



ANNOOR DENTAL COLLEGE & HOSPITAL

Affiliated to Mahatma Gandhi University & Kerala University of Health Sciences

Recognised by Dental Council of India and Govt of India)

Muvattupuzha-686673, Ernakulam Dist, Kerala, India

E Mail: annoordentalcollege@rediffmail.com website: www.annoordentalcollege.org

Ph: 0485-2815217 Fax : 0485-2815817

1.3.1 The Institution integrates cross-cutting issues relevant to gender, environment and sustainability, human values, health determinants, Right to Health and emerging demographic issues and Professional Ethics into the Curriculum as prescribed by the University / respective regulative councils

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Principal
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CERTIFICATE OF THE HEAD OF THE INSTITUTION



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TO WHOMSOEVER IT MAY CONCERN

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Principal

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Human Values: Public Health dentistry, General Medicine, General Surgery

Ethics: Oral medicine and radiology, Public Health Dentistry, General medicine, Orthodontics, Conservative Dentistry and Endodontics, Paediatric and Preventive Dentistry and Periodontics.

Environment sustainability: Public Health Dentistry, General Human Anatomy.

Health Determinants: Pediatric & Preventive Dentistry, General Human Physiology, Dental Materials, Conservative Dentistry & Endodontics

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15. PUBLIC HEALTH DENTISTRY

a) **GOAL:**

To prevent and control oral diseases and promote oral health through organized community efforts

b) **OBJECTIVES:**

i. **Knowledge:**

At the conclusion of the course the student shall have a knowledge of the basis of public health, preventive dentistry, public health problems in India, palliative care, Nutrition, Environment and their role in health, basics of dental statistics, epidemiological methods, National oral health policy with emphasis on oral health policy.

ii. **Skill and Attitude:**

At the conclusion of the course the students shall have acquired the skill of identifying health problems affecting the society, conducting health surveys, conducting health education classes and deciding health strategies. Students should develop a positive attitude towards the problems of the society and must take responsibilities in providing health and palliative care.

iii. **Communication abilities:**

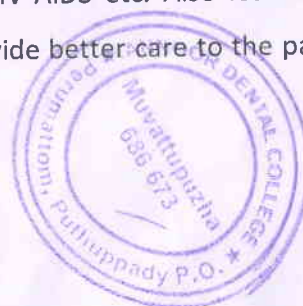
At the conclusions of the course the student should be able to communicate the needs of the community efficiently, inform the society of all the recent methodologies in preventing oral disease.

PALLIATIVE CARE:

Objective of including palliative care in to the curriculum of BDS:

Objective of the curriculum is to train future dental surgeons in the basics of Palliative Medicine. Palliative medicine is the branch of medicine involved in the treatment of patients with advanced, progressive, life-threatening disease for whom the focus of care is maximising their quality of life through expert symptom management, psychological, social and spiritual support as part of a multi-professional team. Government of Kerala has declared palliative care as part of Primary Health Care. Dental surgeons come across many patients with chronic and incurable diseases like cancer, HIV-AIDS etc. Also learning the symptom, control and communication will help them to provide better care to the patients coming under their care.

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Structure of the Training:

The palliative care training will be given in the third academic year. The training to include didactic sessions, role plays, discussions, case presentations

Theory*: Introduction (3 hours), Communication (5 hours), Pain management (3 hours), Nursing care (3 hours). Total 14 hours

**Classes in Palliative care to be handled by faculty in Public Health Dentistry who have undergone training in palliative care from KUHS recognised centres.*

1: Introduction to palliative care

Learning Outcomes:

The trainee will be able to discuss the philosophy and definitions of palliative care. The trainee will demonstrate that this knowledge and understanding improves his/ her clinical practice, decision-making and management of practice.

The trainee will demonstrate the knowledge, attitudes and skills required to foster timely and efficient communication between services necessary for a smooth continuum of patient care

The trainee will demonstrate the skilful application of knowledge and understanding to prepare individuals for bereavement, to support the acutely grieving person/family. This will include the ability to anticipate / recognise abnormal grief and access specialist help

The trainee will demonstrate an understanding of the theoretical basis for applied ethics in clinical practice, and be able to evaluate personal attitudes, beliefs and behaviours.

The trainee will demonstrate an awareness of, and respect for, the social and cultural values and practices of others

The trainee will recognise differences in beliefs and personal values. The trainee will be able to deal with conflicts in the beliefs and values within the clinical team. The trainee will recognise the psycho social and spiritual components of problems in advanced diseases and understand the role of non-professional members of the community in addressing them.

Block 1: Philosophy and Principles of palliative care.

Unit 1: Definitions- hospice, palliative care and terminal care, Principles of palliative care. Quality of Life (QOL), concepts of 'Good Death', grief, bereavement team work, inter and multidisciplinary teams. Role of family and community, ethics, spirituality

- Definitions of: palliative care approach; general palliative care; specialist palliative care; hospice; specialist palliative care unit; palliative medicine; supportive care

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- Evolving nature of palliative care over the course of illness, including integration with active treatment, and the significance of transition points
- Differing concepts of what constitutes quality of life (including measurement) and a "good death"
- Re-adaptation and rehabilitation
- Shared care with other members of the team and community as a doctor and an individual
- Communication skills relevant to negotiating these roles
- Critical analysis of current theoretical approaches to: medical ethics, including 'four principles (beneficence, non-maleficence, justice and respect for autonomy)
- Understanding the concept of spirituality

2: *Psychological issues and communication*

Learning Outcomes:

The trainee will demonstrate knowledge and understanding of psychological responses to illness in a range of situations, and skills in assessing and managing these in practice

The trainee will demonstrate good communication skills and use of reflective practice to ensure these skills are maintained.

The trainee will be able to identify obstacles to communication and demonstrate skills in overcoming these.

The trainee will demonstrate a professional attitude to confidentiality

Block 1: Communication.

Unit 1: Communication- Different types, barriers, how to overcome?

Unit 2: Breaking bad news, and handling uncertainty, collusion, denial, anxiety, depression, anger

- Skills in active listening, open questioning and information giving to:
- elicit concerns across physical, psychological, social and spiritual domains
- managing awkward questions and information giving, sensitively and as appropriate to wishes and needs of the individual
- facilitate decision making and promote autonomy of the individual patient
- Ensure that the patient is apprised of arrangements for the continuity of their care and whom to contact in case of need,



- Knowledge of theories and evidence base for communication practice including breaking bad news, collusion and discussing natural death
- Awareness of different styles of communications and critical evaluation of own consulting skills
- Awareness of common barriers to communication for both patients and professionals
- Awareness of common communication problems: deafness, expression and learning disabilities
- A professional understanding of the ethical and legal aspects to confidentiality

Block 2: *The family in palliative care.*

Unit 1: Terminal/ Chronic illnesses- problems of families.

Unit 2: Coping with the problems - patient to family, family to palliative Care worker, patient to palliative care worker

3: *Management of pain*

Learning outcomes:

The trainee will have the knowledge, understanding and skills to manage pain in patients with life limiting progressive diseases

Block 1: Pharmacological Management of pain.

Unit 1: General considerations, pathophysiology, types and assessment of pain

Unit 2: WHO analgesic ladder

Unit 3: Opioids, nonopioid analgesics and adjuvants in pain management.

Unit 4: Neuropathic pain, diagnosis and management

Unit 5: Other Pains- Breakthrough pain, incident pain, end of dose pain –management

Unit 6: Relevant invasive procedures for pain management.

4: *Nursing Care*

Learning outcomes:

The trainee will inculcate knowledge and skills required to identify, manage and refer problems in need of specific nursing interventions during the course of palliative care

Block 1: Mouth care & nutrition

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17. ORAL MEDICINE AND RADIOLOGY

a) AIM

- To train the students to diagnose the common disorders of Orofacial region by clinical examination and with the help of such investigations as may be required and medical management of oro-facial disorders with drugs and physical agents.
- To train the students about the importance, role, use and techniques of radiographs and other imaging methods in diagnosis.
- The principles of the clinical and radiographic aspects of Forensic Odontology.

b) COURSE CONTENT

- The syllabus in ORAL MEDICINE & RADIOLOGY is divided into two main parts.
Part-I: Diagnosis, Diagnostic methods and Oral Medicine {which is again subdivided into three sections. (a) Diagnostic methods (b) Diagnosis and differential diagnosis (c) Oral Medicine & Therapeutics} and Part-II: Oral Radiology. Emphasis should be laid on oral manifestations of systemic diseases and ill-effects of oral sepsis on general health.
- To avoid confusion regarding which lesion and to what extent the student should learn and know, this elaborate syllabus is prepared. As certain lesions come under more than one group, there is repetition.

c) THEORY: 75 HOURS (III YR. 25 HRS, FINAL YR. PART. I. 50 HRS.)

| THEORY TOPICS FOR THIRD YEAR (25 Hrs) | | |
|--|---|-------|
| Sl No | Oral Medicine Topics | Hours |
| 1. | Introduction to oral medicine, terminologies & Ethics (Professional liabilities, negligence, malpractice, consent etc) | 1 |
| 2. | Case history and clinical examination (examination of soft tissues and hard tissues, primary & secondary lesions, lymph nodes, TMJ, muscles of mastication, salivary glands, swelling, ulcer, white & red lesions, pigmented lesions) | 2 |
| 3. | Lymphatic drainage of head and neck. D/d of cervical lymphadenopathy | 1 |
| 4. | Investigations in oral medicine (chair side and laboratory investigations including haematological, microbiological, immunologic, biochemical and biopsy). | 2 |
| 5. | Dental therapeutics (drugs commonly used: antibiotics, anti-inflammatory, analgesics, anaesthetics, steroids, topical applications, coagulants & anticoagulants, sialogogues). | 2 |
| 6. | Emergencies in dental practice | 1 |
| 7. | Developmental disorders of the teeth & paradental structures | 1 |
| 8. | Acute and chronic infections of the jaws (sequelae of dental infection, spread of infection, facial space infections, osteomyelitis, foci of oral infections) | 1 |
| 9. | Disorders of tongue | 1 |
| Total Oral Medicine teaching hours in third year | | 12 |
| Radiology Topics | | |
| 1. | History of dental radiology, Radiation Physics (electromagnetic spectrum, properties of X rays) | 1 |

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1. GENERAL HUMAN ANATOMY INCLUDING EMBRYOLOGY AND HISTOLOGY

a) GOAL

The students should gain the knowledge and insight into, the functional anatomy of the normal human head and neck, functional histology and an appreciation of the genetic basis of inheritance and disease, and the embryological development of clinically important structures. So that relevant anatomical & scientific foundations are laid down for the clinical years of the BDS course.

b) OBJECTIVES:

i. Knowledge & understanding:

At the end of the 1st year BDS course in Anatomical Sciences the undergraduate student is expected to:

- (1) Know the normal disposition of the structures in the body while clinically examining a patient and while conducting clinical procedures.
- (2) Know the anatomical basis of disease and injury.
- (3) Know the microscopic structure of the various tissues, a pre-requisite for understanding of the disease processes.
- (4) Know the nervous system to locate the site of lesions according to the sensory and or motor deficits encountered.
- (5) Have an idea about the basis of abnormal development, critical stages of development, effects of teratogens, genetic mutations and environmental hazards.
- (6) Know the sectional anatomy of head neck and brain to read the features in radiographs and pictures taken by modern imaging techniques.
- (7) Know the anatomy of cardio-pulmonary resuscitation.

ii. Skills

- 1) To locate various structures of the body and to mark the topography of the living anatomy.
- 2) To identify various tissues under microscope.
- 3) To identify the features in radiographs and modern imaging techniques.
- 4) To detect various congenital abnormalities.

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c) INTEGRATION

By emphasizing on the relevant information and avoiding unwanted details, the anatomy taught integrally with other basic sciences & clinical subjects not only keeps the curiosity alive in the learner but also lays down the scientific foundation for making a better doctor, a benefit to the society.

This insight is gained in a variety of ways:

- i. Lectures & small group teaching
- ii. Demonstrations
- iii. Dissection of the human cadaver
- iv. Study of dissected specimens
- v. Osteology
- vi. Surface anatomy on living individual
- vii. Study of radiographs & other modern imaging techniques.
- viii. Study of Histology slides.
- ix. Study of embryology models
- x. Audio-visual aids

Throughout the course, particular emphasis is placed on the functional correlation, clinical application & on integration with teaching in other bio dental disciplines.

d) AN OUTLINE OF THE COURSE CONTENT:

General anatomy: Introduction of anatomical terms and brief outline of various systems of the body.

- i. Regional anatomy of head & neck with Osteology of bones of head & neck, with emphasis on topics of dental importance.
- ii. General disposition of thoracic, abdominal & pelvic organs.
- iii. The regional anatomy of the sites of intramuscular & intra vascular injections, & lumbar puncture.
- iv. General embryology & systemic embryology with respect to development of head & neck.
- v. Histology of basic tissues and of the organs of gastrointestinal, respiratory, Endocrine, excretory systems & gonads.
- vi. Medical genetics



2. GENERAL HUMAN PHYSIOLOGY

a) GOAL

The broad goal of the teaching undergraduate students in Physiology aims at providing the student comprehensive knowledge of the normal functions of the organ systems of the body to facilitate an understanding of the physiological basis of health and disease.

b) OBJECTIVES

i. Knowledge

At the end of the course, the student will be able to:

- (1) Explain the normal functioning of all the organ systems and their interactions for well co-ordinated total body function.
- (2) Assess the relative contribution of each organ system towards the maintenance of the milieu interior.
- (3) List the physiological principles underlying the pathogenesis and treatment of disease.

ii. Skills

At the end of the course, the student shall be able to:

- (1) Conduct experiments designed for the study of physiological phenomena.
- (2) Interpret experimental and investigative data
- (3) Distinguish between normal and abnormal data derived as a result of tests which he/she has performed and observed in the laboratory.

iii. Integration

At the end of the integrated teaching the student shall acquire an integrated knowledge of organ structure and function and its regulatory mechanisms.

c) THEORY: 120 Hours

| | Hours |
|---|-------|
| 1. GENERAL PHYSIOLOGY | |
| Homeostasis: Basic concept, Feedback mechanisms Structure of cell membrane, transport across cell membrane Body fluid Compartments: distribution of total body water, intracellular & extracellular compartments, major anions & cations in intra and extra cellular fluid. Membrane potentials. RMP & Action Potential. | 4 |
| 2. BLOOD: | |
| Composition & functions of Blood | 15 |

12. GENERAL MEDICINE

a) GUIDELINES:

Special emphasis should be given throughout on the importance of various diseases as applicable to dentistry.

- i. Special precautions/ contraindication for anaesthesia in oral and dental procedures in different systemic diseases.
- ii. Oral manifestations of systemic diseases.
- iii. Medical emergencies in dental practice.

A dental student should be taught in such a manner that he/she is able to record the arterial pulse, blood pressure and be capable of suspecting by sight and superficial examination of the body, diseases of the heart, lungs, kidneys, blood etc. He should be capable of handling medical emergencies encountered in dental practice.

b) THEORY: 60 HOURS

| CORE TOPICS | Hours |
|--|-------|
| 1. Aims of medicine, definitions of diagnosis, treatment & prognosis. History taking, Physical examination of the patient, diagnosis and management of disease. Genetics and disease, Medical Ethics. | 2 |
| 2. Infections: Enteric fever, HIV, Herpes simplex, Herpes zoster, Syphilis, Diphtheria, Malaria, Actinomycosis, Viral hepatitis, Tuberculosis. Infectious mononucleosis Mumps, Measles, Rubella, Leprosy, Organisation and functions of the immune systems. | 5 |
| 3. G.I.T: Stomatitis, Gingival hyperplasia, Dysphagia, Acid peptic disease, Jaundice, Acute and chronic hepatitis, Cirrhosis of liver, Ascitis, Amoebiasis, Tender hepatomegaly, Hepatotoxic drugs, Portal hyper tension. Diarrhoea and Dysentery including Malabsorption syndromes, Helicobacter pylori. | 5 |
| 4. CVS :Acute rheumatic fever Valvular heart disease, Hypertension, Ischemic heart disease (myocardial infarction), Infective endocarditis, Common arrhythmias, Classification of congenital heart disease, Congestive cardiac failure. Heart failure, Fallot's tetralogy, ASD, VSD. | 7 |
| 5. Respiratory System: Applied Anatomy and physiology of RS, Pneumonia, COPD, Pulmonary tuberculosis, Bronchial asthma, Pleural effusion, Acute respiratory tract infections, Pulmonary embolism, Suppurative lung diseases, and Lung abscess. Pneumothorax, Bronchiectasis Lung Cancer, Empyema, Sleep apnea, ARDS, Respiratory failure. | 6 |
| 6. Hematology: Hematopoiesis, Anaemias, Bleeding & Clotting disorders, Acute and chronic myeloid leukemias, Agranulocytosis and Neutropenia, Thrombocytopenia, Splenomegaly Lymphomas, Oral manifestations of haematological disorders, Generalized Lymphadenopathy. Principles of blood and blood products transfusion, Thromboembolic disease, Oncogenesis, Haemolytic anemia, DIC (Disseminated Intravascular | |

13. GENERAL SURGERY

a) AIMS:

To acquaint the student with various diseases which may require surgical intervention. And to train the student to analyze the disease history and be able to do a thorough physical examination of the patient. The diseases as related to head and neck region are to be given due importance, at the same time other relevant surgical problems are also to be addressed. At the end of one year of study the student should have a good theoretical knowledge of various ailments, and be practically trained to differentiate benign and malignant diseases and be able to decide which patient requires further evaluation.

b) OBJECTIVES:

Skills to be developed by the end of teaching are to examine a routine swelling, ulcer and other related diseases and to perform minor surgical procedures such as draining an abscess, taking a biopsy etc.

c) THEORY: 60 HOURS

| Sl. No. | Topic | Hours |
|---------|---|-------|
| 1 | HISTORY OF SURGERY: The development of surgery as a specialty over the years, will give the students an opportunity to know the contributions made by various scientists, teachers and investigators. It will also enable the student to understand the relations of various specialties in the practice of modern surgery. | 1 |
| 2 | GENERAL PRINCIPLES OF SURGERY: Introduction to various aspects of surgical principles as related to orodental diseases. Classification of diseases in general. This will help the student to understand the various diseases, their relevance to routine dental practice. | 2 |
| 3 | PRINCIPLES OF OPERATIVE SURGERY: Principles as applicable to minor surgical procedures including detailed description of asepsis, antiseptics, sterilisation, principles of anaesthesia and principles of tissue replacement. Knowledge of sutures, drains, diathermy, cryosurgery and use of Laser in surgery. | 1 |
| 4 | WOUNDS: Their classification, wound healing repair, treatment of wounds, skin grafting, medicolegal aspects of accidental wounds and complications of wounds. | 1 |

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18. ORTHODONTICS AND DENTOFACIAL ORTHOPAEDICS

a) AIM

Undergraduate programme in Orthodontics is designed to enable the qualifying dental surgeon to diagnose, analyze and treat common orthodontic problems by preventive, interceptive and corrective orthodontic procedures

b) COURSE CONTENT

The undergraduate study of orthodontics spans over second year, third year and fourth year. In second year the emphasis is given for basic and preclinical wire bending exercises and appliance fabrication. In third year the student has to undergo clinical postings where patient care and appliance management is emphasized. In fourth year of study the candidate will be allotted with long cases for detailed discussion treatment plan formulation appliance construction, insertion and management. In addition they will be trained to attend routine out patients, appliance activation, cephalometric interpretation etc.

c) SKILLS

- i. To diagnose a case of malocclusion and formulate a treatment plan
- ii. To make a good alginate impression
- iii. To fabricate a good study model
- iv. To perform various model analysis and cephalometric analysis
- v. To construct routine removable and myofunctional appliances using cold cure acrylic
- vi. Insertion and management of appliance

d) INTEGRATION

By learning the science of Orthodontics, the student should be able to diagnose different types of malocclusion, develop a treatment plan and manage simple malocclusions. The student should acquire skills to recognize Complex malocclusions and the same may be referred to a specialist.

This insight is gained in a variety of ways:

- i. Pre clinical training
- ii. Lectures & small group teaching
- iii. Demonstrations
- iv. Spot diagnosis and discussions
- v. Long case discussions
- vi. Seminar presentations

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20. CONSERVATIVE DENTISTRY AND ENDODONTICS

a) OBJECTIVES:

i. Knowledge and Under Standing:

The graduate should acquire the following knowledge during the period of training,

- (1) To diagnose and treat simple restorative work for teeth.
- (2) To gain knowledge about aesthetic restorative material and to translate the same to patients needs.
- (3) To gain the knowledge about endodontic treatment on the basis of scientific foundation.
- (4) To carry out simple endodontic treatment.
- (5) To carry out simple luxation of tooth and its treatment and to provide emergency endodontic treatment.

ii. Skills:

He should attain following skills necessary for practice of dentistry

- (1) To use medium and high speed hand pieces to carry out restorative work.
- (2) Poses the skills to use and familiarize endodontic instruments and materials needed for carrying out simple endodontic treatment.
- (3) To achieve the skills to translate patients esthetic needs along with function.

iii. Attitudes:

- (1) Maintain a high standard of professional ethics & conduct and apply these in all aspects of professional life.
- (2) Willingness to participate in CDE programme to update the knowledge and professional skill from time to time.
- (3) To help and participate in the implementation of the national oral health policy.
- (4) He should be able to motivate the patient for proper dental treatment and maintenance of oral hygiene should be emphasise which will help to maintain the restorative work and prevent future damage.

b) THEORY: 160 HOURS (II yr.25hrs, III Yr. 65 hrs, Final Yr. Part I. 40 hrs. Part II. 30hrs.)

| Sl.No. | Topic for II Year | Hours |
|--------|---|-------|
| 1. | Introduction to Conservative Dentistry. | 1 |
| 2. | Definition, Aim & Scope of Conservative Dentistry & Endodontics | |
| 3. | Nomenclature of dentition; Tooth Numbering systems | |
| 4. | Restoration - Definition & Objectives | |

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