

#### **BDS REGULATION 2018-2019**

#### PROGRAM OUTCOMES

- PO1 Adequate knowledge of the scientific foundations on which dentistry is based and good understanding of various relevant scientific methods, principles of biological functions and be able to evaluate and analyze scientifically various established facts and data.
- PO2 Adequate knowledge of the development, structure and function of the teeth, mouth and jaws and associated tissues both in health and disease and their relationship and effect on general state of health and also bearing on physical and social well being of the patient.
- **PO3** Adequate knowledge of clinical disciplines and methods which provide a coherent picture of anomalies, lesions and diseases of the teeth, mouth and jaws and preventive diagnostic and therapeutic aspects of dentistry.
- **PO4** Adequate clinical experience required for general dental practice.
- PO5 Adequate knowledge of the constitution, biological function and behavior of persons in health and sickness as well as the influence of the natural and social environment on the state of health in so far as it affect dentistry.
- PO6 Able to diagnose and manage various common dental problems encountered in general dental practice keeping in mind the expectations and the right of the society to receive the best possible treatment available wherever possible.

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- **PO7** Acquire the skill to prevent and manage complications if encountered while carrying out various surgical and other procedures.
- **PO8** Possess skill to carry out certain investigative procedures and ability to interpret laboratory findings.
- PO9 Promote oral health and help prevent oral diseases where possible.
- PO10 Competent in the control of pain and anxiety among the patients during dental treatment.
- **PO11** Willing to apply the current knowledge of dentistry in the best interest of the patients and the community.
- **PO12** Maintain a high standard of professional ethics and conduct and apply these in all aspects of professional life.
- **PO13** Seek to improve awareness and provide possible solutions for oral health problems and needs throughout the community.
- **PO14** Willingness to participate in the CPED Programs to update the knowledge and professional skill from time to time.

PO15 To help and participate in the implementation of the national oral health policy.

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#### COURSE OUTCOMES

# HUMAN ANATOMY, EMBRYOLOGY, HISTOLOGY & MEDICAL GENETICS

CO1Know the normal disposition of the structures in the body while clinically examining a patient and while conducting the clinical procedures

CO2Know the anatomical basis of disease and injury

CO3Know the microscopic structure of the various tissues, a prerequisite for understanding the disease process.

C04Know the nervous system to locate the site of lesion according to the sensory and or the motor deficits encountered

CO5Have an idea about the basis of the abnormal development, critical stages of development, effects of teratogens, genetic mutations and environmental hazards

CO6Know the sectional anatomy of the head and neck and brain to read the features in the Radiographs and the picture taken by modern technique

CO7Know the anatomy of cardiopulmonary resuscitation

CO8To locate various structure of the body and to mark the topography of the living anatomy

CO9To identify various tissues under microscope

CO10 To identify the features in radiography and modern imaging techniques.

CO11To detect various congenital abnormalities.

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#### **HUMAN PHYSIOLOGY**

- CO 1Explain the normal functioning of all the organ systems and their interactions for well coordinated total body function.
- **CO 2**Assess the relative contribution of each organ system towards the maintenance of the milieu interior.
- CO 3 List the physiological principles underlying the pathogenesis and treatment of disease.
- CO 4 Conduct experiments designed for the study of physiological phenomena
- CO 5 Interpret experimental and investigative data.
- **CO 6** Distinguish between normal and abnormal data derived as a result of testswhich he/she has performed and observed in the laboratory.
- **CO** 7 At the end of the integrated teaching the student shall acquire an integrated knowledge of organ structure and function and its regulatory mechanisms.

#### **BIOCHEMISTRY**

**CO1**To provide a sound but crisp knowledge on the biochemical basis of the life processes relevant to the human system and to dental/medical practice.

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### DENTAL ANATOMY, EMBRYOLOGY AND ORAL HISTOLOGY

- CO 1Carving of crowns of permanent teeth in wax.
- CO 2Microscopic study of Oral tissues.
- CO 3Identification of Deciduous & Permanent teeth.
- CO 4Age estimation by patterns of teeth eruption from plaster casts of different age groups
- CO 5The student is expected to appreciate the normal development, morphology, structure &functions of oral tissues & variations in different pathological/non-pathological states.
- **CO** 6The student should understand the histological basis of various dental treatment procedures and physiologic ageing process in the dental tissues.
- CO 7The students must know the basic knowledge of various research methodologies.

#### **GENERAL PATHOLOGY**

- CO1 To demonstrate and apply basic facts, concepts and theories in the field of pathology
- CO2 To recognize and analyze pathological changes at macroscopic and microscopical levels and explain their observations in terms of disease processes.
- CO3To integrate knowledge from the basic sciences, clinical medicine and dentistry in the study of pathology.
- **CO4** To demonstrate understanding of the capabilities and limitations of morphological pathology in its contribution to medicine, dentistry and biological research.
- CO5To demonstrate ability to consult resource materials outside lectures, laboratory and tutorial classes.



#### **MICROBIOLOGY**

**CO1**Understand the basics of various branches of microbiology and be able to apply the knowledge relevantly.

CO2Apply the knowledge gained in related medical subjects like General Medicine and General Surgery and dental subjects like Oral Pathology, Community Dentistry, Periodontics, Oral Surgery, Paedodontics, Conservative Dentistry and Oral Medicine in higher classes.

CO3Understand and practice various methods of sterilization and disinfection in dental clinics.

C04Have a sound understanding of various infectious disease and lesions in the oral cavity.

CO5Student should have acquired the skill to diagnose and differentiate various oral lesions.

CO6Should be able to select, collect and transport clinical specimens to the laboratory.

CO7 Should be able to carry out proper aseptic procedures in the dental clinic.

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### GENERAL AND DENTAL PHARMACOLOGY AND THERAPEUTICS

- CO1 Describe the pharmacokinetics and pharmacodynamics of essential and commonly used drugsin general and in dentistry in particular.
- CO2List the indications, contraindications; interactions, and adverse reactions of commonly useddrugs with reason.
- CO3Tailor the use of appropriate drugs in disease with consideration to its cost, efficacy, safety forindividual and mass therapy needs.
- CO4Indicate special care in prescribing common and essential drugs in special medical situations such as pregnancy, lactation, old age, renal, hepatic damage and immuno compromised patients.
- CO5Integrate the rational drug therapy in clinical pharmacology.
- CO6 Indicate the principles underlying the concepts of "Essential drugs".
- CO7 Prescribe drugs for common dental and medical ailments.
- **CO8** To appreciate adverse reactions and drug interactions of commonly used drugs.
- **CO9** Observe experiments designed for study of effects of drugs.
- **CO10**Critically evaluate drug formulations and be able to interpret the clinical pharmacology ofmarketed preparations commonly used in dentistry.
- CO11Practical knowledge of use of drugs in clinical practice will be acquired throughintegrated teaching with clinical departments.

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#### **DENTAL MATERIALS**

- CO1To understand the evolution and development of science of dental material.
- **CO2**To explain purpose of course in dental materials to personnel concerned with the profession of the dentistry.
- CO3Knowledge of physical and chemical properties.
- CO4Knowledge of biomechanical requirements of particular restorative procedure.
- **CO5**An intelligent compromise of the conflicting as well as co-ordinating factors into the desired Ernest.
- CO6Laying down standards or specifications of various materials to guide to manufacturers as well as to help professionals.

#### GENERAL MEDICINE

CO1 Special precautions/ contraindication of anaesthesia and various dental procedures in different systemic diseases, oral manifestations of systemic diseases and medical emergencies in dental practice.

#### **GENERAL SURGERY**

CO1 To acquaint the student with various diseases, which may require surgical expertise and to train the student to analyze the history and be able to do a thorough physical examination of the patient.

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#### ORAL PATHOLOGY & ORAL MICROBIOLOGY

- CO1 The different types of pathological processes that involve the oral cavity
- CO2 The manifestation of common diseases, their diagnosis and correlation with clinical pathological processes
- CO3 The oral manifestation of systemic diseases to help in correlating with systemic, physical signs and laboratory findings
- CO4 The underlying biological principles governing treatment of oral diseases
- CO5 The principles of certain basic aspects of Forensic Odontology
- CO6 Microscopic study of common lesions affecting oral tissues through microscopic slides and projection slides
- CO7 Study of the disease process by surgical specimens
- CO8 Study of teeth anomalies/polymorphisms through tooth specimens and plaster casts
- CO9 Microscopic study of plaque pathogens
- CO10 Study of hematological preparations (blood films) of anemias&leukoplakias
- **CO11** Basic exercise in Forensic odontology such as histological methods of age estimation and appearance of teeth in injuries

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#### CONSERVATIVE DENTISTRY AND ENDODONTICS

- CO 1To diagnose and treat simple restorative work for teeth.
- CO 2To gain knowledge about aesthetic restorative material and to translate the same to patients needs.
- CO 3To gain the knowledge about endodontic treatment on the basis of scientific foundation.
- CO 4To carry out simple endodontic treatment.
- CO 5To carry out simple luxation of tooth and its treatment and to provide emergency endodontic treatment
- CO 6To use medium and high speed hand pieces to carry out restorative work.
- **CO** 7 Poses the skills to use and familiarize endodontic instruments and materials needed for carrying out simple endodontic treatment.
- CO 8To achieve the skills to translate patients esthetic needs along with function
- **CO** 9Maintain a high standard of professional ethics and conduct and apply these in all aspects of professional life.
- **CO 10**Willingness to participate in CDE programme to update the knowledge and professional skill from time to time.
- CO 11To help and participate in the implementation of the national oral health policy.
- CO 12He should be able to motivate the patient for proper dental treatment at the same time proper maintenance of oral hygiene should be emphasise which will help to maintain the restorative work and prevent future damage.

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#### ORAL & MAXILLOFACIAL SURGERY

- **CO1** Able to apply the knowledge gained in the related medical subjects like pathology, microbiology and general medicine in the management of patients with oral surgical problem.
- CO2 Able to diagnose, manage and treat (understand the principles of treatment of) patients with oral surgical problems.
- CO3 Knowledge of range of surgical treatments.
- **CO4** Ability to decide the requirement of a patient to have oral surgical specialist opinion or treatment.
- **CO5** Understand the principles of in-patient management.
- **CO6** Understanding of the management of major oral surgical procedures and principles involved in patient management.
- CO7 Should know ethical issues and communication ability.
- CO8 A graduate should have acquired the skill to examine any patient with an oral surgical problem in an orderly manner. Be able to understand requisition of various clinical and laboratory investigations and is capable of formulating differential diagnosis.
- CO9 Should be competent in the extraction of teeth under both local and general anaesthesia.
- **CO10** Should be able to carry out certain minor oral surgical procedures under L.A. like frenectomy, alveolar procedures & biopsy etc.
- CO11 Ability to assess, prevent and manage various complications during and after surgery.
- CO12 Able to provide primary care and manage medical emergencies in the dental office.
- CO13 Understanding of the management of major oral surgical problems and principles involved in inpatient management.



#### ORAL MEDICINE AND RADIOLOGY

- CO1 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.
- CO2 To train the students about the importance, role, use and techniques of radiographs/digital radiograph and other imaging methods in diagnosis.
- CO3 The principles of the clinical and radiographic aspects of Forensic Odontology.

#### ORTHODONTICS & DENTOFACIAL ORTHOPAEDICS

CO1 To enable the qualifying dental surgeon to diagnose, analyse and treat common orthodontic problems by preventive, interceptive and corrective orthodontic procedures.

#### PUBLIC HEALTH DENTISTRY

- CO1The student shall have a knowledge of the basis of public health, preventive dentistry, public health problem in India, nutrition, environment and their role in health, basis of dental statistics, epidemiological methods, national oral health policy.
- CO2The students shall acquire the skill of identifying health problems affecting the society, conducting health surveys, conducting health education classes and deciding the health strategies.
- **CO3**The students should develop positive attitude towards the problems of the society and must take responsibilities in providing health.

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#### **PERIODONTOLOGY**

- **CO1** The student shall acquire the skill to perform dental scaling ,diagnostic tests of periodontal diseases; to use the instruments for periodontal therapy and maintenance of the same.
- **CO2** The student shall develop attitude to impart the preventive measures namely, the prevention of periodontal diseases and prevention of the progress of the disease.
- CO3 The student shall also develop an attitude to perform the treatment with full aseptic precautions; shall develop an attitude to prevent introgenic diseases; to conserve the tooth to the maximum possible time by maintaining periodontal health and to refer the patients who require specialist's care.

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#### MDS - REGULATION 2018-2019

#### PROGRAM OUTCOMES

- PO1 Demonstrate understanding of basic sciences relevant to specialty.
- **PO2** Describe etiology, patho physiology, principles of diagnosis and management of common problems within the specialty in adults and children.
- **PO3** Identify social, economic, environmental and emotional determinants in a given case and take them in to account for planned treatment.
- **PO4** Recognize conditions that may be outside the area of specialty or competence and to refer them to the concerned specialist.
- **PO5** Update knowledge by self-study and by attending courses, conferences and seminars pertaining to specialty.
- PO6 Undertake audit, use information technology and carry out research in both basic and clinical with the aim of publishing or presenting the work at various scientific gathering;
- **PO7** Take a proper clinical history, examine the patient, perform essential diagnostic procedures and order relevant tests and interpret them to come to a reasonable diagnosis about the condition.
- **PO8** Acquire adequate skills and competence in performing various procedures as required in the specialty.
- **PO9** Adopt ethical principles in all aspects of practice.
- PO10 Foster professional honesty and integrity.

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- PO11 Deliver patient care irrespective of social status, caste, creed, or religion of the patient.
- PO12 Develop communication skills, to explain various options available and obtain a true informed consent from the patient.
- PO13 Provide leadership and get the best out of his team in a congenial working atmosphere.
- PO14 Apply high moral and ethical standards while carrying out human or animal research.
- PO15 Be humble and accept the limitations in his knowledge and skill and to ask for help from colleagues when needed.
- PO16 Respect patient's rights and privileges including patient's right to information and right to seek a second opinion.

Prof. Dr. S. SENTHILNATHAN MDS PRINCIPAL

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#### **COURSE OUTCOMES**

#### **OPERATIVE DENTISTRY AND ENDODONTICS**

| CO1 | Applied Basic  | Sciences: A  | Applied Anatom  | y, Physiolog  | y, Pathology |
|-----|----------------|--------------|-----------------|---------------|--------------|
|     | including Oral | Microbiology | , Pharmacology, | Biostatistics | and Research |
|     | Methodology    | and          | Applied         | Dental        | Materials.   |
|     |                |              |                 |               |              |

| CO2 | Conservative | Dentistry |
|-----|--------------|-----------|
|     |              |           |

CO3 Endodontics

CO4 Descriptive and analyzing type question

#### ORAL AND MAXILLOFACIAL SURGERY

| CO1 | Applied Basic Sciences: Applied Anatomy, Physiology, & Biochemistry, Pathology, Microbiology, Pharmacology, Research Methodology and Biostatistics |
|-----|--|
| CO2 | Minor Oral Surgery and Trauma  |
| CO3 | Maxillo-facial Surgery   |
| CO4 | Descriptive and analyzing type question  |



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#### **PROSTHODONTICS**

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Applied Basic Sciences: Applied anatomy, embryology, growth and development Genetics, Immunology, anthropology, Physiology, nutrition and Biochemistry, Pathology and Microbiology, virology, Applied pharmacology, Research Methodology and bio statistics,. Applied Dental anatomy and histology, Oral pathology & oral Microbiology, Adult and geriatric psychology. Applied dental materials.

CO<sub>2</sub>

Removable Prosthodontics and Implant supported prosthesis (Implantology), Geriatric dentistry and Cranio facial Prosthodontics

CO<sub>3</sub>

Fixed Prosthodontics, occlusion, TMJ and esthetics.

CO<sub>4</sub>

Descriptive and analyzing type

questions

#### **PERIODONTICS**

| CO <sub>1</sub> | Applied Basic | Sciences: Applied | l Anatomy, | Physiology, and | Bioche | mistry,        |
|-----------------|---------------|-------------------|------------|-----------------|--------|----------------|
| Pathology,      | Microbiology, | Pharmacology,     | Research   | Methodology     | and    | Biostatistics. |

Normal Periodontal structure, Etiology and Pathogenesis of Periodontal diseases, epidemiology as related to Periodontics

CO3 Periodontal diagnosis, therapy and Oral implantology

CO4 Descriptive and analyzing type question

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