

**PROGRAM OUTCOME, PROGRAM SPECIFIC OUTCOME AND COURSE  
OUTCOME IN BACHELOR OF DENTAL SURGERY PROGRAM**

<b>COURSE</b>	<b>SUBJECT</b>	<b>COURSE OUTCOME</b>
First BDS	Anatomical science	<p><u>a.KNOWLEDGE AND UNDERSTANDING:</u></p> <ol style="list-style-type: none"> <li>1. Know the normal disposition of the structures in the body while clinically examining a Patient and while conducting the clinical procedures</li> <li>2. Know the anatomical basis of disease and injury</li> <li>3. Know the microscopic structure of the various tissues, a prerequisite for understanding the disease process.</li> <li>4. Know the nervous system to locate the site of lesion according to the sensory and or the motor deficits encountered</li> <li>5. Have an idea about the basis of the abnormal development, critical stages of development, effects of teratogens, genetic mutations and environmental hazards</li> <li>6. Know the sectional anatomy of the head and neck and brain to read the features in the Radiographs and the picture taken by modern technique</li> <li>7. Know the anatomy of cardiopulmonary resuscitation</li> </ol> <p><u>SKILLS:</u></p> <ol style="list-style-type: none"> <li>1. To locate various structure of the body and to mark the topography of the living anatomy</li> <li>2. To identify various tissues under microscope</li> <li>3. To identify the features in radiography and modern imaging techniques.</li> <li>4. To detect various congenital abnormalities</li> </ol> <p><u>ATTITUDE:</u></p> <ol style="list-style-type: none"> <li>1. Willingness to apply the current knowledge of dentistry in the best interest of the patient and community</li> <li>2. Seek to improve awareness and provide possible solutions for oral health problems and needs throughout the community</li> </ol>

First BDS	Physiology	<p>a. <u>KNOWLEDGE AND UNDERSTANDING</u></p> <ol style="list-style-type: none"> <li>1. Explain the normal functioning of all the organ systems and their interactions for well co-ordinated total body function.</li> <li>2. Assess the relative contribution of each organ system towards the maintenance of the milieu interior.</li> <li>3. List the physiological principles underlying the pathogenesis and treatment of disease</li> </ol> <p>b. <u>SKILLS:</u></p> <p>At the end of the course, the student shall be able to</p> <ol style="list-style-type: none"> <li>1. Conduct experiments designed for the study of physiological phenomena.</li> <li>2. Interpret experimental and investigative data</li> <li>3. Distinguish between 'normal and abnormal data derived as a result of tests which he/she has performed and observed in the laboratory.</li> </ol> <p>c. <u>ATTITUDE:</u></p> <ol style="list-style-type: none"> <li>1. To develop the attitude to serve the rural community.</li> </ol> <p>d. <u>INTEGRATION:</u></p> <ol style="list-style-type: none"> <li>1. At the end of the integrated teaching the student shall acquire an integrated knowledge of organ structure and function and its regulatory mechanisms.</li> </ol>
First BDS	Biochemistry	<p><u>KNOWLEDGE AND UNDERSTANDING</u></p> <p>At the end of the course, the student should be able to:</p> <ol style="list-style-type: none"> <li>1. describe the molecular and functional organization of a cell and list its</li> </ol>

		<p>subcellular components;</p> <ol style="list-style-type: none"> <li>delineate structure, function and inter-relationships of biomolecules and consequences of deviation from normal;</li> <li>summarize the fundamental aspects of enzymology and clinical application wherein regulation of enzymatic activity is altered;</li> <li>describe digestion and assimilation of nutrients and consequences of malnutrition;</li> <li>integrate the various aspects of metabolism and their regulatory pathways;</li> <li>explain the biochemical basis of inherited disorders with their associated sequelae;</li> <li>describe mechanisms involved in maintenance of body fluid and pH homeostasis;</li> <li>outline the molecular mechanisms of gene expression and regulation, the principles of genetic engineering and their application in dentistry</li> <li>summarize the molecular concepts of body defence and their application in dentistry</li> <li>outline the biochemical basis of environmental health hazards, biochemical basis of cancer and carcinogenesis</li> <li>explain the principles of various conventional and specialized laboratory investigations and instrumentation analysis and interpretation of a given data relevant to dentistry</li> <li>suggest experiments to support theoretical concepts and clinical diagnosis.</li> </ol> <p><u>SKILLS:</u></p> <p>At the end of the course, the student should be able to :</p>
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First Year BDS	Dental Anatomy, Embryology And Oral Histology	<p><u>KNOWLEDGE AND UNDERSTANDING:</u></p> <ol style="list-style-type: none"> <li>1. To acquire an understanding of how cells, tissues, and organs develop and function in order to gain a clear perspective of these structures as a basis for understanding oral biology/ecology</li> <li>2. To develop a comprehension of the principles of embryogenesis and human development with emphasis on the face and structures of the oral cavity</li> <li>3. To understand, comprehend, describe, compare, and illustrate the histologic characteristics of oral tissues in health and diseased states</li> <li>4. To develop a professional vocabulary of terminology related to the head and neck, the oral complex, and the teeth so as to apply in clinical scenario</li> <li>5. To identify, locate, and relate the gross anatomical structures of the head and neck to include various teeth, the bones of the skull, musculature, major nerves, glands and the circulatory and lymphatic systems.</li> </ol>

		<ol style="list-style-type: none"> <li>6. To identify the histologic and anatomic features of the extra-oral and intraoral structures.</li> <li>7. To compare and contrast the human dentition in relationship to location, function, and morphology</li> <li>8. To identify, comprehend, describe the sequence and eruption patterns of primary and permanent teeth and their implications on future oral and overall health</li> <li>9. To understand the oral physiology, unique biochemical basis behind of oral musculature, glands and movements</li> <li>10. To be able to clinically apply and incorporate knowledge of tooth morphology, dental occlusion, head and neck anatomy, histology, and embryology into patient assessment, preventive management, treatment planning, and patient education in future</li> </ol> <p><u>SKILLS:</u></p> <ol style="list-style-type: none"> <li>1. Able to carve and reproduce the morphology of human permanent teeth in wax blocks</li> <li>2. Able to identify different oral hard tissues in clinical situations</li> <li>3. Able to differentiate normal from abnormal and diseased states</li> <li>4. Able to identify various types of human teeth based on their morphology</li> <li>5. Able to appreciate the influence of age, gender and race on oral and para-oral structures</li> <li>6. Able to locate the different areas/surfaces of the teeth</li> <li>7. Able to understand the implications of the disease process and ageing on normal oral structures</li> <li>8. Able to appreciate the eruption and shedding pattern of human teeth</li> <li>9. Able to appreciate and integrate the concept of occlusion, range of human jaw movements in preclinical and clinical situations</li> <li>10. Able to use effectively the terminologies and anatomical terms for</li> </ol>
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		<p>clinical and patient communications</p> <p><u>Competencies specific to the subject</u></p> <p>1. To gain knowledge about the microscopic configuration of normal histological structure of both soft and hard tissues.</p>
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Second BDS	Year	General Pathology	a. <u>KNOWLEDGE AND UNDERSTANDING:</u>
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		<ol style="list-style-type: none"> <li>1. To demonstrate and analyze pathological changes at macroscopic and microscopic levels and explain their observations in terms of disease processes.</li> <li>2. To integrate knowledge from the basic sciences, clinical medicine and dentistry in the study of Pathology.</li> <li>3. To demonstrate understanding of the capabilities and limitations of morphological pathology in its contribution to medicine, dentistry and biological research.</li> <li>4. To demonstrate ability to consult resource materials outside lectures, laboratory and tutorial classes.</li> </ol> <p>b. <u>SKILLS:</u></p> <ol style="list-style-type: none"> <li>1. A dental graduate should be able to identify the abnormal diseases like tumor, non tumours and also to arrive what are the investigations needed for the diagnosis of the diseases.</li> <li>2. Carry out certain investigations and ability to interpret lab findings</li> </ol> <p>c. <u>ATTITUDE:</u></p> <ol style="list-style-type: none"> <li>1. A dental student must be willing to apply the knowledge gained in pathology in the best interest of the patient and the community.</li> <li>2. Maintain a high standard of professional ethics In patient care and also in carrying out the diagnostic modalities.</li> <li>3. Willing to update knowledge in pathological conditions and diagnostic investigations from time to time.</li> </ol> <p>d. <u>INTEGRATION</u></p>
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Second BDS	Year Microbiology	<p>a. <u>KNOWLEDGE AND UNDERSTANDING:</u></p> <p>At the end of the Microbiology course the student is expected to</p> <ol style="list-style-type: none"> <li>1. Understand the basics of various branches of Microbiology and able to apply the knowledge relevantly.</li> <li>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.</li> <li>3. Understand and practice various methods of Sterilisation and disinfection in dental clinics.</li> <li>4. Have a sound understanding of various infectious diseases and lesions in the oral cavity.</li> <li>5. Awareness of Health care associated infections and their prevention in dental practice</li> </ol> <p>b. <u>SKILLS</u></p> <ol style="list-style-type: none"> <li>1. Student should have acquired the skill to diagnose, differentiate various oral lesions.</li> <li>2. Should be able to select, collect and transport clinical specimens to the laboratory.</li> <li>3. Should be able to carry out proper aseptic procedures in the dental clinic.</li> <li>4. Interpretation of antimicrobial susceptibility tests and to make right choice of antibiotic based on spectrum of infection and ensure appropriate use</li> </ol>



		<p>to avoid antibiotic resistance.</p> <p>c. <u>ATTITUDE:</u></p> <ol style="list-style-type: none"> <li>To apply knowledge in the interest of the individual patient and community.</li> <li>Maintain high standards of professional ethics in patient care and in carrying out diagnostic tests.</li> <li>To update knowledge from time to time with regard to diagnostics and immunoprophylaxis.</li> </ol> <p>d. <u>INTEGRATION:</u></p> <ol style="list-style-type: none"> <li>At the end of integrated teaching the student shall acquire integrated knowledge from different disciplines which includes etiology, morphology, pathogenesis, clinical features, laboratory diagnosis, treatment, prevention and control of infectious diseases.</li> </ol>
Second BDS	Year General Pharmacology	<p>a) <u>KNOWLEDGE AND UNDERSTANDING:</u></p> <p>At the end of the course the student shall be able to</p> <ol style="list-style-type: none"> <li>Describe the pharmacokinetics and pharmacodynamics of essential and commonly used drugs in general and in dentistry in particular.</li> <li>List the indications, contraindications, interactions and adverse reactions of commonly used drugs with reason.</li> <li>Tailor the use of appropriate drugs in disease with consideration to its cost, efficacy, safety for individual and mass therapy needs.</li> <li>Indicate special care in prescribing common and essential drugs in special</li> </ol>

		<p>medical situations such as pregnancy, lactation, old age, renal, hepatic damage and immunocompromised patients.</p> <ol style="list-style-type: none"> <li>Integrate the rational drug therapy in clinical pharmacology.</li> <li>Indicate the principles underlying the concepts of “Essential drugs</li> </ol> <p>b) <u>SKILLS:</u></p> <p>At the end of the course student shall be able to:</p> <ol style="list-style-type: none"> <li>Prescribe drugs for common medical and dental ailments.</li> <li>Appreciate adverse reactions and drug interactions of commonly used drugs</li> <li>Observe experiments designed for study of effects of drugs.</li> <li>Critically evaluate drug formulations and be able to interpret the clinical pharmacology of marketed preparations commonly used in dentistry.</li> </ol> <p>c) <u>ATTITUDE:</u></p> <ol style="list-style-type: none"> <li>To develop the attitude to serve the rural community</li> </ol> <p>d) <u>INTEGRATION:</u></p> <ol style="list-style-type: none"> <li>Practical knowledge of use of drugs in clinical practice will be acquired through integrated teaching with clinical departments</li> </ol>
Second BDS	Year	<p>Dental Materials</p> <p>a. <u>KNOWLEDGE AND UNDERSTANDING:</u></p> <p>The graduate should acquire the following during the period of training --- Adequate knowledge of the scientific foundations on which dentistry is based and good understanding of various relevant scientific methods, principles of biological functions and should be able to evaluate and analyse</p>

		<p>scientifically various established facts and data. To understand the evolution and development of science of dental materials. To know about the manipulation technique of various restorative materials.</p> <p>b. <u>SKILLS:</u></p> <p>A graduate should be able to demonstrate the following skills necessary for practice of dentistry. To develop skills in the management of various materials in dentistry. Students should know about the physical and chemical properties of the dental materials</p> <p>c. <u>ATTITUDE:</u></p> <p>A graduate should develop during the training period the following attitudes. Willing to apply current knowledge of dentistry in the best interest of the patients and the community. Maintain a high standard of professional ethics and conduct and apply these in all aspects of professional life. Seek to improve awareness and provide possible solutions for oral health problems and needs throughout the community. Willingness to participate in the continuing education programmes to update knowledge and professional skills from time to time. To help and to participate in the implementation of National Health Programmes.</p>
Second BDS	Year Pre clinical Conservative Dentistry	<p>a. <u>KNOWLEDGE AND UNDERSTANDING:</u></p> <p>The student should acquire adequate knowledge during this period of training. Knowledge of the scientific foundation of conservative dentistry and understanding of various treatment procedures carried out</p>

		<p>in conservative dentistry with emphasize on biological principal to be followed during these treatment procedures and to acquire knowledge of various instruments and materials used in restorative procedures .They should also be aware of various manipulative techniques of restorative material.</p> <p>b. <u>SKILLS</u>;</p> <p>The students should be able to demonstrate the following skills which are necessary for practice in conservative dentistry To develop skills in manipulation of various materials used in conservative dentistry. To develop skills in preparation of various cavities and to perform various restorative procedures.</p> <p>c. <u>ATTITUDE</u>;</p> <p>The student should be able to apply the current knowledge of various materials used in dentistry in the interest of patients and the community in general. To be aware of recent developments in instruments and materials used in conservative dentistry and update his/her knowledge by attaining various continuing education programmes. Should be aware of both benefits and health hazards of various restorative materials used in conservative dentistry. Should maintain high standard of professional ethics and apply those in all aspects of professional life.</p> <p>d. <u>INTEGRATION</u>;</p> <p>The dental student must be able to identify the healthy and diseased state of</p>
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		the teeth, thereby enabling them to better understand the diseased state and to plan an ideal treatment protocol for the same.
Second BDS	Year Pre clinical Prosthodontics & Crown & Bridge	<p>a. <u>KNOWLEDGE</u></p> <p>i) Adequate knowledge of the scientific foundations on which dentistry is based and good understanding of various relevant scientific methods, principles of biological functions, ability to evaluate and analyse scientifically various established facts and deals.</p> <p>ii) 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.</p> <p>iii) 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.</p> <p>iv) Adequate clinical experience required for the general dental practice.</p> <p>v) Adequate knowledge of the constitution, biological functions and behaviour 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.</p> <p>b. <u>ATTITUDE</u></p>

		<p>A graduate should develop during the training period the following attitudes.</p> <ol style="list-style-type: none"> <li>2. Willingness to apply the current knowledge of dentistry in the best interest of the patient and community.</li> <li>3. Maintain a high standard of professional ethics and conduct and apply these in all aspects of professional life.</li> <li>4. Seek to improve awareness and provide possible solutions for oral health problems and needs throughout the community.</li> <li>5. Willingness to participate in the CPED programmes to update knowledge and professional skill time to time.</li> <li>6. Help and participate in the implementation of the national oral health policy.</li> </ol> <p><b>c. <u>SKILLS</u></b></p> <p>A graduate should be able to demonstrate the following skills necessary for practice in dentistry.</p> <ol style="list-style-type: none"> <li>1. 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.</li> <li>2. Prevent and manage complications if encountered while carrying out various surgical and other procedures.</li> <li>3. Carry out certain investigative procedures and ability to interpret laboratory findings.</li> <li>4. Promote oral health and help prevent oral disease where possible.</li> <li>5. Control pain and anxiety among the patients during dental treatment.</li> </ol>
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		<p>d. <u>INTEGRATION</u></p> <p>1. Integrated knowledge about all the divisions in Prosthodontics (CD,RPD,FPD,IMPLANTS etc)</p>
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Third Year BDS	General Medicine	<p>a. <u>KNOWLEDGE and UNDERSTANDING:</u></p> <p>At the end of the course the student shall be able to:</p> <ol style="list-style-type: none"> <li>1. Describe the etiology, pathogenesis, clinical signs and symptoms and complications of various disease processes</li> <li>2. Know of the various pre-requisite settings for the various diseases to occur including a knowledge of the various co-morbidities especially lifestyle diseases such as Hypertension, Diabetes Mellitus.</li> <li>3. Awareness of the oral manifestations of various systemic disorders</li> <li>4. Knowledge of the medical conditions requiring screening and evaluation prior to dental procedures</li> <li>5. To be aware of BLS steps in cases of medical emergencies while undergoing dental procedures</li> </ol> <p>b. <u>SKILLS:</u></p> <p>At the end of the course the student shall be able to:</p> <ol style="list-style-type: none"> <li>1. Take a proper history from the patient</li> <li>2. Do a complete general physical examination including build and nourishment</li> <li>3. Assess the vitals-recording the details of Pulse, recording the BP, temperature, checking capillary blood glucose and oxygen saturation</li> <li>4. Look for cyanosis, clubbing, pallor, icterus, pedal edema, lymphadenopathy, rashes, ecchymosis</li> <li>5. Able to examine the CVS, RS, abdomen and the facial nerve</li> <li>6. Interpret the elicited signs and symptoms of various systemic disease processes</li> </ol>
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Third Year BDS	General Surgery	<u>KNOWLEDGE AND UNDERSTANDING</u>

		<p>At the end of the third BDS in General surgery the undergraduate student is expected to</p> <ol style="list-style-type: none"> <li>1. Know the surgical anatomy , physiology and pathological basis of diseases of head and neck</li> <li>2. Know the basic surgical principles</li> <li>3. Know the common surgical conditions of Head &amp; Neck</li> <li>4. Know eliciting History and to do Clinical examination and to arrive at a Provisional diagnosis</li> <li>5. Know about Radiological and blood investigations to arrive at a diagnosis</li> </ol> <p><u>SKILLS</u></p> <ol style="list-style-type: none"> <li>1. Know the interpretation of Radiological films of Head and Neck</li> <li>2. Know the Operative procedures, Post operative complications and Post operative management</li> <li>3. To differentiate between Benign and Malignant diseases of Head &amp; Neck</li> <li>4. Know to perform minor surgical procedures such as Draining an Abscess and taking a Biopsy</li> </ol> <p><u>ATTITUDE</u></p> <ol style="list-style-type: none"> <li>1. Willingness to apply the current knowledge of dentistry in the best interest of the patient and community</li> <li>2. Seek to improve awareness and provide possible solutions for oral health problems and needs throughout the community</li> </ol> <p><u>INTEGRATION</u></p> <ol style="list-style-type: none"> <li>1. By emphasizing on the relevant information and sound knowledge</li> </ol>
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		<p>of Basic Science, to acquaint the student with various diseases, which may require surgical expertise and to train the student to analyse the history and be able to do a thorough clinical examination of the patient.</p>
Third Year BDS	Oral Pathology and Oral Microbiology	<p>a. <u>KNOWLEDGE AND UNDERSTANDING:</u></p> <ol style="list-style-type: none"> <li>1. Adequate knowledge of the scientific foundations' on which dentistry is based and good understanding of various relevant scientific methods, principles of biological functions; ability to evaluate and analyse' scientifically various established facts and data.</li> <li>2. 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.</li> <li>3. 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.</li> <li>4. Adequate clinical experience required for general dental practice</li> <li>5. 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.</li> </ol> <p>b. <u>SKILLS:</u></p> <p>A graduate should be able to demonstrate the following skills necessary for practice of dentistry.</p>

		<ol style="list-style-type: none"> <li>1. 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.</li> <li>2. Prevent and manage complications if encountered while carrying out various surgical and other procedures.</li> <li>3. Carry out certain investigative procedures and ability to interpret laboratory findings.</li> <li>4. Promote oral health and help prevent oral diseases where possible.</li> <li>5. Control pain and anxiety among the patients during dental treatment.</li> </ol> <p>c. <u>ATTITUDE:</u></p> <ol style="list-style-type: none"> <li>1. Willingness to apply the current knowledge of dentistry in the best interest of the patient and community.</li> <li>2. Maintain a high standard of professional ethics and conduct and apply these in all aspects of professional life.</li> <li>3. Seek to improve awareness and provide possible solutions for oral health problems and needs throughout the community.</li> <li>4. Willingness to participate in the CPED Programmes to update knowledge and professional skill from time to time.</li> <li>5. Help and participate in the implementation of the national oral health policy.</li> </ol> <p>d. <u>INTEGRATION:</u></p> <p>The knowledge gained from learning core basic and clinical science in medicine and dentistry are applied in the context of Oral Pathology for the following purpose:-</p>
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		<ol style="list-style-type: none"> <li>1. To understand the process of disease mechanism and consequential outcome.</li> <li>2. To interpret radiological and/or laboratory features to make reliable pathological diagnosis, and thereby, to manage human health and disease.</li> <li>3. In addition by integration of sound basic knowledge into clinical practice will enable students to develop and advance their skills for the betterment of patient care by applying scientific method either for critical appraisal of evidence based medicine or to pursue independent research relevant to medical/dental practice.</li> </ol>
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Fourth Year BDS	Oral Medicine and Radiology	a. <u>Knowledge and Understanding</u> :
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		<ol style="list-style-type: none"> <li>1. Adequate knowledge of the scientific foundations on which dentistry is based and good understanding of various relevant scientific methods, principles of biological functions and should be able to evaluate and analyse scientifically various established facts and data.</li> <li>2. 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 the bearing on physical and social well-being of the patient.</li> <li>3. 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.</li> <li>4. Adequate clinical experience required for general dental practice</li> <li>5. Adequate knowledge of biological function and behaviour of persons in health and sickness as well as the influence of the natural and social environment on the state of health so far as it affects dentistry.</li> </ol> <p>b. <u>Skills</u> :</p> <ol style="list-style-type: none"> <li>1. 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.</li> <li>2. Acquire skill to prevent and manage complications if encountered while carrying out various dental surgical and other procedures. Possess skill to carry out required investigative procedures including clinical and radiological investigations and ability to interpret laboratory findings.</li> <li>3. Promote oral health and help to prevent oral diseases wherever possible.</li> <li>4. Accurate planning of treatment</li> </ol>
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		<p>5. Competent in control of pain and anxiety during dental treatment.</p> <p>c. <u>Attitude:</u></p> <p>A graduate should develop during the training period the following attitudes.</p> <ol style="list-style-type: none"> <li>1. Willing to apply current knowledge of dentistry in the best interest of the patients and the community.</li> <li>2. Maintain a high standard of professional ethics and conduct and apply these in all aspects of professional life.</li> <li>3. Seek to improve awareness and provide possible solutions for oral health problems and needs throughout the community.</li> <li>4. Willingness to participate in the continuing education programmes to update knowledge and professional skills from time to time.</li> <li>5. To help and to participate in the implementation of national health programmes.</li> </ol> <p>d. <u>Integration:</u></p> <ol style="list-style-type: none"> <li>1. From the integrated teaching, the student shall be able to describe the various signs and symptoms and interpret the clinical manifestation of disease processes.</li> <li>2. Horizontal integration can be done in common with basic science departments, and vertical integration can be done with clinical departments</li> </ol>
Fourth Year BDS	Pedodontics and Preventive Dentistry	<p>a. <u>Knowledge and understanding:</u></p> <ol style="list-style-type: none"> <li>1. Adequate knowledge of the scientific foundations' on which dentistry</li> </ol>

		<p>is based and good understanding of various relevant scientific methods, principles of biological functions; ability to evaluate and analyze scientifically various established facts and data.</p> <ol style="list-style-type: none"> <li>2. 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.</li> <li>3. 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.</li> <li>4. Adequate clinical experience required for general dental practice</li> <li>5. Adequate knowledge of the constitution, biological function and behaviour 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.</li> </ol> <p>b. <u>Skills:</u></p> <p>A graduate should be able to demonstrate the following skills necessary for practice of dentistry.</p> <ol style="list-style-type: none"> <li>1. 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.</li> <li>2. Prevent and manage complications if encountered while carrying out various surgical and other procedures.</li> <li>3. Carry out certain investigative procedures and ability to interpret laboratory findings.</li> </ol>
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		<p>4. Promote oral health and help prevent oral diseases where possible.</p> <p>5. Control pain and anxiety among the patients during dental treatment.</p> <p>c. <u>Attitude:</u></p> <p>A graduate should develop during the training period the following attitudes.</p> <ol style="list-style-type: none"> <li>1. Willingness to apply the current knowledge of dentistry in the best interest of the patient and community.</li> <li>2. Maintain a high standard of professional ethics and conduct and apply these in all aspects of professional life.</li> <li>3. Seek to improve awareness and provide possible solutions for oral health problems and needs throughout the community.</li> <li>4. Willingness to participate in the CPED Programmes to update knowledge and professional skill from time to time.</li> <li>5. Help and participate in the implementation of the national oral health policy</li> </ol> <p>d. <u>Integration:</u></p> <ol style="list-style-type: none"> <li>1. A graduate should have good knowledge and should be able to apply the different concepts and manage the patient as a whole.</li> </ol>
Fourth Year BDS	Orthodontics and Dentofacial Orthopaedics	<p>a. <u>KNOWLEDGE:</u></p> <ol style="list-style-type: none"> <li>1. Demonstrate understanding of basic sciences relevant to speciality;</li> <li>2. Describe aetiology, pathophysiology, principles of diagnosis and management of common problems within the speciality in adults and</li> </ol>

		<p>children;</p> <ol style="list-style-type: none"> <li>3. Identify social, economic, environmental and emotional determinants in a given case and take them into account for planned treatment;</li> <li>4. Recognise conditions that may be outside the area of speciality or competence and to refer them to the concerned specialist;</li> <li>5. Knowledge by self study and by attending courses, conferences and seminars pertaining to speciality;</li> <li>6. 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.</li> </ol> <p>b. <u>SKILLS</u>:</p> <ol style="list-style-type: none"> <li>1. 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;</li> <li>2. acquire adequate skills and competence in performing various procedures as required in the speciality.</li> </ol> <p>c. <u>ATTITUDE</u>:</p> <p>HUMAN VALUES, ETHICAL PRACTICE AND COMMUNICATION ABILITIES.</p> <ol style="list-style-type: none"> <li>1. adopt ethical principles in all aspects of practice;</li> <li>2. foster professional honesty and integrity;</li> <li>3. deliver patient care irrespective of social status, caste, creed, or religion of the patient;</li> </ol>
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		<ol style="list-style-type: none"> <li>4. develop communication skills, to explain various options available and obtain a true informed consent from the patient;</li> <li>5. provide leadership and get the best out of his team in a congenial working atmosphere;</li> <li>6. apply high moral and ethical standards while carrying out human or animal research;</li> <li>7. be humble and accept the limitations in his knowledge and skill and to ask for help from colleagues when needed;</li> <li>8. respect patient's rights and privileges including patient's right to information and right to seek a second opinion</li> </ol> <p>d. <u>INTEGRATION:</u></p> <ol style="list-style-type: none"> <li>1. Students should have a holistic understanding of each of the pathological situation and be able to frame a comprehensive treatment plan and deliver treatment to the limitations of what she/ he is trained and efficient and at the same time refer to the concerned specialists thereafter for opinion / further management</li> </ol>
Fourth Year BDS	Periodontology	<p>a. <u>Knowledge and understanding:</u></p> <p>To have adequate knowledge and understanding of the basic periodontal tissues, etiology, pathophysiology, diagnosis and treatment planning for various periodontal disease/ problem.</p> <p>b. <u>Skill:</u></p> <p>To chart a proper clinical history after thorough examination of the</p>

		<p>patient, able to perform diagnostic procedure; able to interpret laboratory investigation; arrive at a provisional / definitive diagnosis regarding the periodontal problem in question.</p> <p>c. <u>Attitude:</u></p> <p>To develop the right attitude to store his knowledge and the willingness to learn newer concept so as to keep pace with current technology and development; also to seek opinion from an allied Medical Dental specialist as and when required.</p> <p>d. <u>Integration:</u></p> <p>From the integrated teaching of other clinical sciences, the students shall be able to describe the various signs, and symptoms and interpret the clinical manifestations of disease processes.</p>
Fourth Year BDS	Prosthodontics And Crown And Bridge	<p>a. <u>KNOWLEDGE:</u></p> <ol style="list-style-type: none"> <li>1. Adequate knowledge of the scientific foundations on which dentistry is based and good understanding of various relevant scientific methods, principles of biological functions, ability to evaluate and analyze scientifically various established facts and deals.</li> <li>2. 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.</li> </ol>

		<ol style="list-style-type: none"> <li>3. 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.</li> <li>4. Adequate clinical experience required for the general dental practice.</li> <li>5. Adequate knowledge of the constitution, biological functions 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 affects dentistry.</li> </ol> <p>b. <u>ATTITUDE:</u></p> <ol style="list-style-type: none"> <li>1. During the training period, a graduate should develop the following attitudes.</li> <li>2. Willingness to apply the current knowledge of dentistry in the best interest of the patient and community.</li> <li>3. Maintain a high standard of professional ethics and conduct and apply these in all aspects of professional life.</li> <li>4. Seek to improve awareness and provide possible solutions for oral health problems and needs throughout the community.</li> <li>5. Willingness to participate in the CPED programmes to update knowledge and professional skill time to time.</li> <li>6. Help and participate in the implementation of the National Oral Health Policy.</li> </ol> <p>c. <u>SKILLS:</u></p> <p>A graduate should be able to demonstrate the following skills necessary for</p>
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		<p>practice in dentistry.</p> <ol style="list-style-type: none"> <li>1. 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.</li> <li>2. Prevent and manage complications if encountered while carrying out various surgical and other procedures.</li> <li>3. Carry out certain investigative procedures and ability to interpret laboratory findings.</li> <li>4. Promote oral health and help prevent oral disease where possible.</li> <li>5. Control pain and anxiety among the patients during dental treatment.</li> </ol> <p>d. <u>INTEGRATION:</u></p> <p>Integrated knowledge about all the divisions in Prosthodontics (CD,RPD,FPD,IMPLANTS etc)</p>
Fourth Year BDS	Conservative Dentistry And Endodontics	<p>a. <u>KNOWLEDGE AND UNDERSTANDING:</u></p> <p>The graduate should acquire the following during the period of training.</p> <ol style="list-style-type: none"> <li>1. Adequate knowledge and understanding of Etiology, Diagnosis and Treatment procedures.</li> <li>2. Adequate knowledge of the scientific foundations on which dentistry is based and good understanding of various relevant scientific methods, principles of biological functions and should be able to evaluate and analyze scientifically various established facts and data.</li> </ol>

		<ol style="list-style-type: none"> <li>3. 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 the bearing on physical and social well-being of the patient.</li> <li>4. 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.</li> <li>5. Adequate clinical experience required for general dental practice.</li> <li>6. Adequate knowledge of 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 so far as it affects dentistry.</li> </ol> <p>b. <u>SKILLS</u>:</p> <ol style="list-style-type: none"> <li>1. A graduate should be able to demonstrate the following skills necessary for practice of dentistry. 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.</li> <li>2. Acquire skill to prevent and manage complications if encountered while carrying out various dental surgical and other procedures.</li> <li>3. Possess skill to carry out required investigative procedures and ability to interpret laboratory findings.</li> <li>4. Promote oral health and help to prevent oral diseases wherever possible.</li> <li>5. Competent in control of pain and anxiety during dental treatment.</li> </ol>
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		<p>c. <u>ATTITUDE:</u></p> <p>A graduate should develop during the training period the following attitudes.</p> <ol style="list-style-type: none"> <li>1. Have empathy for the patient and do the best possible as situation demands</li> <li>2. Willing to apply current knowledge of dentistry in the best interest of the patients and the community.</li> <li>3. Maintain a high standard of professional ethics and conduct and apply these in all aspects of professional life.</li> <li>4. Seek to improve awareness and provide possible solutions for oral health problems and needs throughout the community.</li> <li>5. Willingness to participate in the continuing education programmes to update knowledge and professional skills from time to time.</li> <li>6. To help and to participate in the implementation of national health programmes.</li> </ol> <p>d. <u>INTEGRATION:</u></p> <ol style="list-style-type: none"> <li>1. At the conclusion of the course the student should be able to diagnose and treat the disease efficiently.</li> <li>2. Should integrate interdisciplinary approach and management.</li> </ol>
Fourth Year BDS	Oral and Maxillofacial Surgery	<p>a. <u>Knowledge and Understanding:</u></p> <p>At the end of the course and clinical training the graduate is expected to -</p> <ol style="list-style-type: none"> <li>1. Apply the knowledge gained in the related medical subjects like pathology, Microbiology and general medicine in the management of patients with oral surgical problems</li> <li>2. Diagnose, manage and treat (understand the principles of</li> </ol>



		<p>treatment) patients with oral surgical problems.</p> <ol style="list-style-type: none"> <li>3. Gain Knowledge of a range of surgical treatments.</li> <li>4. Be able to decide the requirement of a patient to have oral surgical specialist opinion or treatment.</li> <li>5. Understand the principles of in-patient management.</li> <li>6. Understand the management of major oral surgical procedures and principles involved in patient management.</li> <li>7. Know the ethical issues and have communication ability.</li> </ol> <p>b. <u>Skills:</u></p> <ol style="list-style-type: none"> <li>1. 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.</li> <li>2. Should be competent in the extraction of teeth under both local and general anaesthesia.</li> <li>3. Should be able to carry out certain minor oral surgical procedures under LA like frenectomy, alveolar procedures &amp; biopsy etc.</li> <li>4. Ability to assess, prevent and manage various complications during and after surgery.</li> <li>5. Able to provide/primary care and manage medical emergencies in the dental office.</li> <li>6. Understand the management of major oral surgical problems and principles involved, in inpatient management.</li> </ol>
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		<p>c. <u>Attitude:</u></p> <p>A graduate should develop during the training period the following attitudes</p> <ol style="list-style-type: none"> <li>1. Willingness to apply the current knowledge of dentistry in the best interest of the patient and community.</li> <li>2. Maintain a high standard of professional ethics and conduct and apply these in all aspects of professional life.</li> <li>3. Seek to improve awareness and provide possible solutions for oral health problems and needs throughout the community.</li> <li>4. Willingness to participate in the CDE programmes to update knowledge and professional skill from time to time</li> <li>5. Help and participate in the implementation of the national oral health policy.</li> </ol> <p>d. <u>Integration:</u></p> <p>Horizontal integration - Provision of learning within the structure where individual departments/subject areas contribute to the development and delivery of learning in a meaningful, holistic manner. Links are made between the different subject areas and that learning is enriched by the connections and interrelationships being made explicit by this process.</p> <p>Vertical integration - combination of basic and clinical sciences in such a way that the traditional divide between preclinical and clinical</p>
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		<p>studies is broken down. Basic science is represented explicitly in the curriculum within the clinical environments during all the years of undergraduate education and beyond into postgraduate training and continuing professional development.</p> <p>(e.g.) All the students studied a case of Oral cancer - the second-year student prepared the pathology part while the intern correlated it with the case presentation. This was followed by a first year explaining the anatomy and the final year explaining the signs, symptoms, grading and staging, The surgical part was correlated with anatomy by the postgraduate.</p>
Fourth Year BDS	Public Health Dentistry	<p>a. <u>KNOWLEDGE:</u></p> <p>Apply basic sciences knowledge regarding etiology, diagnosis and management of all the oral conditions at the individual and community level Identify social, economic, environmental and emotional determinants in a given individual patient or a community for the purpose of planning and execution of community oral health programme. Ability to conduct oral health surveys in order to identify all the oral health problems affecting the community and find solutions using multi-disciplinary approach. Ability to act as a consultant in Community Oral Health and take part in research (both basic and clinical), present and publish the outcome at various scientific conferences and journals, both national and international.</p> <p>b. <u>SKILLS:</u></p> <p>Take history, conduct clinical examination including all diagnostic</p>

		<p>procedures to arrive at diagnosis at the individual level and conduct survey of the community at a state and national level of all conditions related to oral health to arrive at community diagnosis. Plan and perform all necessary treatment , prevention, and promotion of Oral Health at the individual and community level. Plan appropriate Community Oral Health Programme, conduct the programme and evaluate, at the community level. Ability to make use of knowledge of epidemiology to identify causes and plan appropriate preventive and control measures. Develop appropriate person power at various levels and their effective utilization. Conduct survey and use appropriate methods to impart Oral Health Education Develop ways of helping the community towards easy payment plan, followed by evaluation of their oral health care needs. Develop the planning, implementation, evaluation and administrative skills to carry out successful Community oral Health programmes</p> <p>c. <u>ATTITUDE:</u></p> <p>Adopt ethical principles in all aspects of Community Oral Health activities. To apply ethical and moral standards while carrying out epidemiological research. Develop communication skills, in particular to explain the causes and prevention of oral health diseases to the patient. Be humble and accept the limitations in his knowledge and skill and to ask for help from colleagues when needed and promote teamwork approach. Respect patient's rights and privileges including patient's right to information and right to seek a second opinion</p> <p>d. <u>INTEGRATION:</u></p> <p>At the conclusions of the course the student should be able to</p>
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		communicate the needs of the community efficiently, inform the society of all the recent methodologies in preventing oral disease.
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