
- 3.4. Establish rapport with the family of a patient with an oral malignancy to supply the relevant information without causing undue alarm and sorrow.

ONCOLOGY COURSE UNIT

	Lecture Topics	Responsibility (Department)
1	Definition, aetiology and Pathogenesis of oral precancer, oral cancer and benign neoplasms	Oral Pathology
2	Clinical features of precancer	Oral Medicine
3	Clinical features of benign and malignant neoplasia	Oral Surgery
4	Histopathology of oral precancer and oral cancer	Oral Pathology
5	Pathological basis of clinical features and treatment of Orofacial Neoplasms	Oral Pathology
6	Surgical treatment of malignant Neoplasms - Lecture I	Oral Surgery
7	Surgical treatment of benign and malignant Neoplasms - Lecture II	Oral Surgery
8	Non surgical treatment of precancer and cancer	Oral Medicine

9	Effects of radiation on oral mucosa	Oral Medicine
10	Post operative follow up of cancer patient	Oral Surgery

Clinical / Practical Classes

	Lecture Topic	Responsibility
1	Pathology of precancer	Oral Pathology
2	Pathology of benign and malignant neoplasms	Oral Pathology
3	Pathology as related to management of precancer and cancer	Oral Pathology
4	Clinical features of precancer	Oral Medicine
5	Clinical features of oral cancer and benign neoplasms	Oral Surgery
6	Biopsy technique	Oral Surgery
7	Surgical treatment of oral cancer	Oral Surgery
8	Post treatment follow up of oral cancer patient	Oral Surgery

Evaluation

Evaluation will be done at end of course

Knowledge	- Essay type question
Skills	OSCE Histopathology Clinical features

Timing

Second Term of the Final Year

**COURSE UNIT - DEVELOPMENTAL ANOMALIES OF THE
MAXILLO-
FACIAL REGION (4.6.6)
Developed by the Department of Oral Surgery**

Pre requisite knowledge

Before entering this course unit students must have knowledge of the embryology,
Development and gross anatomy of face, head and neck.

Content

Applied embryology, aetiology and pathogenesis of developmental anomalies of the Mouth, jaws (excluding teeth) and face and the principles of diagnosis and management of these conditions.

OBJECTIVES**1. Knowledge and Understanding**

On completion of the course unit the students should be able to

- 1.1. Describe the embryology and causation of common developmental anomalies of the head and neck and give a suitable classification of these conditions

- 1.2 Describe the clinical features of common developmental anomalies of the mouth and face eg. Cleft lip and palate, jaw deformities, hemifacial microsomia, synostosis, dysostosis, synchondrosis
- 1.3. List the special investigations and describe the information they provide, which are necessary for the diagnosis of the conditions mentioned under 1.1
- 1.4. Describe the principles of treatment of conditions mentioned under 1.1.
- 1.5. Describe the management of common developmental anomalies affecting the mouth which could be carried out in general practice, eg. Lingual frenum, labial frenum.

2. SKILLS

On completion of the course unit the students should be able to demonstrate the skills necessary to;

- 2.1. Interview a patient with a development anomaly and record a relevant history of the disease
- 2.2. Conduct a clinical examination and determine and record the clinical features
- 2.3. Decide what special investigations are necessary to confirm a diagnosis and perform /arrange for same
- 2.4. Refer patient to appropriate specialist for treatment
- 2.5. Carry out surgical treatment of simple developmental defects such as; lingual frenum, labial frenum etc.

3. ATTITUDES

Students should have been motivated to

- 3.1. Recognize the need to refer patients for management
- 3.2. Keep abreast of recent concepts in aetiology and management of patients with developmental anomalies
- 3.3. Establish rapport with patient/family to supply relevant information on possibilities of treatment
- 3.4. Appreciate the need for team work in the management of developmental anomalies
- 3.5. Appreciate the need for long term follow up of patients mentioned under 1.1
- 3.6. Relate to patients who have developmental anomalies with sensitivity and kindness

	Lecture Topic	Responsibility (Department)
1	Development of the face, Causation and Embryology of common developmental anomalies of the face	Anatomy Oral Surgery
2	Clinical features of common developmental anomalies of the face	Oral Surgery
3	Management of cleft lip and palate	Oral Surgery
4	Developmental anomalies of the Tongue and soft tissues of the mouth	Oral Medicine
5	Surgical treatment of developmental anomalies of soft tissues and tongue	Oral Surgery
6	Management of jaw deformities and other major facial deformities	Oral Surgery
7	Prosthetic management of oro-facial anomalies	Prosthodontics

Clinical Demonstrations	Responsibility (Department)
1 Clinical features of cleft lip and palate	Oral Surgery
2 Clinical features of jaw deformities	Oral Surgery
3 Surgical correction of cleft lip & palate	Oral Surgery
4 Deformities of soft tissue & tongue	Oral Medicine
Slide Sessions	
1 Deformities of Head and Neck	Oral Surgery

COURSE UNIT ON GENERAL ANAESTHESIOLOGY AND INTRA-FENOUS SEDATION (4.6.7)

Pre requisite Knowledge

General Medicine, General Surgery, Pharmacology

OBJECTIVES

1. Knowledge – At the end of the course the student should be able to
 - 1.1. List the indications for general anaesthesia (GA) and IV sedation
 - 1.2. List the drugs used in GA and IV sedation, their actions and how they are Administered to a patient
 - 1.3. Describe the techniques of GA and IV sedation
 - 1.4. Describe the screening, preparation and premedication of patients for GA

- 1.5. Describe the methods of monitoring a patient during and after GA and IV sedation
- 1.6. List the complications that may occur during or after GA and IV sedation
- 1.7. Describe the role of the anaesthetist/nurse during recovery

2. SKILLS - At the end of the course the student should be able to

- 2.1. Examine a patient and determine whether GA is indicated in the treatment
- 2.2. Assist the anaesthetist in preparing a patient for GA, in relevant investigations, aseptic measures and preparation
- 2.3. Assist the anaesthetist during GA by making available equipment, material and drugs
- 2.4. Monitor vital signs, pulse, blood pressure and respiration during GA and recovery
- 2.5. Detect/suspect the presence of a complication due to GA and treat/arrange for treatment of same
- 2.6. Maintain airway, IV drips, control pain, detect post operative bleeding during recovery

3. ATTITUDES

At the end of the course the student should be motivated to

- 3.1. Appreciate the patient's psychological fear of pain, GA Surgery and the need to take measures to reduce the same
- 3.3. Evaluate cost effectiveness and risks when deciding on GA as the method of anaesthesia

Learning Methods

	Lectures	Responsibility	No. of Duration
1	Indications for GA, drugs used in GA and their actions	Oral Surgery (Anaesthetist)	1

2	Preparation and premedication of patients for GA	Oral Surgery (Anaesthetist)	1
3	Techniques of GA and monitoring of patients	Oral Surgery (Anaesthetist)	1
4	Maintenance of Airway	Oral Surgery (Anaesthetist)	1
5	Complications in GA and their management	Oral Surgery (Anaesthetist)	1
Clinical Demonstrations			
1.	Techniques of GA and monitoring of patients and managing a patient in recovery	Oral Surgery (Anaesthetist)	1
2	ICU Management	Oral Surgery (Anaesthetist)	1

COURSE UNIT - AETIOLOGY, PATHOGENESIS AND DIAGNOSIS OF PERIODONTAL DISEASE (4.7.1)

Developed by the working group for periodontology

Pre requisite knowledge

Structure and function of the periodontium, microbiology and understanding of the oral flora, periodontal pathogens and fundamentals of immuno pathology.

Content

Aetiology and pathogenesis of periodontal disease clinical data and special investigation to diagnose periodontitis.

OBJECTIVES

1. Knowledge and understanding

On completion of the course unit student should be able to

- 1.1. Describe the formation of microbial dental plaque
- 1.2. Describe physical properties of plaque
- 1.3. Describe microbiology of microbial dental plaque, its initiation and maturation with special emphasis on normal flora and periodontal pathogens.
- 1.4. Describe the influence of trauma from occlusion on periodontal health and disease
- 1.5. Describe the pathogenesis of periodontitis
- 1.6. Discuss differential diagnosis of periodontitis and gingivitis
- 1.7. Describe the use of radiology in the diagnosis of periodontal disease
- 1.8. Describe the testing of vitality of teeth as an aid to diagnosing periodontal disease.
- 1.9. List the microbiological investigations and describe the information that could be obtained from these for diagnosis of periodontal disease.
- 1.10. Describe antibody and CPD based techniques for diagnosing periodontitis.

2. SKILLS

At the end of the course the students should be able to

- 2.1. Perform, history taking relevant to periodontal diseases.
- 2.2. Conduct clinical examination and record the clinical features of gingivitis and periodontitis.
- 2.3. Decide what special investigations are necessary to confirm a diagnosis and perform/arrange for same.
- 2.4. Refer patient for special investigations where it is necessary.
- 2.5. Measure plaque score
- 2.6. Measure bleeding score
- 2.7. Measure pocket depth
- 2.8. Measure loss of attachment
- 2.9. Measure mobility of teeth
- 2.10. Examine furcal involvement and grade the severity
- 2.11. Arrive at a diagnosis based on data collected

Arrive at a diagnosis based on data collected

3. ATTITUDES

Student should have been motivated to:

- 3.1. Appreciate the need to diagnose patients condition accurately.

3.2. Keep abreast of recent concepts in aetiology pathogenesis and diagnosis aids

	Lectures	Responsibility	No. of Duration
1	Clinical anatomy of the periodontium	Anatomy	1
2	Clinical recognition of gingivitis and periodontitis	Periodontology	1
3	Periodontal examination of patients and PSR (Periodontal Screening Record) determination	Periodontology	1
4	Gingival environment and gingival microflora and periodontal pathogens	Periodontology	1
5	The host response - inflammation and immunity	Periodontology	1
6	Histopathology of periodontal disease	Oral Pathology	1
7	Occlusion and periodontal disease	Orthodontics & Periodontology	1
8	Aids to diagnose periodontal disease	Periodontology	1

Clinical & Laboratory Demonstration

1	Clinical features of gingivitis and periodontitis	Periodontology	
2	Charting and measuring of plaque bleeding scores	Periodontology	
3	Charting and measuring of pocket depth	Periodontology	8

4. Charting and measuring of mobility of teeth Periodontology
5. Examination of furcal involvement and grading the severity Periodontology

Video Sessions

1. Use of the periodontal probe clinical examination and charting
2. Plaque management

COURSE UNIT ON NON - SURGICAL MANAGEMENT OF PERIODONTAL DISEASE (4.7.2)

Pre-requisite Knowledge

Aetiology pathogenesis and diagnosis of periodontal disease, pharmacology, aseptic technique.

Content : Plaques management, personal plaque management professional plque management, drug therapy in the treatment of periodontal disease.

OBJECTIVES

1. KNOWLEDGE

At the end of the course the student should be able to

- 1.1. Describe treatment planning of periodontal disease based on diagnosis.
- 1.2. Describe the methods of personal plaque management E.g. Brushing, flossing, tooth pick, chemical
- 1.3. Describe the method of professional plaque management.
- 1.4. Describe the methods of assessing the plaque management.
- 1.5. Discuss the scope of drugs used in the management of periodontal disease.
- 1.6. Give the indication for drug therapy and describe the drugs currently used and their effects in the management of periodontal disease.
- 1.7. Describe the non surgical management of periodontal pockets.

2. SKILLS

Student should be able to

- 2.1. Plan non-surgical treatment of periodontal disease and give oral hygiene instructions
- 2.2. Educate and motivate patients for personal plaque control
- 2.3. Carry out scaling, polishing and root planning for plaque control making optimal use of available resources
- 2.4. Decide on a drug regime, prescribe and instruct patient on same
- 2.5. Review and assess patient at appropriate intervals

ATTITUDES

At the end of the course, the student should be motivated to

3.1. Promote plaque control in the clinical situation

	Lectures Topics	Responsibility	No. of Lectures
1	Treatment planning in periodontal disease	Periodontology	4
2	Plaque control, personal & professional	Periodontology	3
3	Instruments used in scaling, polishing and root planning	Periodontology	2
4	Root planning and periodontal tissue regeneration	Periodontology	1
5	Assessment and review of periodontal therapy	Periodontology	1
6	Drug therapy and review of periodontal disease	Periodontology	1
	Clinical demonstrations - 04	Video -	2

COURSE UNIT : SURGICAL MANAGEMENT OF PERIODONTAL DISEASE (4.7.3)

Developed by the working committee for periodontology

Pre-requisite knowledge

Aetiology, pathogenesis and diagnosis of periodontal disease and non surgical management of periodontal disease.

Content

Rationale for surgical therapy in Periodontal disease, principles of surgical management , miscellaneous, surgical considerations (Furcations, root resection techniques, recession, tissue regeneration techniques).

OBJECTIVES

Knowledge

On completion of the course unit student should be able to;

- 1.1. List the indications for Periodontal Surgical Therapy
- 1.2. Describe the general principles of periodontal surgical therapy
- 1.3. Describe the surgical option to eliminate periodontal pockets (Simple Periodontal Surgery)
- 1.4. Describe the problems regarding surgical therapy associated with
 - root morphology – complex periodontal surgery
 - bone morphology
 - recession of gingivae
- 1.5. Discuss the anaesthesia suitable to perform simple and complex periodontal surgery
- 1.6. Describe the methods of controlling surgical, bleeding and haemostatsis
- 1.7. Describe the anatomical consideration in periodontal surgery
- 1.8. Describe postoperative care and management
- 1.9. Describe dressings, sutures and other material that are used in periodontal surgery
- 1.10. Discuss techniques to reduce undue postoperative pain
- 1.11. Describe modalities available in post surgical plaque control

- 1.12. Describe wound healing after periodontal therapeutic procedures
- 1.13. Discuss the outcome of different surgical options
- 1.14. Discuss current technique available to improve the results of periodontal surgery

2. SKILLS

At the end of the course the student be able to

- 2.1. Assess the outcome of non surgical periodontal therapy and select patients for periodontal surgery
- 2.2. a. Identify and indicate so in writing in the report that the following was covered with the patient
 1. The intended area of surgery
 2. The cost
 3. The amount of discomfort encountered
 4. The intended placement of sutures or dressing
- b. Carry out appropriate radiological investigation and interpret these in relation to alveolar bone loss
- 2.3. Assess the degree and the amount of osseous reduction or augmentation necessary
- 2.4. Select the regime for adequate anaesthesia
- 2.5. Identify the instruments necessary for periodontal surgery
- 2.6. Carry out the following procedures
 - a. Gingivectomy including dressings
 - b. Flap procedure including root planning and bone grafting
- 2.7. Manage bleeding and obtain Haemostasis
- 2.8. Arrange a means of contact for the patient during the immediate post surgical period
- 2.9. Issue written instructions to the patient
- 2.10. Prescribe drugs to manage post operative pain and infection
- 2.11. Remove sutures and dressings at the correct stage

2.12. Carry out long term follow up after periodontal surgical treatment

3. ATTITUDES

At the end of the course the students should be motivated to

3.1. Appreciate the importance of patient selection,

	Lectures Topics	Responsibility	No. of Lectures
1	The rationale for surgical therapy in periodontology	Periodontology	1
2	General principles of periodontal surgery, Tissue management and post operative care	Periodontology	1
3	Local Anaesthesia in periodontal surgery	Oral Surgery	1
4	Tissue healing in excisional and incisional surgery	Periodontology	1
5	Principles of grafting and grafts	Oral Surgery	1
6	Tissue healing in Grafting and Mucogingival surgery	Periodontology	1
7	Regeneration in periodontal surgical therapy	Periodontology	1
8	Gingival surgical procedures	Periodontology	1
9	Periodontal flaps and alveolar osseous	Periodontology	1
10	Mucogingival surgical procedures (periodontal plastic surgery)	Periodontology	1
11	Surgical procedures for treatment of teeth with furcation involvement	Periodontology	1

Clinical demonstrations

Designing incisions on paper and paper models

Designing and carrying out incision on wax plastic models

Identification of suture material. Surgical blade selection and instrument used in surgery

Exposure to and surgical procedures and assist in surgery

Do various types of suture techniques on models

Perform surgical procedures

Treatment of Furcations

Pedicle grafts to treat recession

Free graft to treat recession

Bone surgery in the management of advance periodontitis

Video sessions:

Sharing care

1 ½ hours/student

Guided tissue regeneration

PAPEDODONTICS

COURSE UNIT : DEVELOPMENTAL ANOMALIES OF TEETH (4.8.4)

Pre-requisite Knowledge

Before entering the course unit, the students must have a basic knowledge of the normal development of the tooth, this will include the stages in development of tooth and in terms of special arrangement, time, differentiation and organization. In addition they also should have a fundamental knowledge about the anatomy of primary and permanent teeth.

Content

Major types of developmental anomalies of teeth which include anomalies in shape, shade, number, size, structure eruption is dealt with. In addition individual entities of developmental anomalies within each major type will be discussed in detail.

OBJECTIVES

1. Knowledge and understanding

On completion of the course unit the student should be able to

- 1.1. List the major types of anomalies of teeth
- 1.2. Describe the individual entities of developmental anomalies within each major type
- 1.3. Describe the aetiology and pathogenesis of conditions mentioned under 1.1. & 1.2.
- 1.4. Describe the histological features of the conditions mentioned under 1.1. & 1.2.
- 1.5. Describe the investigations carried out in order to differentiate the individual entities of anomalies.

- 1.6. Describe the methods of treatment of developmental anomalies mentioned in 1.3.
- 1.7. Discuss the need for early detection of developmental anomalies and the need for prevention or modification of the effects that may be caused.

2. SKILLS

On completion of the course unit the students should be able to

- 2.1. Interview parent/child and obtain a relevant history
- 2.2. Examine a child patient and collect data relevant to the developmental anomalies
- 2.3. Carry out special investigations or arrange for same and interpret the result
- 2.4. Arrive at a definite diagnosis
- 2.5. Plan appropriate treatment for each of the entities
- 2.6. Carry out or arrange for appropriate treatment for each developmental anomaly.

3. ATTITUDES

- 3.1. Empathize with the child/parent who are concerned about the developmental anomaly.
- 3.2. Appreciate the need to reassure child/parent about the possibility of successful treatment.
- 3.3. Appreciate the need to take safety measures when using harmful materials

	Lectures Topics	Responsibility	No. of Lectures
1	Major types of developmental anomalies of teeth	Paedodontics	1
2	Developmental anomalies in number of teeth	Oral Pathology	1

3	Different entities of developmental anomalies with the major types	Paedodontics	1
4	Developmental anomalies in shade	Paedodontics	1
5	Developmental anomalies in the shape of the tooth	Paedodontics	1
6	Aetiology pathogenesis and histopathology of developmental anomalies of teeth	Oral Pathology	

Clinical Demonstration

1. GIC/Composite Restorations for hypoplastic teeth
2. Bleaching technique for Dental Fluorosis
3. ART Technique

**COURSE UNIT : EARLY INTRODUCTION TO CLINICALS -
Disease of Dental Hard Tissues including Fluorosis**

Relevant module in Basic Sciences: Structure of enamel, dentine, cementum, morphology of teeth

Objectives

At the end of the course the students should be able to

1. Identify carious lesions in patients and in extracted teeth
2. Explain what happens to the mineral component of teeth in caries
3. Identify fluorosis, in patients and extracted teeth
4. Explain at what stage of development of teeth fluorosis may occur

Learning methods

1. Clinical demonstration of caries
2. Clinical demonstration of fluorosis

Responsibility

- Restorative
Paedodontics

**COURSE UNIT : EARLY INTRODUCTION TO CLINICALS -
DISEASE OF THE PERIODONTIUM**

Relevant module in Basic Sciences : Anatomy of the periodontium

Objectives

1. Identify common clinical features of periodontal disease, colour changes, swelling, detachment, pocketing
2. Explain what happens to the anatomical structures of the periodontium due to the changes mentioned in 1.

Learning methods

Responsibility

- | | |
|---------------------------------------------------------------------------------------|----------------|
| 1. Clinical demonstration on periodontal disease and discussion on structural changes | Periodontology |
|---------------------------------------------------------------------------------------|----------------|

COURSE UNIT ON EARLY INTRODUCTION TO CLINICALS - DISEASE OF THE ORAL MUCOUS MEMBRANE

Relevant Module in Basic Sciences : Structure of the Oral Mucous membrane, Nutrition

Objectives

At the end of the course the student should be able to;

1. Identify changes in colour of the oral mucous membrane, redness, pallor, white lesions, pigmentation
2. Identify papillae and their atrophy, hypertrophy
3. Explain which layer of the mucous how and what nutritional deficiencies could cause conditions mentioned in 1 and 2.
4. Explain which layer of the mucous membrane is effected in conditions mentioned in 1 and 2.

Learning methods

1. Salivary demonstration of diseases of the oral mucous membrane

Responsibility

Oral Medicine

**COURSE UNIT : EARLY INTRODUCTION TO CLINICALS -
ORO FACIAL INFECTIONS**

Relevant Module in Basic Sciences - Fascial spaces of the head and neck

Responsibility: Oral Surgery

Objectives: At the end of the course the students should be able to

1. List the areas and fascial spaces into which odontogenic infections may spread.
2. Demonstrate on a patient the sites at which swellings may be caused by spread of infection into fascial spaces.
3. Trace the path of spread of infections from origin (tooth) to different fascial spaces on cadaver and also on patient.
4. Trace the path of spread of odontogenic infections into cavernous sinus, glottis region and mediastinum on a cadaver.

Learning Methods

Responsibility

1. **Lecture**

- 1.1. Fascial spaces of the head and neck and their significance

Oral Surgery

2. **Clinical**

- 1.2. Clinical demonstration on spread of Odontogenic infection Oral Surgery

COURSE UNIT - EARLY INTRODUCTION TO CLINICALS - LYMPH NODE ENLARGEMENT IN HEAD & NECK

Relevant Module in Basic Science : Anatomy of Lymphatic Drainage of Head & Neck, Physiology of lymphatic system

Objectives:

At the end of the course the student should be able to;

1. Detect by observation swellings in the submental, submandibular areas and anterior and posterior triangles of the neck.
2. Palpate and detect enlargement of lymph nodes in the submental, submandibular and anterior and posterior triangles of the neck.
3. Identify the area of drainage of enlarged lymph nodes in the head and neck.

Learning methods	Responsibility	No. of Classes
Clinical demonstration on Examination of a patient with Lymph adenopathy	Oral Surgery	1

COURSE UNIT - EARLY INTRODUCTION TO CLINICALS - DISEASE OF SALIVARY GLANDS

Relevant module in Basic Sciences : Anatomy and physiology of salivary glands

Objectives:

At the end of the course the students should be able to;

1. Identify in a patient swellings of salivary glands
2. List structures and tissues from which similar swellings could arise in the same region as salivary glands.
3. Detect in a patient reduction of salivary secretion and also excessive secretion.

Learning methods

Responsibility

- | | |
|-------------------------------------------------------------------|---------------|
| 1. Clinical demonstration on swellings of the salivary gland | Oral Surgery |
| 2. Clinical demonstration and abnormalities of salivary secretion | Oral Medicine |

**COURSE UNIT - EARLY INTRODUCTION TO CLINICALS -
2nd BDS/FIRST YEAR**

Clinical Subject - cleft lip and palate

Relevant subject in Basic Sciences - Embryology and development of face and mouth

Objectives

At the end of the course the student should be able to

1. Detect the presence of cleft lip and palate in a patient
2. Identify the embryological origin of the components of unilateral and bilateral cleft lip and palate.
3. Explain in embryological terms how the cleft lip and palate deformity is produced.
4. Explain how the cleft lip and palate deformity supports the theories of embryological development of face and mouth.
5. Describe the derangement of functions of the mouth in cleft lip and palate.

Learning Methods Classes	Responsibility	No. of
1. Clinical Demonstration on 1 unilateral and bilateral cleft lip and plate with discussion on its causation and derangement of function	Oral Surgery	

Timing: First year/2nd term

COURSE UNIT - EARLY INTRODUCTION TO CLINICALS - DEVELOPMENTAL ANOMALIES OF TEETH

Relevant module in Basic Sciences : Development of teeth

Objectives:

At the end of the course the students should be able to;

1. Detect developmental anomalies of teeth in patients and in extracted teeth eg: Hypoplasia, amelogenesis imperfecta, dentinogenesis imperfecta, deformed teeth, dilacerations, densinvaaginatus, fusion, anodontia, mesiodens.
2. Explain how and at what stage of tooth development the conditions mentioned in 1 are caused.

Learning methods	Responsibility
1. Clinical demonstration of developmental	Paedodontics

anomalies of teeth

**COURSE UNIT - EARLY INTRODUCTION TO CLINICALS -
FACIAL PAIN, LOCAL ANAESTHESIA**

Objectives:

At the end of the course the student should be able to

1. Identify areas and structures of the oral cavity and fact from which pain may arise.
2. Trace the path of pain perception from the primary site to the sensory cortex.
3. Explain in physiological terms the clinical features of facial pain eg: Types of pain, radiation, aggravation, relief.
4. Explain the anatomical basis of the technique of inferior alveolar block injection of local anaesthetic.

Learning methods

Responsibility

1. Clinical demonstration of a patient with facial pain Oral Medicine
2. Clinical demonstration of inferior alveolar block Oral Surgery
Injection

**COURSE UNIT : EARLY INTRODUCTION TO CLINICALS -
ABNORMALITIES OF CELL PROLIFERATION**

Relevant module in Basic Sciences: Histology and cell proliferation

Objectives:

At the end of the course the students should be able to

1. Detect atrophy (thinning), hypertrophy/hyperplasia (thickening) of oral mucous membrane and explain how they are caused by abnormalities of cell proliferation
2. Detect growths arising from oral mucous membrane due to excessive cell proliferation
3. Explain what abnormalities of cell proliferation cause pre cancer and cancer.

Learning methods
Responsibility

- | | | |
|----|---------------------------------------------------------|------|
| 1. | Clinical demonstration on diseases of the
Medicine | Oral |
| | Oral mucous membrane due to abnormal cell proliferation | |

**COURSE UNIT ON EARLY INTRODUCTION TO CLINICALS -
VARIATIONS OF OCCLUSION, MALOCCLUSION, JAW
RELATIONSHIP**

Relevant module in Basic Sciences: Jaw relationship, occlusion

Objectives:

At the end of the course the students should be able to:

1. Detect variations of normal occlusion in patients and in models, eg: Class II, Class III.
2. Detect variations in jaw relationship in patients, skeletal Class II and Class III

Learning methods

Responsibility

1. Clinical demonstration on variation in occlusion Orthodontics and jaw relationship

COURSE UNIT ON EARLY INTRODUCTION TO CLINICALS - GERIATRIC DENTISTRY

Relevant module in Basic Sciences : Age changes in oral and para oral tissues

Objectives

At the end of the course the student should be able to

1. Detect age changes in jaw bones, muscles of mastication and teeth in patients
2. Detect changes in alveolar bone, jaw relationship and T/M joint due to edentulousness in patients

Learning methods

1. Clinical demonstration on age changes due to edentulousness in oral and para oral tissues

Responsibility

Prosthetics

11. IMPLEMENTATION OF COURSE UNITS**11.1. Lectures**

Lectures will start in the Third Year and will be conducted from 8.00 till 9.00 am and from 1.00 pm till 2.00 pm. There will be no lectures in the Morning in the Final Year so that more time will be available for clinical work.

The Head of the Department/Division to which a course unit is allocated will be responsible for arranging to the Lecture Topics given in the course unit, making use of the time slot in the time table allocated to that department/division for lectures. Head of the Department will inform and coordinate with other departments/divisions which contribute to the course units.

11.2. Clinical Demonstrations

As almost every lecture has a clinical/laboratory aspect which needs to be taught in the clinic/laboratory and as these two components need to be integrated as far as possible the rotation appointment in the morning (9 am - 12 noon) will be made use of for clinical demonstrations topics of which are given under course units. Head of the Department /Division to which course units are allocated will be responsible for schedules and will coordinate with other departments/divisions which contribute and participate in a particular course unit.

11.3. Time Table for Course Units

A few course units will be done during the second and third terms of the second academic year. These are given below;

1. Dental materials
2. Pathology and diagnosis of caries
3. Management of caries
4. Basic Restorations I
5. Infection Control
6. Principles of Oral Diagnosis

The rest of the course units will be completed as follows:

Department (Final) Nos.	Third Year Course Unit Nos.	Fourth Course	Year Unit
Community	All course units	-	
Restorative	4.2.4	4.2.6	
Prosthetics	4.3.1, 4.3.2, 4.3.3.	4.3.4.	

Oral Pathology	All except 4.4.1	-	
Oral Medicine	4.5.2, 4.5.3, 4.5.4, 4.5.5 4.5.6, 4.5.7		4.5.8
Oral Surgery 4.6.6, 4.6.7	4.6.2, 4.6.3, 4.6.4, 4.6.5		
Periodontology	All course units	-	
Orthodontics	All course units		-