



Dayananda Sagar College of Dental Sciences

BDS COURSE OUTCOME

PRINCIPAL

Dayananda Sagar College of Dental Sciences
Kumaraswamy Layout,
Bangalore - 560 078.

BDS COURSE OUTCOMES (BDS-COs)

Name of the institution	-Dayananda Sagar College of Dental Sciences (DSCDS), Bengaluru
Course outcome proposed by	-Academic Advisory Council-DSCDS
Course outcome approved by	-Internal Quality Assurance Cell-DSCDS
Course approved by	- Dental Council of India (Regulating body)
Affiliated to	- Rajiv Gandhi University of Health Sciences
Date of approval by AAC	- 18-01-2018
Date of IQAC approval	- 17-02-2021

The BDS programme is a four year academic programme encompassing courses covering basic sciences and dental specialties. This is followed by a year of compulsory rotatory internship for gaining experience in clinical practice, patient education and practice management.

PROGRAMME STRUCTURE:

The BDS programme comprises of the following courses:

YEAR 1:

BDS1: Human Anatomy, Embryology, Histology & Medical Genetics

BDS2: Physiology

BDS3: Biochemistry

BDS4: Dental Anatomy, Embryology and Oral Histology

BDS5: Dental Materials

Year 2:


BDS6: General Pathology

BDS7: Microbiology

BDS8: General and Dental Pharmacology and Therapeutics

BDS9: Pre Clinical Conservative Dentistry Laboratory

BDS10: Preclinical Prosthodontics


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Year 3:

BDS11: General Medicine

BDS12: General Surgery

BDS13: Oral Pathology

Year 4:

BDS14: Oral Medicine

BDS15: Pedodontics

BDS16: Public health dentistry

BDS17: Orthodontics

BDS18: Oral and Maxillofacial Surgery

BDS19: Periodontics

BDS20: Prosthodontics

BDS21: Conservative dentistry and Endodontics

BDS22: One year of compulsory rotatory internship

The intended learning outcomes for the courses are as follows:

HUMAN ANATOMY, EMBRYOLOGY, HISTOLOGY & MEDICAL GENETICS

By the end of the course, the student should be able to:

1. Explain 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.

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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.

b) 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.

PHYSIOLOGY


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-coordinated 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.
4. Conduct experiments designed for the study of physiological phenomena.
5. Interpret experimental and investigative data
6. Distinguish between normal and abnormal data derived as a result of tests which he/she has performed and observed in the laboratory.

BIOCHEMISTRY

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

1. Define and classify bioorganic molecules - Carbohydrates, Lipids Proteins and High energy compounds
2. Discuss about macronutrients and their digestion
3. Define and classify micronutrients, state their daily requirement, sources and deficiency symptoms, and explain their functions-Vitamins, Minerals, Calcium and phosphate, Heme and nonheme iron and Iodine
4. Summarize aspects of energy metabolism
5. Understand special aspects of metabolism
6. Explain biochemical genetics and protein synthesis
7. Discuss enzyme and metabolic regulation
8. Describe structural components and blood proteins- structure, functions and metabolism
9. understand medical biochemistry- common medical conditions and their biochemical evaluation


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DENTAL ANATOMY, EMBRYOLOGY AND ORAL HISTOLOGY

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

1. Appreciate the normal development, morphology, structure & functions of oral tissues & variations in different pathological/non-pathological states.
2. Understand the histological basis of various dental treatment procedures and physiologic ageing process in the dental tissues.
3. Know the basic knowledge of various research methodologies.

GENERAL PATHOLOGY

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

1. Demonstrate and apply basic facts, concepts and theories in the field of Pathology
2. Recognize and analyze pathological changes at macroscopically and microscopical levels and explain their observations in terms of disease processes
3. Integrate knowledge from the basic sciences, clinical medicine and dentistry in the study of Pathology.
4. Demonstrate understanding of the capabilities and limitations of morphological Pathology in its contribution to medicine, dentistry and biological research.
5. Demonstrate ability to consult resource materials outside lectures, laboratory and tutorial classes

MICROBIOLOGY

At the end of the Microbiology course the student is expected to :

1. Understand the basics of various branches of microbiology and able to apply the knowledge relevantly.
2. Apply the knowledge gained in related medical subjects like General Medicine and General Surgery and Dental subjects like Oral Pathology, Community Dentistry, Periodontics, Oral Surgery, Pedodontics, Conservative Dentistry and Oral medicine in higher classes.
3. Understand and practice various methods of Sterilisation and disinfection in dental clinics.
4. Have a sound understanding of various infectious diseases and lesions in the oral cavity.
5. Student should have acquired the skill to diagnose, differentiate various oral lesions.
6. Should be able to select, collect and transport clinical specimens to the laboratory.
7. Should be able to carry out proper aseptic procedures in the dental clinic.

GENERAL AND DENTAL PHARMACOLOGY AND THERAPEUTICS

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

1. Describe the pharmacokinetics and pharmacodynamics of essential and commonly used drugs in general and in dentistry in particular.

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2. List the indications, contraindications; interactions, and adverse reactions of commonly used drugs with reason.
3. Tailor the use of appropriate drugs in disease with consideration to its cost, efficacy, safety for individual and mass therapy needs.
4. Indicate 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.
5. Integrate the rational drug therapy in clinical pharmacology
6. Indicate the principles underlying the concepts of "Essential drugs".
7. Prescribe drugs for common dental and medical ailments.
8. Appreciate adverse reactions and drug interactions of commonly used drugs.
9. Observe experiments designed for study of effects of drugs.
10. Critically evaluate drug formulations and be able to interpret the clinical pharmacology of marketed preparations commonly used in dentistry.
11. Apply Practical knowledge of use of drugs in clinical practice

DENTAL MATERIALS

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

1. Understand the evolution and development of science of dental material.
2. Explain purpose of course in dental materials to personnels concerned with the profession of the dentistry.
3. Explain physical and chemical properties of dental materials
4. Understand biomechanical requirements of particular restorative procedure.
5. Understand standards or specifications of various materials and evaluate the claims made by manufactures of dental materials

PRE CLINICAL CONSERVATIVE DENTISTRY LABORATORY

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


1. Identify and use handcutting instruments
2. Identify and use rotary cutting instruments in contra angle hand pieces
3. Prepare Class I to Class V cavities, restore and polish restorations
4. Identify and manipulate varnish and bases
5. Identify and manipulate various matrices, tooth separators and materials like composites and modified glassionomer cements.
6. Identify and use endodontic instruments
7. Outline the steps and demonstrate the steps of endodontic treatment in upper central incisor

GENERAL MEDICINE

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

1. Define signs and symptoms
2. Provide a diagnosis and differential diagnosis

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3. Outline treatment & determine prognosis of infections, disorders of GIT, CVS, CNS, Respiratory and Renal systems, hematology and endocrinology
4. Understand principles of Critical Care and conditions requiring critical care
5. Take a detailed history
6. Conduct a general physical examination (including build, nourishment, pulse, BP, respiration, clubbing, cyanosis, jaundice, lymphadenopathy, oral cavity)
7. Examine CVS, RS and abdomen and facial nerve

GENERAL SURGERY

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

1. Explain various diseases, which may require surgical expertise
2. Analyze the medical history
3. Conduct a thorough physical examination of the patient
4. Differentiate benign and malignant diseases and decide which patient requires further evaluation
5. Examine a routine swelling, ulcer and other related diseases
6. Perform minor surgical procedures such as draining an abscess, taking a biopsy etc.

ORAL MEDICINE & RADIOLOGY

By the end of the course, the student should be able to:

1. Obtain patient's history in a methodical way
2. Perform thorough clinical examination, identify precancerous and cancerous lesions of the oral cavity and refer to the concerned specialist for their management
3. Take intra-oral radiographs and interpret the radiographic findings
4. Identify the need for extra-oral radiographic procedures, TMJ radiography and sialography
5. Select and interpret clinical, radiological and other diagnostic information
6. Arriving at provisional, differential and final diagnosis
7. Demonstrate knowledge about radiation health hazards by employing radiation safety and protection.
8. Recognize the importance of intra- and extra-oral radiographs and dental records in forensic identification, age estimation and with respect to law.

PAEDIATRIC & PREVENTIVE DENTISTRY

By the end of the course, the student should be able to:

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1. Instill a positive attitude and behaviour in children towards oral health and describe the principles of prevention and preventive dentistry right from birth to adolescence
2. Guide and counsel the parents in regards to various treatment modalities including different facets of preventive dentistry
3. Treat dental diseases occurring in child patient
4. Manage the physically and mentally challenged disabled children effectively and efficiently, tailored to the needs of individual requirement and conditions.

ORTHODONTICS & DENTOFACIAL ORTHOPAEDICS

By the end of the course, the student should be able to:

1. Describe normal growth and development of facial skeleton and dentition
2. Identify aberrations in growth process- both dental and skeletal and plan necessary treatment
3. Diagnose the various malocclusion categories
4. Motivate and explain to the patient (and parent) about the necessity of treatment
5. Plan and execute preventive orthodontics (space maintainers or space regainers)
6. Plan and execute interceptive orthodontics (habit breaking appliances)
7. Manage treatment of simple malocclusion such as anterior spacing using removable appliances
8. Handle delivery and activation of removable orthodontic appliances
9. Diagnose and appropriately refer patients with complex malocclusion to the specialist

PERIODONTOLOGY

By the end of the course, the student should be able to:

1. Diagnose the patients' periodontal problem, plan and perform appropriate periodontal treatment
2. Educate and motivate the patient
3. Perform thorough oral prophylaxis, subgingival scaling, root planing and minor periodontal surgical procedures
4. Give proper post treatment instructions and do periodic recall and evaluation
5. Anticipate medical complications that can arise while treating systemically compromised patients and employ prior precautions or seek consent from the concerned medical specialist.


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6. Explain the concepts of osseointegration and basic surgical aspects of implantology

PROSTHODONTICS AND CROWN & BRIDGE

By the end of the course, the student should be able to:

1. Choose appropriate dental materials for a given clinical scenario
2. Make impressions and create working models for laboratory procedures
3. Fabricate conventional complete and partial removable dentures and assess the need for fixed partial dentures
4. Educate and counsel patients about the need for prosthetic replacement of missing teeth
5. Explain the concept of osseointegration and the value of implant-supported Prosthodontic Procedures

CONSERVATIVE DENTISTRY AND ENDODONTICS


By the end of the course, the student should be able to:

1. Diagnose all carious lesions
2. Prepare Class I and Class II cavities and restore them with amalgam
3. Restore class V and Class III cavities with glass ionomer cement
4. Diagnose and appropriately treat pulpally involved teeth (pulp capping procedures)
5. Perform RCT for anterior teeth
6. Carry out small composite restorations
7. Describe the principles of aesthetic dental procedures

ORAL & MAXILLOFACIAL SURGERY

By the end of the course, the student should be able to:

1. Apply the knowledge gained in the basic medical and clinical subjects in the management of patients with surgical problems
2. Diagnose, manage and treat patients with basic oral surgical problems
3. Demonstrate a broad knowledge of maxillofacial surgery and oral implantology
4. Recognize legal, ethical and moral issues pertaining to the patient care and communication skills


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5. Apply and practice the basic principles of asepsis and sterilisation
6. Administer all forms of local anaesthesia
7. Perform extraction of the teeth under local anaesthesia (LA)
8. Perform certain minor oral surgical procedure under LA like trans-alveolar extraction, frenectomy, dento-alveolar procedures, simple impaction, biopsy, etc.
9. Assess, prevent and manage common complications that arise during and after minor oral surgery
10. Prescribe drugs as per pre operative, prophylactic and therapeutic requirements
11. Provide primary care and manage medical emergencies in the dental office
12. Describe the management of major oral surgical problems and principles involved in the inpatient management

PUBLIC HEALTH DENTISTRY

By the end of the course, the student should be able to:

1. Apply the principles of health promotion and disease prevention
2. Describe the organization and provision of health care in community and in the hospital service
3. Examine the prevalence of common dental conditions in India.
4. Participate in improving the oral health of the individuals through community activities
5. Observe and indicate social, cultural and env. factors which contribute to health or illness.
6. Administer oral hygiene instructions, topical fluoride therapy and fissure sealing.
7. Educate patients concerning the aetiology and prevention of oral disease and encourage them to assume responsibility for their oral health
8. Evaluate population dynamics, reimbursement mechanism practice
9. Co-ordinate & supervise the activities of allied dental health personnel
10. Implement & monitor infection control and environmental safety programs


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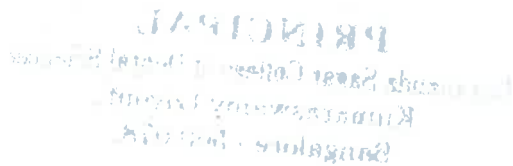
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Chairman, Academic Advisory Council


CO-Ordinator, IQAC


Member Secretary, Academic Advisory Council


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