

Bapuji Education Association<sup>(R)</sup>  
**College of Dental Sciences,  
Davangere.**

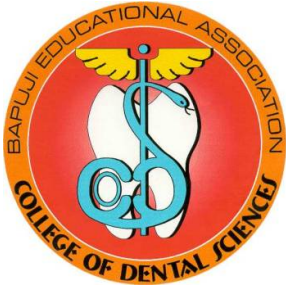
**COURSE OUTCOMES FOR ALL COURSES**



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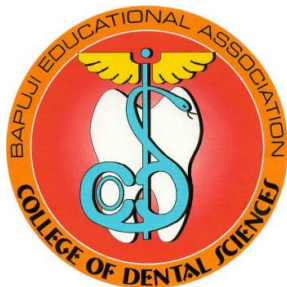
### COURSE OUTCOMES FOR BDS DEGREE

BDS COURSE AND YEAR	COURSE OUTCOME
<b>FIRST YEAR BDS</b>	
<b>1. ANATOMY</b>	<p><b>a) KNOWLEDGE &amp; UNDERSTANDING:</b>            At the end of the 1<sup>st</sup> year BDS course in Anatomical Sciences the undergraduate student is expected to:</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 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 pre-requisite for understanding of the disease processes.</li> <li>4. Know the nervous system to locate the site of lesions according to the sensory and or motor deficits encountered.</li> <li>5. Have an idea about the basis of abnormal development, critical stages of development, effects of teratogens, genetic mutations and environmental hazards.</li> <li>6. Know the sectional anatomy of head neck and brain to read the features in radiographs and pictures taken by modern imaging techniques.</li> <li>7. Know the anatomy of cardio-pulmonary resuscitation.</li> </ol> <p><b>b) SKILLS</b></p> <ol style="list-style-type: none"> <li>1. To locate various structures 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 radiographs and modern imaging techniques.</li> <li>4. To detect various congenital abnormalities.</li> </ol>
<b>HUMAN PHYSIOLOGY</b>	<p><b>KNOWLEDGE</b>            At the end of the course, the student will be able to:</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>b) SKILLS</b>            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</li> </ol>



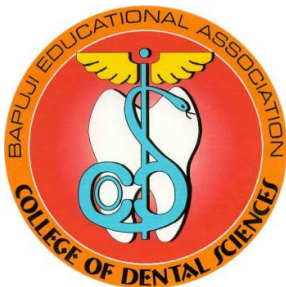
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	<p>phenomena.</p> <ol style="list-style-type: none"> <li>2. Interpret experimental and investigative data</li> <li>3. Distinguish between normal and abnormal data derived as a result of tests which he/she has performed and observed in the laboratory.</li> </ol> <p><b>c) INTEGRATION</b>          At the end of the integrated teaching the student shall acquire an integrated knowledge of organ structure and function and its regulatory mechanisms.</p>
<p><b>BIOCHEMISTRY</b></p>	<p><b>KNOWLEDGE AND UNDERSTANDING</b>          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 subcellular components; delineate structure, function and inter-relationships of biomolecules and consequences of deviation from normal;</li> <li>2. summarize the fundamental aspects of enzymology and clinical application wherein regulation of enzymatic activity is altered;</li> <li>3. describe digestion and assimilation of nutrients and consequences of malnutrition; integrate the various aspects of metabolism and their regulatory pathways;</li> <li>4. explain the biochemical basis of inherited disorders with their associated sequel;</li> <li>5. describe mechanisms involved in maintenance of body fluid and pH homeostasis;</li> <li>6. outline the molecular mechanisms of gene expression and regulation, the principles of genetic engineering and their application in dentistry;</li> <li>7. Summarize the molecular concepts of body defense and their application in dentistry</li> <li>8. Outline the biochemical basis of environmental health hazards, biochemical basis of cancer and carcinogenesis</li> <li>9. Explain the principles of various conventional and specialized laboratory investigations and instrumentation analysis and interpretation of a given data relevant to dentistry</li> <li>10. Suggest experiments to support theoretical concepts and clinical diagnosis.</li> </ol> <p><b>SKILLS:</b>          At the end of the course, the student should be able to :</p> <ol style="list-style-type: none"> <li>1. Make use of conventional techniques/instruments to perform biochemical analysis relevant to clinical screening and diagnosis.</li> <li>2. Analyze and interpret investigative data;</li> </ol>



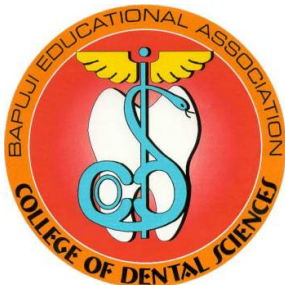
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	<p>3. Demonstrate the skills of solving scientific and clinical problems and decision making in dentistry. <b>ATTITUDE:</b></p> <p>1. At the end of the course, the student should be able to understand the biochemical basis of the health and diseases.</p> <p><b>INTEGRATION:</b></p> <p>The knowledge acquired in biochemistry should help the students to integrate molecular events with structure and function of the human body</p>
<p><b>DENTAL ANATOMY, EMBRYOLOGY AND ORAL HISTOLOGY</b></p>	<p><b>SKILLS</b></p> <p>The student should acquire basic skills in :</p> <ol style="list-style-type: none"> <li>1. Carving of crowns of permanent teeth in wax.</li> <li>2. Microscopic study of Oral tissues.</li> <li>3. Identification of Deciduous &amp; Permanent teeth.</li> <li>4. Age estimation by patterns of teeth eruption from plaster casts of different age groups.</li> </ol> <p><b>OBJECTIVES</b></p> <p>After a course on Dental Anatomy including Embryology and Oral Histology,</p> <ol style="list-style-type: none"> <li>1. The student is expected to appreciate the normal development, morphology, structure &amp; functions of</li> <li>2. oral tissues &amp; variations in different pathological/non-pathological states.</li> <li>3. The student should understand the histological basis of various dental treatment procedures and physiologic ageing process in the dental tissues.</li> <li>4. The students must know the basic knowledge of various research methodologies.</li> </ol>
<p><b>SECOND YEAR BDS</b></p>	
<p><b>GENERAL PATHOLOGY</b></p>	<p><b>AIM:</b></p> <p>At the end of the course the student should be competent to: Apply the scientific study of disease processes, which result in morphological and functional alterations in cells, tissues and organs to the study of pathology and the practice of dentistry.</p> <p><b>OBJECTIVES:</b></p> <p>Enabling the student</p> <ol style="list-style-type: none"> <li>1. To demonstrate and apply basic facts, concepts and theories in the field of Pathology.</li> <li>2. To recognize and analyze pathological changes at macroscopically and microscopically levels and explain their observations in terms of disease processes.</li> </ol>



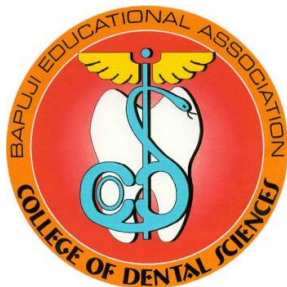
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	<ol style="list-style-type: none"> <li>3. To integrate knowledge from the basic sciences, clinical medicine and dentistry in the study of Pathology.</li> <li>4. To demonstrate understanding of the capabilities and limitations of morphological Pathology in its contribution to medicine, dentistry and biological research.</li> <li>5. To demonstrate ability to consult resource materials outside lectures, laboratory and tutorial classes.</li> </ol>
<p><b>MICROBIOLOGY</b></p>	<p><b>OBJECTIVES:</b></p> <p><b>A. KNOWLEDGE AND UNDERSTANDING</b></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</li> <li>3. General Surgery and Dental subjects like Oral Pathology, Community Dentistry, Periodontics,</li> <li>4. Oral Surgery, Pedodontics, Conservative Dentistry and Oral medicine in higher classes.</li> <li>5. Understand and practice various methods of Sterilisation and disinfection in dental clinics.</li> <li>6. Have a sound understanding of various infectious diseases and lesions in the oral cavity.</li> </ol> <p><b>B. SKILLS</b></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> </ol>
<p><b>GENERAL AND DENTAL PHARMACOLOGY AND THERAPEUTICS</b></p>	<p><b>OBJECTIVES:</b></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 pharmacokinetics and pharmacodynamics of essential and commonly used drugs in general and in dentistry in particular.</li> <li>2. List the indications, contraindications; interactions, and adverse reactions of commonly used drugs with reason.</li> <li>3. Tailor the use of appropriate drugs in disease with consideration to its cost, efficacy, safety for individual and mass therapy needs.</li> <li>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.</li> </ol>



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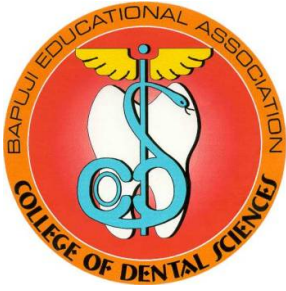
	<p>5. Integrate the rational drug therapy in clinical pharmacology.          6. Indicate the principles underlying the concepts of “Essential drugs”.</p> <p><b>SKILLS:</b>          At the end of the course the student shall be able to:</p> <ol style="list-style-type: none"> <li>1) Prescribe drugs for common dental and medical ailments.</li> <li>2) To appreciate adverse reactions and drug interactions of commonly used drugs.</li> <li>3) Observe experiments designed for study of effects of drugs.</li> <li>4) Critically evaluate drug formulations and be able to interpret the clinical pharmacology of marketed preparations commonly used in dentistry.</li> <li>5) INTEGRATION: Practical knowledge of use of drugs in clinical practice will be acquired through integrated teaching with clinical departments.</li> </ol>
<p><b>DENTAL MATERIALS</b></p>	<p><b>a. KNOWLEDGE AND UNDERSTANDING:</b>          The graduate should acquire the following during the period of training ---</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 and should be able to evaluate and analyze scientifically various established facts and data.</li> <li>2) To understand the evolution and development of science of dental materials.</li> <li>3) To know about the manipulation technique of various restorative materials.</li> </ol> <p><b>b. SKILLS:</b>          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><b>c. ATTITUDE:</b>          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</li> </ol>



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	<p>update knowledge and professional skills from time to time.</p> <p>5) To help and to participate in the implementation of National Health Programmes.</p>
<p><b>PRE CLINICAL CONSERVATIVE DENTISTRY</b></p>	<p><b>a. KNOWLEDGE AND UNDERSTANDING:</b></p> <ol style="list-style-type: none"> <li>1) Knowledge of the scientific foundation of conservative dentistry and understanding of various treatment procedures carried out 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.</li> <li>2) They should also be aware of various manipulative techniques of restorative material.</li> </ol> <p><b>b. SKILLS;</b></p> <ol style="list-style-type: none"> <li>1) The students should be able to demonstrate the following skills which are necessary for practice in conservative dentistry</li> <li>2) To develop skills in manipulation of various materials used in conservative dentistry.</li> <li>3) To develop skills in preparation of various cavities and to perform various restorative procedures.</li> </ol> <p><b>c. ATTITUDE;</b></p> <ol style="list-style-type: none"> <li>1) 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.</li> <li>2) 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.</li> <li>3) Should be aware of both benefits and health hazards of various restorative materials used in conservative dentistry.</li> <li>4) Should maintain high standard of professional ethics and apply those in all aspects of professional life.</li> </ol> <p><b>d. INTEGRATION:</b></p> <p>The dental student must be able to identify the healthy and diseased state of the teeth, thereby enabling them to better understand the diseased state and to plan an ideal treatment protocol for the same.</p>
<p><b>PRE CLINICAL PROSTHODONTICS &amp; CROWN &amp; BRIDGE</b></p>	<p><b>a. KNOWLEDGE</b></p> <ol style="list-style-type: none"> <li>1. Adequate knowledge of the scientific foundations of which dentistry is based and good understanding of various relevant scientific methods, principles of biological functions, ability to evaluate and analyse</li> </ol>





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scientifically various established facts and deals.

2. Adequate knowledge of the development, structure and function of the teeth, mouth and jaws and associated tissues both in health and disease and the relationship and effect on general state of health and also bearing on physical and social wellbeing of the patient.
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.
4. Adequate clinical experience required for the general dental practice.
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.

**b. ATTITUDE**

A graduate should develop during the training period the following attitudes.

- 1) Willingness to apply the current knowledge of dentistry in the best interest of the patient and community.
- 2) Maintain a high standard of professional ethics and conduct and apply these in all aspects of professional life.
- 3) Seek to improve awareness and provide possible solutions for oral health problems and needs throughout the community.
- 4) Willingness to participate in the CPED programmes to update knowledge and professional skill time to time.
- 5) Help and participate in the implementation of the national oral health policy.

**c. SKILLS**

A graduate should be able to demonstrate the following skills necessary from practice in dentistry.

- 1) Diagnose and manage various common dental problem 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.
- 2) Prevent and manage complications if encountered while carrying out various surgical and other procedures.
- 3) Carry out certain investigative procedures and ability to interpret laboratory findings.
- 4) Promote oral health and help prevent oral disease where possible.
- 5) Control pain and anxiety among the patients during dental treatment.

**d. INTEGRATION**

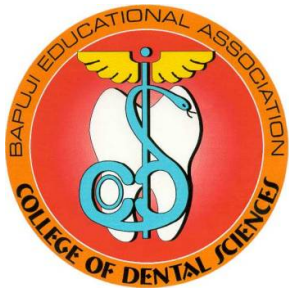
Integrated knowledge about all the divisions in Prosthodontics





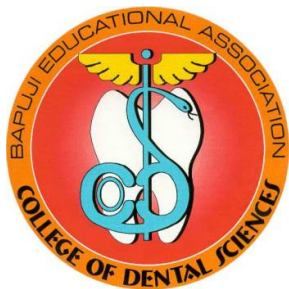
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	(CD,RPD,FPD,IMPLANTS etc).
<b>THIRD YEAR BDS</b>	
<b>ORAL PATHOLOGY &amp; ORAL MICROBIOLOGY</b>	<p><b>OBJECTIVES:</b>          At the end of Oral Pathology &amp; Oral Microbiology course, the student should be able to comprehend -</p> <ol style="list-style-type: none"> <li>1. The different types of pathological processes that involves the oral cavity.</li> <li>2. The manifestations of common diseases, their diagnosis &amp; correlation with clinical pathological processes.</li> <li>3. An understanding of the oral manifestations of systemic diseases should help in correlating with the systemic physical signs &amp; laboratory findings.</li> <li>4. The student should understand the underlying biological principles governing treatment of oral diseases.</li> <li>5. The principles of certain basic aspects of Forensic Odontology.</li> </ol> <p><b>SKILLS:</b></p> <ol style="list-style-type: none"> <li>1. Microscopic study of common lesions affecting oral tissues through microscopic slides &amp; projection slides.</li> <li>2. Study of the disease process by surgical specimens.</li> <li>3. Study of teeth anomalies/polymorphisms through tooth specimens &amp; plaster casts.</li> <li>4. Microscopic study of plaque pathogens.</li> <li>5. Study of haematological preparations (blood films) of anaemias &amp; leukemias.</li> <li>6. Basic exercises in Forensic Odontology such as histological methods of age estimation and appearance of teeth in injuries.</li> </ol>
<b>GENERAL MEDICINE</b>	<p><b>a. KNOWLEDGE and UNDERSTANDING:</b>          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>b. SKILLS:</b>          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</li> </ol>



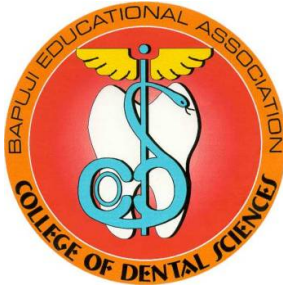
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	<p>nourishment</p> <ol style="list-style-type: none"> <li>3. Assess the vitals-recording the details of Pulse, recording the BP, temperature, checking capillary blood glucose and oxygen saturation</li> <li>4. Look for cyanosis, clubbing, pallor, icterus, 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> <li>7. Interpreting lab reports such as importance of CBC, RFT, ECG, BT, CT, PT, INR etc</li> <li>8. To be trained in simple procedures such as giving intramuscular, intravenous Injection as well as starting an IVline</li> <li>9. To be trained in basic life support</li> <li>10. Writing prescriptions</li> </ol> <p><b>c. ATTITUDE:</b></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><b>d. INTEGRATION:</b></p> <p>From the integrated teaching of other clinical sciences, the student shall be able to describe the various signs and symptoms and interpret the clinical manifestation of disease processes. Horizontal integration can be done in common with basic science departments, and vertical integration can be done with clinical departments. For example, horizontal integration can be the interpretation of lab results with Biochemistry and biopsy reports with Pathology; and vertical integration can be the study of oropharyngeal pathology of along with ENT and oral surgical procedures with General surgery</p>
<p><b>GENERAL SURGERY</b></p>	<p><b>KNOWLEDGE AND UNDERSTANDING</b></p> <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</li> </ol>



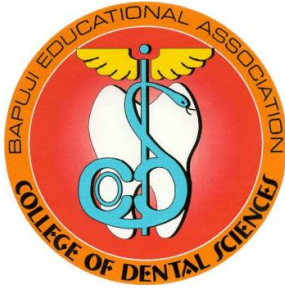
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	<p style="text-align: center;">diagnosis</p> <p><b>SKILLS</b></p> <ol style="list-style-type: none"> <li>1. Know the interpretation of Radiological films of Head and Neck</li> <li>1. Know the Operative procedures, Post operative complications and Post operative management</li> <li>2. To differentiate between Benign and Malignant diseases of Head &amp; Neck</li> <li>3. Know to perform minor surgical procedures such as</li> <li>4. Draining an Abscess and taking a Biopsy</li> </ol> <p><b>ATTITUDE</b></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><b>INTEGRATION</b></p> <p>By emphasizing on the relevant information and sound knowledge 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>
<b>FOURTH YEAR BDS</b>	
<b>ORAL MEDICINE AND RADIOLOGY</b>	<p><b>a. Knowledge and Understanding :</b></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 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>b. Skills :</b></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</li> </ol>



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	<p>expectations and the right of the society to receive the best possible treatment available wherever possible.</p> <ol style="list-style-type: none"> <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 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> <li>5. Competent in control of pain and anxiety during dental treatment.</li> </ol> <p><b>c. Attitude:</b>  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><b>d. Integration:</b></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>
<p><b>PEDODONTICS  AND  PREVENTIVE  DENTISTRY</b></p>	<p><b>a. Knowledge and understanding:</b></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;</li> <li>2. Ability to evaluate and analyze scientifically various established facts and data.</li> <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 bearing on physical and social well being of the</li> </ol>



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patient.

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.
5. Adequate clinical experience required for general dental practice
6. 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.

**b. Skills:**

A graduate should be able to demonstrate the following skills

Necessary for practice of dentistry.

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.
2. Prevent and manage complications if encountered while carrying out various surgical and other procedures.
3. Carry out certain investigative procedures and ability to interpret laboratory findings.
4. Promote oral health and help prevent oral diseases where possible.

Control pain and anxiety among the patients during dental treatment.

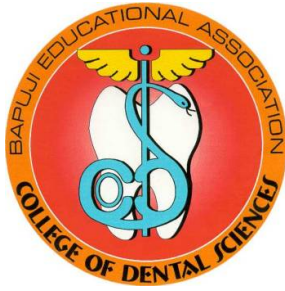
**c. Attitude:**

A graduate should develop during the training period the following attitudes.

1. Willingness to apply the current knowledge of dentistry in the best interest of the patient and community.
2. Maintain a high standard of professional ethics and conduct and apply these in all aspects of professional life.
3. Seek to improve awareness and provide possible solutions for oral health problems and needs throughout the community.
4. Willingness to participate in the CPED Programmes to update knowledge and professional skill from time to time.
5. Help and participate in the implementation of the national oral health policy

**d. Integration:**

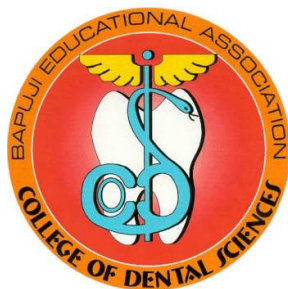
1. A graduate should have good knowledge and should be able to apply the different concepts and manage the patient as a whole.



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<p><b>ORTHODONTICS AND DENTOFACIAL ORTHOPAEDICS</b></p>	<p><b>a. KNOWLEDGE:</b></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 children;</li> <li>3. Identify social, economic, environmental and emotional determinants in a given case and take the 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>b. SKILLS:</b></p> <ol style="list-style-type: none"> <li>1. take a proper clinical history, examine the patient,</li> <li>1. 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><b>c. ATTITUDE:</b>  <b>HUMAN VALUES, ETHICAL PRACTICE AND  COMMUNICATION ABILITIES.</b></p> <ol style="list-style-type: none"> <li>1. adopt ethical principles in all aspects of practice; 2. foster professional honesty and integrity;</li> <li>2. deliver patient care irrespective of social status,</li> <li>3. caste, creed, or religion of the patient;</li> <li>4. develop communication skills, to explain various options</li> <li>5. available and obtain a true informed consent from the</li> <li>6. patient;</li> <li>7. provide leadership and get the best out of his team in a</li> <li>8. congenial working atmosphere;</li> <li>9. apply high moral and ethical standards while carrying out</li> <li>10. human or animal research;</li> <li>11. be humble and accept the limitations in his knowledge and</li> <li>12. skill and to ask for help from colleagues whenneeded;</li> <li>13. respect patient's rights and privileges including patient's</li> <li>14. right to information and right to seek a second opinion</li> </ol> <p><b>d. INTEGRATION:</b>  Students should have a holistic understanding of each of the pathological</p>
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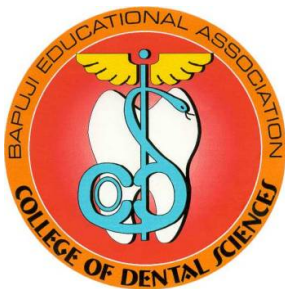
	<p>situation and be able to frame a comprehensive treatment plan and deliver treatment to the limitations of what she/ he is trained and efficient and at the same time refer to the concerned specialists thereafter for opinion / further management.</p>
<p><b>PERIODONTOLOGY</b></p>	<p><b>a. Knowledge and understanding:</b>          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>b. Skill:</b>          To chart a proper clinical history after thorough examination of the 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><b>c. Attitude:</b>          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><b>d. Integration:</b>          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>
<p><b>PROSTHODONTICS          AND CROWN          AND          BRIDGE</b></p>	<p><b>a. KNOWLEDGE:</b></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> <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>





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	<p><b>b. ATTITUDE:</b>          During the training period, a graduate should develop 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 time to time.</li> <li>5. Help and participate in the implementation of the National Oral Health Policy.</li> </ol> <p><b>c. SKILLS:</b>          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> <p><b>d. INTEGRATION:</b>          Integrated knowledge about all the divisions in Prosthodontics (CD,RPD,FPD,IMPLANTS etc).</p>
<p><b>CONSERVATIVE DENTISTRY AND ENDODONTICS</b></p>	<p><b>a. KNOWLEDGE AND UNDERSTANDING:</b>          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</li> <li>3. Should be able to evaluate and analyze 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</li> </ol>



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and also the bearing on physical and social well-being of the patient.

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.
4. Adequate clinical experience required for general dental practice.
5. 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.

**b. SKILLS:**

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.
2. Acquire skill to prevent and manage complications if encountered while carrying out various dental surgical and other procedures.
3. Possess skill to carry out required investigative procedures and ability to interpret laboratory findings.
4. Promote oral health and help to prevent oral diseases wherever possible.
4. Competent in control of pain and anxiety during dental treatment.

**c. ATTITUDE:**

A graduate should develop during the training period the following attitudes.

1. Have empathy for the patient and do the best possible as situation demands.
2. Willing to apply current knowledge of dentistry in the best interest of the patients and the community.
3. Maintain a high standard of professional ethics and conduct and apply these in all aspects of professional life.
4. Seek to improve awareness and provide possible solutions for oral health problems and needs throughout the community.
5. Willingness to participate in the continuing education programmes to update knowledge and professional skills from time to time.
6. To help and to participate in the implementation of national health programmes.

**d. INTEGRATION:**

1. At the conclusion of the course the student should be able to diagnose and treat the disease efficiently.
2. Should integrate interdisciplinary approach and management.



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**ORAL AND  
MAXILLOFACIAL  
SURGERY**

**a. Knowledge and Understanding:**

At the end of the course and clinical training the graduate is expected to -

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.
2. Diagnose, manage and treat (understand the principles of treatment) patients with oral surgical problems.
3. Gain Knowledge of a range of surgical treatments.
4. Be able to decide the requirement of a patient to have oral surgical specialist opinion or treatment.
5. Understand the principles of in-patient management.
6. Understand the management of major oral surgical procedures and principles involved in patient management.
7. Know the ethical issues and have communication ability.

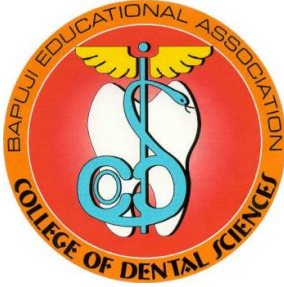
**b. Skills:**

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.
2. Should be competent in the extraction of teeth under both local and general anaesthesia.
3. Should be able to carry out certain minor oral surgical procedures under LA like frenectomy, alveolar procedures & biopsy etc.
4. Ability to assess, prevent and manage various complications during and after surgery.
5. Able to provide/primary care and manage medical emergencies in the dental office.
6. Understand the management of major oral surgical problems and principles involved, in inpatient management.

**c. Attitude:**

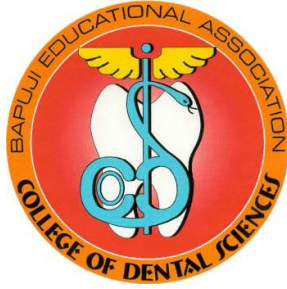
A graduate should develop during the training period the following attitudes

1. Willingness to apply the current knowledge of dentistry in the best interest of the patient and community.
2. Maintain a high standard of professional ethics and conduct and apply these in all aspects of professional life.
3. Seek to improve awareness and provide possible solutions for oral health problems and needs throughout the community.
5. Willingness to participate in the CDE programmes to update knowledge and professional skill from time to time



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	<p>6. Help and participate in the implementation of the national oral health policy.</p> <p><b>d. Integration:</b>  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.  Vertical integration - combination of basic and clinical sciences in such a way that the traditional divide between preclinical and clinical studies are 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><b>PUBLIC HEALTH DENTISTRY</b></p>	<p><b>a. KNOWLEDGE:</b></p> <ol style="list-style-type: none"> <li>1. 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.</li> <li>2. 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.</li> <li>3. 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.</li> </ol> <p><b>b. SKILLS:</b></p> <ol style="list-style-type: none"> <li>1. Take history, conduct clinical examination including all diagnostic 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.</li> <li>2. 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.</li> <li>3. 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.</li> </ol>



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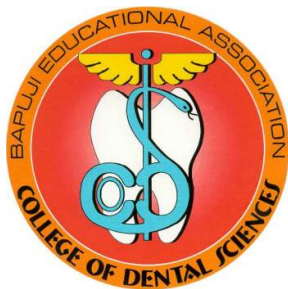
4. Conduct survey and use appropriate methods to impart Oral Health Education Develop ways of helping the community towards easy payment plan, followed by evaluation of their oral health care needs.
5. Develop the planning, implementation, evaluation and administrative skills to carry out successful Community oral Health programmes.

**c. ATTITUDE:**

1. Adopt ethical principles in all aspects of Community Oral Health activities.
2. 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.
3. Be humble and accept the limitations in his knowledge and skill and to ask for help from colleagues when needed and promote teamwork approach.
4. Respect patient's rights and privileges including patient's right to information and right to seek a second opinion

**d. INTEGRATION:**

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



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## COURSE OUTCOMES FOR MDS DEGREE

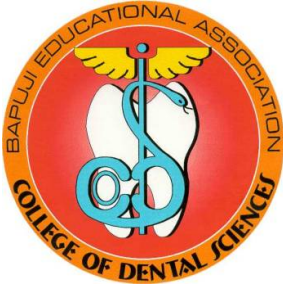
SPECIALTIES OF MDS	COURSE OUTCOME
1. PROSTHODONTICS	<p><b>Aim:</b>            To train dental graduates so as to ensure higher competence in both general and special area of Prosthodontics and prepare a candidate for teaching, research and clinical abilities including prevention and after care in prosthodontics including crown and brid-and implantology.</p> <p><b>General Objectives of the Course:</b></p> <ol style="list-style-type: none"> <li>1. Training programme in Prosthodontic dentistry including Crown &amp; Bridge &amp; Implantology is structured to achieve knowledge and skill in theoretical and clinical laboratory, attitude, communicative skills and ability to research with understanding of social, cultural, education and environmental background of the society.</li> <li>2. To have acquired adequate knowledge and understanding of applied basic and systematic medical science knowledge in general and particular to head and neck.</li> <li>3. The postgraduates will be able to provide Prosthodontic therapy for patients with competence and working knowledge with understanding of applied medical behavioral and clinical science that are beyond the treatment skills of the general BDS graduate and MDS graduate of other specialities to demonstrate evaluative and judgment skills in making appropriate decisions regarding prevention, treatment aftercare and referral to deliver comprehensive care to patients.</li> </ol> <p><b>Knowledge</b>            The candidate should possess knowledge applied basic and systematic medical sciences.</p> <ol style="list-style-type: none"> <li>1. On human anatomy, embryology, histology, applied in general and particular to head and neck, Physiology &amp; Biochemistry, Pathology and microbiology, virology, Health and diseases of various systems of the body (systemic) principles in surgery and medicine, Pharmacology, Nutrition, behavioral Science, Age changes, genetics, Immunology, Congenital defects and syndrome and Anthropology, Bioengineering, Bio-medical and Biological Principle and application Dental material science.</li> <li>2. Ability to diagnose and planned treatment for patients requiring a Prosthodontic therapy.</li> <li>3. Ability to read and interpret a radiograph and other investigations for the purpose of diagnoses treatment plan.</li> <li>4. Tooth and tooth surface restorations, Complete denture</li> </ol>



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	<p>prosthodontics, removable partial dentures Prosthodontics, fixed prosthodontics and maxillofacial and Craniofacial Prosthodontics, implants supported Prosthodontics, T.M.J, and occlusion, craniofacial esthetic, and biomaterials. Craniofacial disorders - problems of psychogenic origin.</p> <ol style="list-style-type: none"><li>5. Age changes and Prosthodontic Therapy for aged.</li><li>6. Ability to diagnose failed restoration and provide Prosthodontic therapy and after care.</li><li>7. Should have essential knowledge on ethics, laws and Jurisprudence and forensic odontology in Prosthodontics.</li><li>8. General health conditions and emergency as related to prosthodontics treatment,</li><li>9. Identify social, cultural, economic, environmental, educational and emotional determinants of the patient and consider them in planning the treatment.</li><li>10. Identify cases, which are outside the area of his speciality/ competence and refer them to appropriate specialists.</li><li>11. Advice regarding case management involving surgical, interim treatment etc.</li><li>12. Competent specialization in team management of craniofacial design.</li><li>13. Should attend continuing education programmes, seminars and conferences related to prosthodontics in thus updating himself.</li><li>14. Teach and guide his / her team, colleague and other students.</li><li>15. Should be able to use information technology tools and carry out research basic and clinical, with the aims of publishing his/ her work and presenting his work at various scientific forum.</li><li>16. Should have essential knowledge of personal hygiene, infection control, prevent of cross infection and safe disposal of waste, keeping in view the risks of transfer of Hepatitis &amp; HIV</li><li>17. Should have an ability to plan to establish Prosthodontic clinic/hospital teach8; department and practice management</li><li>18. Should have a sound knowledge for the application of pharmacology. Effects drugs on oral tissue and systems of a body and for medically compromised</li></ol> <p><b>Skills</b></p> <ol style="list-style-type: none"><li>1. The candidate should be able to examine the patients requiring Prosthodontic therapy, investigate the patient systemically, analyze the investigation results, radiography, diagnose the ailment, plan a treatment, communicate it with the patient and execute it.</li></ol>
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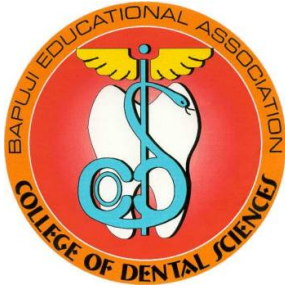
2. Understand the prevalence and prevention of diseases of craniomandibular system related to Prosthetic dentistry.
3. The candidate should be able to restore the lost functions of the stomatognathic system namely speech, mastication etc to provide a quality health care for craniofacial region
4. The candidate should be able to interact with other speciality including a medical speciality for a planned team management of patients for a craniofacial and oral acquired and congenital defects, Temporomandibular joint syndromes, esthetics, Implant supported Prosthetics and problems of Psychogenic origin,
5. Should be able to demonstrate the clinical competence necessary to carry out appropriate treatment at higher level of knowledge, training and practice skills currently available in their specialty area.
6. Identify target diseases and awareness amongst the population for Prosthodontic therapy.
7. Perform clinical and Laboratory procedure with understanding of biomaterials, tissue conditions related to prosthesis and has competent dexterity and skill for performing clinical and laboratory procedures in fixed, removable, implant and maxillofacial TMJ, esthetics Prosthodontics.
8. Laboratory technique management based on skills and knowledge of Dental Materials and dental equipment and instruments, management.
9. To understand demographic distribution and target diseases of Cranio mandibular region related to Prosthodontic including crown & bridge and implantology.

**Attitudes**

1. Adopt ethical principles in all Prosthodontic practice. Professional honesty and integrity are to be fostered. Treatment to be delivered irrespective of social status, caste, creed or religion of patient.
2. Willing to share the knowledge and clinical experience with professional colleagues.
3. Willing to adopt new methods and techniques in prosthodontics from time to time based on scientific research, which is in patient's best interest.
4. Respect patient's rights and privileges including patients right to information and right to seek second opinion.

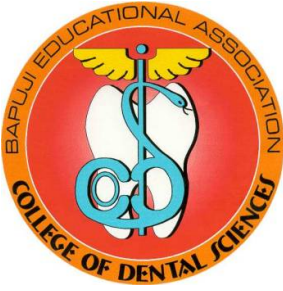
**Communication Abilities**

1. Develop communication skills, in particular, to explain treatment option available in management.



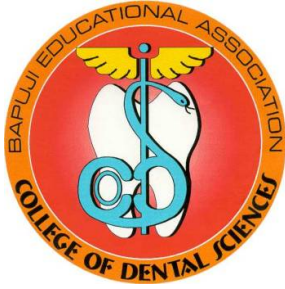
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	<ol style="list-style-type: none"> <li>2. Provide leadership and get the best out of his group in a congenial working atmosphere.</li> <li>3. Should be able to communicate in simple understandable language with the patient and explain the principles of prosthodontics to the patient. He should be able to guide and counsel the patient with regard to various treatment modalities available.</li> <li>4. Develop the ability to communicate with professional colleagues through various media like Internet, e-mail, videoconference, and etc. to render the best possible treatment.</li> </ol>
<p><b>PERIODONTICS</b></p>	<p><b>Objectives</b></p> <p><b>Knowledge</b></p> <ol style="list-style-type: none"> <li>1. Historical perspective to advancement in the subject proper and related topics.</li> <li>2. Etiology, pathogenesis, diagnosis and management of common periodontal diseases with emphasis on Indian population.</li> <li>3. Familiarize with the biochemical, microbiologic and immunologic genetic aspects of periodontal pathology.</li> <li>4. Various preventive periodontal measures.</li> <li>5. Various treatment modalities of periodontal disease from historical aspect to currently available ones.</li> <li>6. Interrelationship between periodontal disease and various systemic conditions.</li> <li>7. Periodontal hazards due to estrogenic causes and deleterious habits and prevention of it.</li> <li>8. Identify rarities in periodontal disease and environmental/Emotional determinates in a given case.</li> <li>9. Recognize conditions that may be outside the area of his Speciality/competence and refer them to an appropriate Specialist.</li> <li>10. Decide regarding non-surgical or surgical management of the case.</li> <li>11. Update him by attending course, conferences and seminars relevant to periodontics or by self-learning process.</li> <li>12. Plan out/ carry out research activity both basic and clinical aspects with the aim of publishing his work in scientific journals.</li> <li>13. Reach to the public to motivate and educate regarding periodontal disease, its prevention and consequences if not treated.</li> <li>14. Plan out epidemiological survey to assess prevalence and incidence of early onset periodontitis and adult periodontitis in Indian population (Region wise).</li> <li>15. Shall develop knowledge, skill in the science and practice of Oral Implantology.</li> </ol>



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	<p>16. Shall develop teaching skill in the field of Periodontology and Oral Implantology</p> <p><b>SKILL</b></p> <ol style="list-style-type: none"> <li>1. Take a proper clinical history, thorough examination 01 intra orally, extra orally, medical history evaluation, advice essential diagnostic procedures and interpret them to come to a reasonable diagnosis</li> <li>2. Effective motivation and education regarding periodontal disease maintenance after the treatment</li> <li>3. Perform both non-surgical &amp; education regarding periodontal disease, maintenance after the treatment</li> <li>4. Perform both non-surgical and surgical procedures independently</li> <li>5. Provide Basic Life Support Service (BLS) recognizes the need for and advance life support and does the immediate need for that.</li> </ol> <p><b>Human values, ethical practice to communication abilities</b></p> <ol style="list-style-type: none"> <li>1. Adopt ethical principles in all aspects of treatment modalities, Professional honesty &amp; integrity are to be fostered</li> <li>2. Develop or Adopt ethical principles in all aspects of treatment modalities; Professional honesty &amp; integrity are to be fostered.</li> <li>3. Develop Communication skills to make awareness regarding periodontal disease</li> <li>4. Apply high moral and ethical standards while carrying out human or animal research,</li> <li>5. Be humble, accept the limitations in his knowledge and skill, and ask for help from colleagues when needed,</li> <li>6. Respect patient's rights and privileges, including patients right to information and right to seek a second opinion.</li> </ol>
<p><b>ORAL AND MAXILLOFACIAL SURGERY</b></p>	<p><b>Objectives:</b></p> <ol style="list-style-type: none"> <li>1. The training program in Oral and Maxillofacial Surgery is structured to achieve the following four objectives-</li> <li>2. Knowledge:</li> <li>3. To have acquired adequate knowledge and understanding of the etiology, pathophysiology and diagnosis, treatment planning of various common oral and Maxillofacial surgical problems both minor and major in nature.</li> <li>4. To have understood the general surgical principles like pre and post surgical management, particularly evaluation, post surgical care, fluid and electrolyte management, blood transfusion and post surgical pain management.</li> <li>5. Understanding of basic sciences relevant to practice or oral and maxillofacial surgery.</li> </ol>



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6. Able to identify social, cultural, economic, genetic and environmental factors and their relevance to disease process management in the oral and Maxillofacial region.
7. Essential knowledge of personal hygiene and infection control, prevention of cross infection and safe disposal of hospital waste keeping in view the high prevalence of hepatitis and HIV.

**Skill**

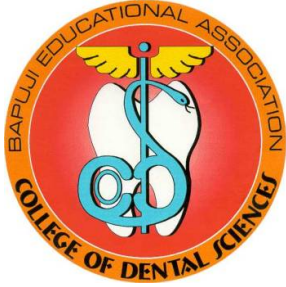
1. To obtain proper clinical history, methodical examination of the patient, perform essential diagnostic procedures and order relevant laboratory tests and interpret them and to arrive at a reasonable diagnosis about the surgical condition.
2. To perform with competence minor oral surgical procedures and common maxillofacial surgery. To treat both surgically and medically (or by other means of the oral and Maxillofacial and the related area).
3. Capable of providing care for maxillofacial surgery patients.

**Attitude:**

1. Develop attitude to adopt ethical principles in all aspects of surgical practice, professional honesty and integrity are to be fostered. Surgical care is to be delivered irrespective of the social status, caste, creed or religion of the patient.
2. Willing to share the knowledge and clinical experience with professional colleagues.
3. Willing to adopt new and techniques of surgical management developed from time to time based on scientific research which are in the best interest of the patient
4. Respect patient right and privileges, including patients right to information and right to seek a second opinion.
5. Develop attitude to seek opinion from an allied medical and dental specialists as and when required.

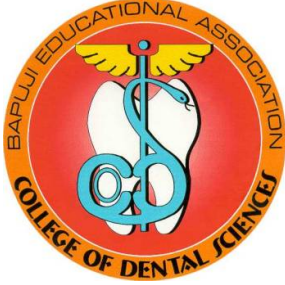
**Communication skills:**

1. Develop adequate communication skills particularly with the patients giving them the various options available to manage a particular surgical problem and obtain a true informed consent from them for the most appropriate treatment available at that point of time
2. Develop the ability to communicate with professional colleagues.
3. Develop ability to teach undergraduates.



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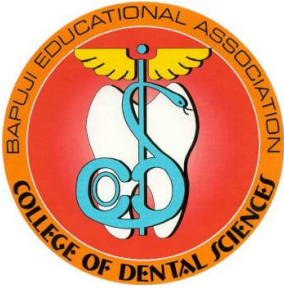
<p><b>CONSERVATIVE DENTISTRY</b></p>	<p><b>Objectives</b></p> <ol style="list-style-type: none"> <li>1. The following objectives are laid out to achieve the goals of the course. These are to be achieved by the time the candidate completes the course.</li> <li>2. Knowledge</li> <li>3. At the end of 36 months of training, the candidates should be able to:</li> <li>4. Describe aetiology, pathophysiology, periapical diagnosis and management of common restorative situations, endodontic situations that will include contemporary management of dental caries, management of trauma and pulpal pathoses including periodontal situations.</li> <li>5. Demonstrate understanding of basic sciences as relevant to conservative / restorative dentistry and Endodontics.</li> <li>6. Identify social, economic, environmental and emotional determinants in a given case or community and take them into account for planning and execution at individual and community level.</li> <li>7. Ability to master differential diagnosis and recognize conditions that may require multi disciplinary approach or a clinical situation outside the realm of the specialty, which he or she should be able to recognize and refer to appropriate specialist.</li> <li>8. Update himself by self-study and by attended basic and advanced courses, conferences, seminars, and workshops in the specialty of Conservative Dentistry- Endodontics-Dental Materials and Restorative Dentistry.</li> <li>9. Ability to teach, guide, colleagues and other students. Use information technology tools and carry out research both basic and clinical with the aim of his publishing his work and presenting the same at scientific platform</li> </ol> <p><b>Skills</b></p> <ol style="list-style-type: none"> <li>1. Take proper chair side history, exam the patient and perform medical and dental diagnostic procedures and order as well as perform relevant tests and interpret to them to come to a reasonable diagnosis about the dental condition in general and Conservative Dentistry - Endodontics in particular. And undertake complete patient monitoring including preoperative as well as post operative care of the patient.</li> <li>2. Perform all levels of restorative work and surgical and non-surgical Endodontics including endodontic endosseous implants, as well as</li> </ol>
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	<p>endodontic-periodontal surgical procedures as part of multidisciplinary approach to clinical condition.</p> <ol style="list-style-type: none"> <li>3. Provide basic life saving support in emergency situations.</li> <li>4. Manage acute pulpal and pulpo periodontal situations.</li> <li>5. Have a thorough knowledge of infection control measures in the dental clinical environment and laboratories.</li> </ol> <p><b>Human Values, Ethical Practice and Communication Abilities</b></p> <ol style="list-style-type: none"> <li>1. Adopt ethical principles in all aspects of restorative and contemporaries Endodontics" including non-surgical and surgical Endodontics.</li> <li>2. Professional honesty and integrity should be the top priority.</li> <li>3. Dental care has to be provided regardless of social status, caste, creed or religion of the patient.</li> <li>4. <b>Develop communication skills-</b> in particular to explain various options available management and to obtain a true informed consent from the patient.</li> <li>5. Apply high moral and ethical standards while carrying on human or animal research. He / She shall not carry out any heroic procedures and must know his limitations in performing all aspects of restorative dentistry including Endodontics. Ask for help from colleagues or seniors when required without hesitation. Respect patient's rights and privileges including patients right to information.</li> </ol>
<p><b>ORTHODONTICS &amp; DENTOFACIAL ORTHOPAEDICS</b></p>	<p><b>Objectives</b></p> <ol style="list-style-type: none"> <li>1. The training programme in Orthodontics is to structure and achieve the following four objectives</li> <li>2. Knowledge</li> <li>3. The dynamic interaction of biologic processes and mechanical forces acting on the stomatognathic system during orthodontic treatment</li> <li>4. The etiology, pathophysiology, diagnosis and treatment planning of various common Orthodontic problems</li> <li>5. Various treatment modalities in Orthodontics preventive interceptive and corrective.</li> <li>6. Basic sciences relevant to the practice of Orthodontics</li> <li>7. Interaction of social, cultural, economic, genetic and environmental factors and their relevance to management of oro - facial deformities</li> <li>8. Factors affecting the long-range stability of orthodontic correction and their management</li> </ol>





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9. Personal hygiene and infection control, prevention of cross infection and safe disposal of hospital waste, keeping in view the high prevalence of Hepatitis and HIV and other highly contagious diseases.

**Skills**

1. To obtain proper clinical history, methodical examination of the patient, perform essential diagnostic procedures, and interpret them and arrive at a reasonable diagnosis about the Dentofacial deformities.
2. To be competent to fabricate and manage the most appropriate appliance - intra or extra oral, removable or fixed, mechanical or functional, and active or passive – for the treatment of any orthodontic problem to be treated singly or as a part of multidisciplinary treatment of orofacial deformities.

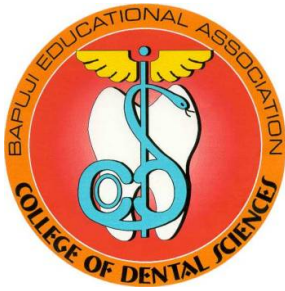
**Attitudes**

1. Develop an attitude to adopt ethical principles in all aspects of Orthodontic practice.
2. Professional honesty and integrity are to be fostered
3. Treatment care is to be delivered irrespective of the social Status, cast, creed or colleagues
4. Willingness to share the knowledge and clinical experience with professional colleagues
5. Willingness to adopt, after a critical assessment, new methods and techniques of orthodontic management developed from time to time based on scientific research, which are in the best interest of the patient
6. Respect patients rights and privileges, including patients right to information and right to seek a second opinion
7. Develop attitude to seek opinion from allied medical and dental specialists as and when required

**Communication skills**

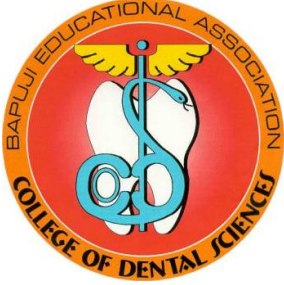
1. Develop adequate communication skills particularly with the patients giving them various options available to manage a particular Dentofacial problem and to obtain a true informed consent from them for the most appropriate treatment available at that point of time.
2. Develop the ability to communicate with professional colleagues, in Orthodontics or other specialities through various media like correspondence, Internet, e-video, conference, etc. To render the best possible treatment.





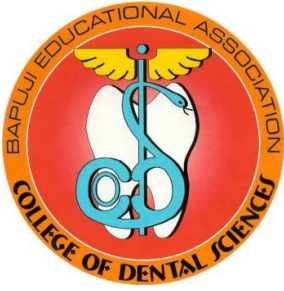
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<b>ORAL PATHOLOGY AND MICROBIOLOGY</b>	<p><b>Objectives</b></p> <ol style="list-style-type: none"> <li>1. To train a post graduate dental surgeon so as to ensure higher competence in both general and special pathology dealing with the nature of oral diseases, their causes, processes and effects.</li> <li>2. An oral pathologist is expected to perform routine histopathological evaluation of specimens relating to oral and perioral tissues, to carry out routine diagnostic procedures including hematological, cytological, microbiological, Immunological and ultra structural investigations.</li> <li>3. He/she is expected to have an understanding of current research methodology, collection and interpretation of data, ability to carry out research projects on clinical and or epidemiological aspects, a working knowledge on current databases, automated data retrieval systems, referencing and skill in writing scientific papers.</li> <li>4. He/she is expected to present scientific data pertaining to the field, in conferences both as poster and verbal presentations and ot take part in group discussions.</li> </ol>
<b>PUBLIC HEALTH DENTISTRY</b>	<p><b>Objectives</b></p> <p>At the end of 3 years of training the candidate should be able to:</p> <p><b>Knowledge</b></p> <ol style="list-style-type: none"> <li>1. Apply basic sciences knowledge regarding etiology, diagnosis and management of the prevention, promotion and treatment of all the oral conditions at the individual and community level.</li> <li>2. 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 Program.</li> <li>3. 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.</li> <li>4. Ability to act as a consultant in community Oral Health, teach, guide and take part in research (both basic and clinical), present and publish the outcome at various scientific conferences and journals, both national and international level.</li> </ol> <p><b>Skills</b></p> <p>The candidate should be able to</p> <ol style="list-style-type: none"> <li>1. Take history, conduct clinical examination including all diagnostic procedures to arrive at diagnosis at the individual level and conduct survey of the community at state and national level of all conditions</li> </ol>



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	<p>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.</p> <ol style="list-style-type: none"> <li>2. Plan appropriate Community Oral Health Program, conduct the program and evaluate, at the community level.</li> <li>3. Ability to make use of knowledge of epidemiology to identify causes and appropriate preventive and control measures.</li> <li>4. Develop appropriate person power at various levels and their effective utilization.</li> <li>5. Conduct survey and use appropriate methods to impart Oral Health Education.</li> <li>6. Develop ways of helping the community towards easy payment plan, and followed by evaluation for their oral health care needs.</li> <li>7. Develop the planning, implementation, evaluation and administrative skills to carry out successful community Oral Health Programs.</li> </ol> <p><b>Values:</b></p> <ol style="list-style-type: none"> <li>1. Adopt ethical principles in all aspects of Community Oral Health Activities.</li> <li>2. To apply ethical and moral standards while carrying out epidemiological researches.</li> <li>3. Develop communication skills, in particular to explain the causes and prevention of oral diseases to the patient.</li> <li>4. Be humble and accept the limitations in his knowledge and skill and to ask for help from colleagues when needed and promote teamwork approach.</li> <li>5. Respect patient's rights and privileges including patients right to information and right to seek a second opinion.</li> </ol>
<p><b>PAEDODONTICS &amp; PREVENTIVE DENTISTRY</b></p>	<p><b>Objectives</b></p> <ol style="list-style-type: none"> <li>1. At the end of 3 years of training the candidate should be able to</li> <li>2. Create not only a good oral health in the child but also a good citizen tomorrow.</li> <li>3. Instill a positive attitude and behavior in children</li> <li>4. Understand the principles of prevention and preventive dentistry right from birth to adolescence</li> <li>5. Guide and counsel the parents in regards to various treatment modalities including different facets of preventive dentistry</li> <li>6. Prevent and intercept developing malocclusion</li> </ol> <p><b>Skills</b></p> <ol style="list-style-type: none"> <li>1. Obtain proper clinical history, methodological examination of the</li> </ol>



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	<p>child patient, perform essential diagnostic procedures and interpret them, and arrive at a reasonable diagnosis and treat appropriately</p> <ol style="list-style-type: none"> <li>2. Be competent to treat dental diseases which are occurring in child patient.</li> <li>3. Manage to repair and restore the lost / tooth structure to maintain harmony between both hard and soft tissues of the oral cavity.</li> <li>4. Manage the disabled children effectively and efficiently, tailored to the needs of individual requirement and conditions.</li> </ol> <p><b>Attitudes</b></p> <ol style="list-style-type: none"> <li>1. Develop an attitude to adopt ethical principles in all aspects of Pedodontic practice.</li> <li>2. Professional honesty and integrity are to be fostered</li> <li>3. Treatment care is to be delivered irrespective of the social status, cast, creed, and religion of the patients.</li> <li>4. Willingness to share the knowledge and clinical experience with professional colleagues.</li> <li>5. Willingness to adopt, after a critical assessment, new methods and techniques of Pedodontic management developed from time to time, based on scientific research, which is in the best interest of the child patient.</li> <li>6. Respect child patient's rights and privileges, including child patients right to information and right to seek a second opinion.</li> <li>7. Develop an attitude to seek opinion from allied medical and dental specialities, as and when required</li> </ol>
<p><b>ORAL MEDICINE AND RADIOLOGY</b></p>	<p><b>Objectives:</b></p> <p><b>Knowledge:</b> Theoretical, Clinical and practical knowledge of all mucosal lesions, diagnostic procedures pertaining to them and latest information of imaging modules.</p> <p><b>Skills:</b> Three important skills need to be imparted</p> <ol style="list-style-type: none"> <li>1. Diagnostic skill in recognition of oral lesions and their management</li> <li>2. Research skills in handling scientific problems pertaining to oral treatment</li> <li>3. Clinical and Didactic skills in encouraging younger doctors to attain learning objectives</li> </ol> <p><b>Attitudes:</b> the positive mental attitude and the persistence of continued learning need to be inculcated.</p>