



SRI RAMAKRISHNA DENTAL COLLEGE & HOSPITAL

(Educational Service : SNR Sons Charitable Trust)

Affiliated to the Tamilnadu Dr. M.G.R. Medical University, Chennai,
Recognised by Dental Council of India, New Delhi



Value added topics

Behavioral sciences, Ethics and jurisprudence and Forensic odontology are recommended by DCI to be introduced in the dental curriculum as additional topics for undergraduates.

Instruction in behaviour science helps in developing communication skills and should begin in first year. The idea is to start the course before students come in contact with patients and is carried out by the Departments of Public health & Preventive Dentistry and Pediatric & Preventive Dentistry.

Forensic Odontology is dealt by Oral Pathology and Oral Microbiology and Oral Medicine and Radiology in addition to their regular syllabus. The topic is introduced in III year and helps students to acquire clinical exposure and acumen to interpret dental records and analyze dental radiographs for age estimation.

Ethics is a topic which is covered by Department of Public health & Preventive Dentistry in-depth. The topic deals with traditional doctor – patient relationship and accountability to society. It also helps the dental specialists to face ethics related issues, by covering dental jurisprudence, legal and ethical obligations.

Taking the above recommendations, SRDCH has taken up these subjects as “Value Added Courses” for the Under Graduates.

5/5/24
Principal

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S.N.R. College Road, COIMBATORE - 641 006.

RECOMMENDED BOOKS:

1. Syllabus of Complete denture by - Charles M. Heartwell Jr. and Arthur O. Rahn.
2. Boucher's "Prosthodontic treatment for edentulous patients"
3. Essentials of complete denture prosthodontics by - Sheldon Winkler.
4. Maxillofacial prosthetics by - William R. Laney.
5. McCracken's Removable partial prosthodontics
6. Removable partial prosthodontics by - Ernest L. Miller and Joseph E. Grasso.

19. AESTHETIC DENTISTRY

Aesthetic Dentistry is gaining more popularity since last decade. It is better that undergraduate students should understand the philosophy and scientific knowledge of the esthetic dentistry.

1. Introduction and scope of esthetic dentistry
2. Anatomy & physiology of smile
3. Role of the colour in esthetic dentistry
4. Simple procedures (roundening of central incisors to enhance esthetic appearance)
5. Bleaching of teeth
6. Veneers with various materials
7. Preventive and interceptive esthetics
8. Ceramics
9. Simple gingival contouring to enhance the appearance
10. Simple clinical procedures for BDS students

Recommended books:

1. Esthetic guidelines for restorative dentistry; Scharer & others
2. Esthetics of anterior fixed prosthodontics; Chiche (GJ) & Pinault (Alain)
3. Esthetic & the treatment of facial form, Vol 28; Mc Namara (JA)

20. FORENSIC ODONTOLOGY (30 hrs of instruction)

Definition

Forensic is derived from the Latin word forum, which means 'court of law.' Odontology literally implies 'the study of teeth.' Forensic odontology, therefore, has been defined by the Fédération Dentaire Internationale (FDI) as "that branch of dentistry which, in the interest of justice, deals with the proper handling and examination of dental evidence, and with the proper evaluation and presentation of dental findings."

Objectives of the undergraduate curriculum

At the end of the programme, the dental graduate should:

1. Have sound knowledge of the theoretical and practical aspects of forensic odontology.
2. Have an awareness of ethical obligations and legal responsibilities in routine practice and forensic casework.
3. Be competent to recognise forensic cases with dental applications when consulted by the police, forensic pathologists, lawyers and associated professionals.
4. Be competent in proper collection of dental evidence related to cases of identification, ethnic and sex differentiation, age estimation and bite marks.
5. Be able to assist in analysis, evaluation, and presentation of dental facts within the realm of law.

Curriculum for forensic odontology

1. Introduction to forensic dentistry
 - Definition and history
 - Recent developments and future trends
2. Overview of forensic medicine and toxicology
 - Cause of death and postmortem changes
 - Toxicological manifestations in teeth and oral tissues
3. Dental identification
 - Definition
 - Basis for dental identification
 - Postmortem procedures
 - Dental record compilation and interpretation
 - Comparison of data, and principles of report writing
 - Identification in disasters and handling incinerated remains
 - Postmortem changes to oral structures
4. Maintaining dental records
 - Basic aspects of good record-keeping
 - Different types of dental records
 - Dental charts
 - Dental radiographs
 - Study casts
 - Denture marking
 - Photographs

- Dental notations
- Relevance of dental records in forensic investigation
- 5. Age estimation
 - Age estimation in children and adolescents
 - Advantages of tooth calcification over 'eruption' in estimating age
 - Radiographic methods of Schour & Massler, Demirjian et al
 - Age estimation in adults
 - Histological methods – Gustafson's six variables and Johanson's modification, Bang & Ramm's dentine translucency
 - Radiographic method of Kvaal et al
 - Principles of report writing
- 6. Sex differentiation
 - Sexual dimorphism in tooth dimensions (Odontometrics)
- 7. Ethnic variations ('racial' differences) in tooth morphology
 - Description of human population groups
 - Genetic and environmental influences on tooth morphology
 - Description of metric and non-metric dental features used in ethnic differentiation
- 8. Bite mark procedures
 - Definition and classification
 - Basis for bite mark investigation
 - Bite mark appearance
 - Macroscopic and microscopic ageing of bite marks
 - Evidence collection from the victim and suspect of bite mark
 - Analysis and comparison
 - Principles of report writing
 - Animal bite investigation
- 9. Dental DNA methods
 - Importance of dental DNA evidence in forensic investigations
 - Types of DNA and dental DNA isolation procedures
 - DNA analysis in personal identification
 - Gene-linked sex dimorphism
 - Population genetics
- 10. Jurisprudence and ethics
 - Fundamentals of law and the constitution
 - Medical legislation and statutes (Dental and Medical Council Acts, etc).
 - Basics of civil law (including torts, contracts and consumer protection act)
 - Criminal and civil procedure code (including expert witness requirement)
 - Assessment and quantification of dental injuries in courts of law
 - Medical negligence and liability
 - Informed consent and confidentiality
 - Rights and duties of doctors and patients
 - Medical and dental ethics (as per Dentists' Act)

Theory sessions and practical exercises

Total hours for the course

- Didactic – 10-12 hours
- Practical – 20-25 hours

Detailed didactic sessions for the above components, either in the form of lectures or as structured student-teacher interactions, is essential. Specialists from multiple disciplines, particularly from legal and forensic sciences, can be encouraged to undertake teaching in their area of expertise.

An interactive, navigable and non-linear (INN) model may also be utilised for education.

Practical exercises (real-life casework and/or simulated cases) must complement didactic sessions to facilitate optimal student understanding of the subject. Mandatory practical training in dental identification methods, dental profiling (ethnic and sex differences, radiographic age estimation), and bite mark procedures, is of paramount importance. In addition, practical exercises/demonstrations in histological age estimation, comparative dental anatomy, DNA methods, medical autopsy, court visits, and other topics may be conducted depending on available expertise, equipment and feasibility.

Approach to teaching forensic odontology

Forensic odontology could be covered in two separate streams. The divisions include a preclinical stream and a clinical stream.

Preclinical stream

- Introduction to forensic odontology
- Sex differences in odontometrics
- Ethnic variations in tooth morphology
- Histological age estimation
- Dental DNA methods

- Bite marks procedures
- Overview of forensic medicine and toxicology

It could prove useful to undertake the preclinical stream in II or III year under Oral Biology/Oral Pathology since these aspects of forensic odontology require grounding in dental morphology, dental histology and basic sciences, which, students would have obtained in I and/or II BDS.

Clinical stream

- Dental identification
- Maintaining dental records
- Radiographic age estimation
- Medical jurisprudence and ethics

It would be suitable to undertake these topics in the IV or V year as part of Oral Medicine and Radiology, since students require reasonable clinical exposure and acumen to interpret dental records, perform dental postmortems and analyse dental radiographs for age estimation.

21. ORAL IMPLANTOLOGY (30 hrs of instruction)

INTRODUCTION TO ORAL IMPLANTOLOGY

Oral Implantology is now emerged as a new branch in dentistry world wide and it has been given a separate status in the universities abroad. In India day to day the practice of treating patients with implants are on rise. In this context inclusion of this branch into under graduate curriculum has become very essential. The objective behind this is to impart basic knowledge of Oral Implantology to undergraduates and enable them to diagnose, plan the treatment and to carry out the needed pre surgical mouth preparations and treat or refer them to speciality centres. This teaching programme may be divided and carried out by the Dept. of Oral Surgery, Prosthodontics and Periodontics.

1. History of implants, their design & surface characteristics and osseointegration
2. Scope of oral & maxillofacial implantology & terminologies
3. A brief introduction to various implant systems in practice
4. Bone biology, Morphology, Classification of bone and its relevance to implant treatment and bone augmentation materials.
5. Soft tissue considerations in implant dentistry
6. Diagnosis & treatment planning in implant dentistry
Case history taking/Examination/Medical evaluation/Orofacial evaluation/ Radiographic evaluation/ Diagnostic evaluation/ Diagnosis and treatment planning/ treatment alternatives/ Estimation of treatment costs/ patient education and motivation
7. Pre surgical preparation of patient
8. Implant installation & armamentarium for the Branemark system as a role model
9. First stage surgery - Mandible - Maxilla
10. Healing period & second stage surgery
11. Management of surgical complications & failures
12. General considerations in prosthodontic reconstruction & Bio mechanics
13. Prosthodontic components of the Branemark system as a role model
14. Impression procedures & Preparation of master cast
15. Jaw relation records and construction of suprastructure with special emphasis on occlusion for osseointegrated prosthesis
16. Management of prosthodontic complications & failures
17. Recall & maintenance phase.

Criteria for success of osseointegrated implant supported prosthesis

SUGGESTED BOOKS FOR READING

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|---|---|---|
| 1. Contemporary Implant Dentistry | - | Carl .E. Misch
Mosby 1993 First Edition. |
| 2. Osseointegration and Occlusal Rehabilitation | | Hobo S., Ichida. E. and
Garcia L.T.
Quintessence Publishing Company, 1989 First
Edition. |

22. BEHAVIOURAL SCIENCES (20 hrs of instruction)

GOAL:

The aim of teaching behavioural sciences to undergraduate student is to impart such knowledge & skills that may enable him to apply principles of behaviour -

- a) For all round development of his personality
- b) In various therapeutic situations in dentistry.

The student should be able to develop skills of assessing psychological factors in each patient, explaining stress, learning simple counselling techniques, and improving patients compliance behaviour.

OBJECTIVES:**A) KNOWLEDGE & UNDERSTANDING:**

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

- 1) Comprehend different aspects of normal behaviour like learning, memory, motivation, personality & intelligence.
- 2) Recognise difference between normal and abnormal behaviour.
- 3) Classify psychiatric disorders in dentistry.
- 4) Recognise clinical manifestations of dental phobia, dental anxiety, facial pain, orofacial manifestations of psychiatric disorders, and behavioural problems in children. Addictive disorders, psychological disorders in various dental departments.
- 5) Should have understanding of stress in dentistry and knowledge of simple counselling techniques.
- 6) Have some background knowledge of interpersonal, managerial and problem solving skills which are an integral part of modern dental practice.
- 7) Have knowledge of social context of dental care.

B) SKILLS

The student shall be able to:

- 1) Interview the patient and understand different methods of communication skills in dentist - patient relationship.
- 2) Improve patients compliance behaviour.
- 3) Develop better interpersonal, managerial and problem solving skills.
- 4) Diagnose and manage minor psychological problems while treating dental patients.

INTEGRATION:

The training in Behavioural sciences shall prepare the students to deliver preventive, promotive, curative and rehabilitative services to the care of the patients both in family and community and refer advanced cases to specialised psychiatric hospitals.

Training should be integrated with all the departments of Dentistry, Medicine, Pharmacology, Physiology and Biochemistry.

PSYCHOLOGY:

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|--|-----|---|-------|---------|
| | Hrs | 1 | Scope | of |
| 1. Definition & Need of Behavioural Science. Determinants of Behaviour. | | | | |
| Behavioural Science. | | | | |
| 2. Sensory process & perception perceptual process- clinical applications. | | | | |
| 3. <u>Attention</u> - Definition - factors that determine attention. Clinical application. | | | | |
| 4. <u>Memory</u> - Memory process - Types of memory, Forgetting: | | | | |
| Methods to improve memory, Clinical assessment of memory & clinical applications. | | | | |
| 5. <u>Definition</u> - Laws of learning | | | | |
| Type of learning. Classical conditioning, operant conditioning, cognitive learning, learning, social learning, observational learning, principles of learning- Clinical application. | | | | Insight |
| 6. <u>Intelligence</u> - Definition: Nature of intelligence stability of intelligence | | | | |
| Determinants of intelligence, clinical application | | | | |
| 7. <u>Thinking</u> - Definition: Types of thinking, delusions, problem solving | | | | |
| 8. <u>Motivation</u> - Definition: Motive, drive, needs classification of motives | | | | |
| 9. <u>Emotions</u> - Definition differentiation from feelings - Role of hypothalamus, Cerebral cortex, adrenal glands ANS. Theories of emotion, Types of emotions. | | | | |
| Personality. Assessment of personality: Questionnaires, personality inventory, rating scales, Interview projective techniques - Rorshach ink blot test, RAT, CAT | | | | |

SOCIOLOGY:

Social class, social groups - family, types of family, types of marriages, communities and Nations and institutions.

REFERENCE BOOKS:

1. General psychology -- S.K. Mangal
2. General psychology -- Hans Raj, Bhatia
3. General psychology -- Munn
4. Behavioural Sciences in Medical practise -- Manju Mehta
5. Sciences basic to psychiatry -- Basanth Puri & Peter J Tyrer

23. ETHICS (20 hrs. of instruction)**Introduction:**

There is a definite shift now from the traditional patient and doctor relationship and delivery of dental care. With the advances in science and technology and the increasing needs of the patient, their families and community, there is a concern for the health of the community as a whole. There is a shift to greater accountability to the society. Dental specialists like the other health professionals are confronted with many ethical problems. It is therefore absolutely necessary for each and every one in the health care delivery to prepare themselves to deal with these problems. To accomplish this and

develop human values Council desires that all the trainees undergo ethical sensitization by lectures or discussion on ethical issues, discussion of cases with an important ethical component.

Course content:

Introduction to ethics –

- what is ethics?
- What are values and norms?
- How to form a value system in one's personal and professional life?
- Hippocratic oath.
- Declaration of Helsinki, WHO declaration of Geneva, International code of ethics, DCI Code of ethics.

Ethics of the individual –

The patient as a person.
 Right to be respected
 Truth and confidentiality
 Autonomy of decision
 Doctor Patient relationship

Profession Ethics –

Code of conduct
 Contract and confidentiality
 Charging of fees, fee splitting
 Prescription of drugs
 Over-investigating the patient
 Malpractice and negligence

Research Ethics –

Animal and experimental research/humanness
 Human experimentation
 Human volunteer research-informed consent
 Drug trials

Ethical workshop of cases

Gathering all scientific factors


Gathering all value factors

Identifying areas of value – conflict, setting of priorities

Working our criteria towards decisions

Recommended Reading:

Medical Ethics, Francis C.M., 1 Ed. 1993, Jaypee Brothers, New Delhi p. 189.


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