

**PACIFIC DENTAL COLLEGE AND HOSPITAL, DEBARI UDAIPUR**  
**DEPT OF PUBLIC HEALTH DENTISTRY**  
**MDS CURRICULUM**

**Part-I** : Applied Basic Sciences: Applied Anatomy and Histology, Applied Physiology and Biochemistry, Applied Pathology, Microbiology, Oral Pathology, Physical and Social Anthropology, Applied Pharmacology and Research Methodology and Biostatistics.

**Part-II:**

Paper-I : Public Health

Paper-II : Dental Public Health

Paper-III : Essay

**GOALS OF MDS COURSE:**

**The goals of postgraduate training in Public Health Dentistry is to train B.D.S. graduate who will, after successful completion of the course:**

- Practice Public Health Dentistry efficiently and effectively, backed by scientific knowledge and skill.
- Exercise empathy and a caring attitude and maintain high ethical standards.
- Continue to evince keen interest in continuing professional education in the Public Health dentistry and allied specialties irrespective of whether in teaching or practice.
- Willing to share the knowledge and skills with any learner, junior or a colleague.
- Develop the faculty for critical analysis and evaluation of various concepts and views, to adopt the most rational approach.

**COURSE CONTENTS:**

**Applied Basic Sciences:**

**I. APPLIED ANATOMY AND HISTOLOGY:**

**A. Applied Anatomy in relation to:**

- Development of face
- Branchial arches
- Muscles of facial expression
- Muscles of mastication
- TMJ
- Salivary gland
- Tongue
- Salivary gland
- Tongue
- Hard and soft palate
- Infratemporal fossa
- Paranasal air sinuses

- Pharynx and larynx
- Cranial and spinal nerves- with emphasis on trigeminal, facial, glossopharyngeal and hypoglossal nerve
- Osteology of maxilla and mandible
- Blood supply, venous and lymphatic drainage of head and neck
- Lymph nodes of head and neck
- Structure and relations of alveolar process and edentulous mouth
- Genetics-fundamentals

#### **B. Oral Histology**

- Development of dentition, Innervations of dentin and pulp
- Periodontium-development, histology, blood supply, nerve supply and lymphatic drainage
- Oral mucous membrane
- Pulp-periodontal complex

### **II. APPLIED PHYSIOLOGY AND BIOCHEMISTRY:**

- Cell
- Mastication and deglutition
- Food and nutrition
- Metabolism of carbohydrates, proteins and fats
- Vitamins and minerals
- Fluid and electrolyte balance
- Pain pathway and mechanism-types, properties
- Blood composition and functions, clotting mechanism and erythropoiesis, Blood groups and transfusions, Pulse and blood pressure,
- Dynamics of blood flow
- Cardiovascular homeostasis-heart sounds
- Respiratory system: Normal physiology and variations in health and diseases, Asphyxia and artificial respiration
- Endocrinology: thyroid, parathyroid, adrenals, pituitary, sex hormones and pregnancy, Endocrine regulation of blood sugar.

### **III. A. APPLIED PATHOLOGY:**

- Pathogenic mechanism of molecular level
- Cellular changes following injury
- Inflammation and chemical mediators
- Oedema, thrombosis and embolism
- Hemorrhage and shock
- Neoplasia and metastasis
- Blood disorders
- Histopathology and pathogenesis of dental caries, periodontal disease, oral mucosal lesions, and malignancies, HIV
- Propagation of dental infection

#### **B. MICROBIOLOGY:**

- Microbial flora of oral cavity
- Bacteriology of dental caries and periodontal disease
- Methods of sterilization

- Virology of HIV, herpes, hepatitis
- Parasitology
- Basic immunology – basic concepts of immune system in human body
  - Cellular and humoral immunity
  - Antigen and antibody system
  - Hypersensitivity
  - Autoimmune diseases

#### **C. ORAL PATHOLOGY:**

- Detailed description of diseases affecting the oral mucosa, teeth, supporting tissues and jaws.

#### **IV. PHYSICAL AND SOCIAL ANTHROPOLOGY:**

- Introduction and definition
- Appreciation of the biological basis of health and disease
- Evolution of human race, various studies of different races by anthropological methods

#### **V. APPLIED PHARMACOLOGY:**

- Definition, scope and relations to other branches of medicine, mode of action, bioassay, standardization, pharmacodynamics, pharmacokinetics.
- Chemotherapy of bacterial infections and viral infections – sulphonamides and antibiotics.
- Local anesthesia
- Analgesics and anti-inflammatory drugs
- Hypnotics, tranquilizers and antipyretics
- Important hormones-ACTH, cortisone, insulin and oral antidiabetics.
- Drug addiction and tolerance
- Important pharmacological agents in connection with autonomic nervous system-adrenaline, noradrenaline, atropine
- Brief mention of antihypertensive drugs
- Emergency drugs in dental practice
- Vitamins and haemopoietic drugs

#### **VI. RESEARCH METHODOLOGY AND BIOSTATISTICS:**

**HEALTH INFORMATICS** – basic understanding of computers and its components, operating software (Windows), Microsoft office, preparation of teaching materials like slides, project, multimedia knowledge.

**RESEARCH METHODOLOGY** – definitions, types of research, designing written protocol for research, objectivity in methodology, quantification, records and analysis.

**BIOSTATISTICS** – introduction, applications, uses and limitations of bio – statistics in Public Health dentistry, collection of data, presentation of data, measures of central tendency, measures of dispersion, methods of summarizing, parametric and non parametric tests of significance, correlation and regression, multivariate analysis, sampling and sampling techniques – types, errors, bias, trial and calibration

**COMPUTERS** – Basic operative skills in analysis of data and knowledge of multimedia.

## **Public Health**

### **1. PUBLIC HEALTH:**

- Definition, concepts and philosophy of dental health
- History of public health in India and at international level
- Terminologies used in public health

### **2. HEALTH:**

- Definition, concepts and philosophy of health
- Health indicators
- Community and its characteristics and relation to health

### **3. DISEASE:**

- Definition, concepts
- Multifactorial causation, natural history, risk factors
- Disease control and eradication, evaluation and causation, infection of specific diseases
- Vaccines and immunization

### **4. GENERAL EPIDEMIOLOGY:**

- Definition and aims, general principles
- Multifactorial causation, natural history, risk factors
- Methods in epidemiology, descriptive, analytical, experimental and classic epidemiology of specific diseases, uses of epidemiology
- Duties of epidemiologist
- General idea of method of investigating chronic diseases, mostly non-infectious nature, epidemic, endemic, and pandemic.
- Ethical conversation in any study requirement
- New knowledge regarding ethical subjects
- Screening of diseases and standard procedures used

### **5. ENVIRONMENTAL HEALTH:**

- Impact of important components of the environment of health
- Principles and methods of identification, evaluation and control of such health hazards
- Pollution of air, water, soil, noise, food
- Water purification, international standards of water
- Domestic and industrial toxins, ionizing radiation
- Occupational hazards
- Waste disposal- various methods and sanitation

### **6. PUBLIC HEALTH EDUCATION:**

- Definition, aims, principles of health education
- Health education, methods, models, contents, planning health education programs

### **7. PUBLIC HEALTH PRACTICE AND ADMINISTRATION SYSTEM IN INDIA.**

### **8. ETHICS AND JURISPRUDENCE:**

- Basic principles of law
- Contract laws- dentist – patient relationships & Legal forms of practice
- Dental malpractice
- Person identification through dentistry
- Legal protection for practicing dentist
- Consumer protection act

**9. NUTRITION IN PUBLIC HEALTH:**

- Study of science of nutrition and its application to human problem
- Nutritional surveys and their evaluations
- Influence of nutrition and diet on general health and oral health, dental caries, periodontal disease and oral cancers
- Dietary constituents and cariogenicity
- Guidelines for nutrition

**10. BEHAVIORAL SCIENCES:**

- Definition and introduction
- Sociology: social class, social group, family types, communities and social relationships, culture, its effect on oral health.
- Psychology: definition, development of child psychology, anxiety, fear and phobia, intelligence, learning, motivation, personalities, fear, dentist-patient relationship, modeling and experience

**11. HOSPITAL ADMINISTRATION:**

- Departmental maintenance, organizational structures
- Types of practices
- Biomedical waste management

**12. HEALTH CARE DELIVERY SYSTEM:**

- International oral health care delivery systems – Review
- Central and state system in general and oral health care delivery system if any
- National and health policy
- National health programme
- Primary health care – concepts, oral health in PHC and its implications
- National and international health organizations
- Dentists Act 1928, Dental council of India, Ethics, Indian Dental Association
- Role of W.H.O. and Voluntary organizations in Health Care for the Community

**13. ORAL BIOLOGY AND GENETICS:**

- A detailed study of cell structure
- Introduction to Genetics, Gene structure, DNA, RNA
- Genetic counseling, gene typing
- Genetic approaches in the study of oral disorders
- Genetic Engineering - Answer to current health problems

**14. DEMOGRAPHY & FAMILY PLANNING:**

**15. HEALTH ECONOMICS:**

## **Dental Public Health:**

### **1. DENTAL PUBLIC HEALTH:**

- History
- Definition and concepts of dental public health
- Differences between clinical and community dentistry
- Critical review of current practice
- Dental problems of specific population groups such as chronically ill, handicapped and institutionalized group

### **2. EPIDEMIOLOGY OF ORAL DISEASES AND CONDITIONS:**

- Dental caries, gingival, periodontal disease malocclusion, dental Fluorosis, oral cancer, TMJ disorders and other oral health related problems.

### **3. ORAL SURVEY PROCEDURES:**

- Planning
- Implementation
- WHO basic oral health methods 1997
- Indices for dental diseases and conditions
- Evaluation

### **4. DELIVERY OF DENTAL CARE:**

- Dental person power – dental auxiliaries
- Dentist – population ratios,
- Public dental care programs
- School dental health programs- Incremental and comprehensive care
- Private practice and group practice
- Oral health policy – National and international policy

### **5. PAYMENT FOR DENTAL CARE:**

- Prepayment
- Post-payment
- Reimbursement plans
- Voluntary agencies
- Health insurance

### **6. EVALUATION OF QUALITY OF DENTAL CARE:**

- Problems in public and private oral health care system program
- Evaluation of quality of services, governmental control

### **7. PREVENTIVE DENTISTRY:**

- Levels of prevention
- Preventive oral health programs screening, health education and motivation
- Prevention of all dental diseases-dental caries, periodontal diseases, oral cancer, malocclusion and Dentofacial anomalies
- Role of dentist in prevention of oral diseases at individual and community level.

- Fluoride
  - History
  - Mechanism of action
  - Metabolism
  - Fluoride toxicity
  - Fluorosis
  - Systemic and topical preparations
  - Advantages and disadvantages of each
  - Update regarding Fluorosis
  - Epidemiological studies
  - Methods of fluoride supplements
  - Defluoridation techniques
- Plaque control measures-
  - Health Education
  - Personal oral hygiene
  - Tooth brushing technique
  - Dentifrices, mouth rinses
- Pit and fissure sealant, ART
- Preventive oral health care for medically compromised individual
- Update on recent preventive modalities
- Caries vaccines
- Dietary counseling

## **8. PRACTICE MANAGEMENT:**

- Definition
- Principles of management of dental practice and types
- Organization and administration of dental practice
- Ethical and legal issues in dental practice
- Current trends
- Infection control in dental practice

## **9. TOBACCO COUNSELING**

- Health Consequences
- Tobacco dependence
- Benefits of intervention

- Tobacco cessation
- Role of dentist

### **STRUCTURED TRAINING SCHEDULE:**

#### **FIRST YEAR MDS:**

##### **FIRST MODULE:**

- 2 seminars in basic sciences subjects.
- To conduct 2 journal clubs.
- Selection & Approval of Library Dissertation topic.
- Selection & Approval of Dissertation topic.
- Monthly assessment in the form of written tests covering basic sciences topics.

##### **Clinical Training:**

1. Pre-clinical conservative and Prosthodontic work on Typhodont and extracted teeth.
2. Learning different criteria and instruments used in various oral indices – 2 cases each
  - Oral Hygiene Index – Greene and Vermillion
  - Oral Hygiene Index – Simplified
  - DMF – DMF (T), DMF (S)
  - Def
  - Fluorosis Indices – Dean's Fluorosis Index, Tooth Surface Index for Fluorosis, Thylstrup and Fejerskov Index
  - Community Periodontal Index (CPI)
  - Plaque Index- Silness and Loe

##### **Field Programme:**

1. Visit to slum, water treatment plant, sewage treatment plant, and Milk dairy, Public Health Institute, Anti-Tobacco Cell, Primary Health Center and submitting reports.
2. Posting at dental satellite centers/ nodal centers.

#### **INTENDED LEARNING OBJECTIVES:**

- Students must understand the community aspects of Dentistry.
- Students should know the basics of Journal club & seminar presentations.
- Students should be well versed with the basic oral indices (DMFT/DMFS, OHI-S, Periodontal Index, CPITN, Dean's Fluorosis Index) in detail.
- Students should be well versed with diagnosis of different oral conditions, simple tooth extractions, restorations & oral prophylaxis procedures.
- Students must know about the health care delivery systems in India, activities at primary health centre and primary health care delivery, about the practical concepts of water purification & the effect of different environmental conditions on health & disease.

##### **SECOND MODULE:**

- 3 seminars in basic sciences subjects.
- To conduct 3 journal clubs.



- Completion & Submission of Library Dissertation.
- Preparation of synopsis and its submission as per calendar of events.
- Monthly assessment in the form of written tests covering basic sciences topics as well as Research Methodology & Biostatistics.

#### Clinical Training:

1. Providing Comprehensive Dental Care to patients in clinics
2. Learning different criteria and instruments used in various oral indices – 3 cases each
  - Oral Hygiene Index – Greene and Vermillion, Oral Hygiene Index – Simplified, DMF – DMF (T), DMF (S), Def, Fluorosis Indices – Dean’s Fluorosis Index, Tooth Surface Index for Fluorosis, Thylstrup and Fejerskov Index, Community Periodontal Index (CPI), Plaque Index-Silness and Loe
  - WHO Oral Health Assessment Form – 1997
  - Carrying out treatment (under comprehensive oral health care) of **5 patients** – maintaining complete records.

#### Field Programme:

1. Carrying out preventive programs and health education for school children of the adopted school.
2. School based preventive programs-
  - Topical Fluoride application-Sodium Fluoride, Stannous Fluoride, Acidulated Phosphate Fluoride preparations and Fluoride varnishes, Fluoride mouth rinses
  - Pit and Fissure Sealant – chemically cured (GIC), light cured
  - Minimal Invasive Treatment-Preventive Resin Restorations (PRR), Atraumatic Restorative Treatment (ART)
  - Organizing and carrying out dental camps in both urban and rural areas.
3. To assist and guide the under graduate students in their clinical and field programs.
4. Posting at Dental Satellite Centers/ nodal centers.

#### **INTENDED LEARNING OBJECTIVES:**

- Students must be well versed with the basic oral indices in detail.
- Students must acquire complete knowledge of applied Basic Sciences & basic research methodology & Biostatistics.
- Students must be well versed in literature search and review.
- Students must be well versed in writing the research protocol.
- Students must know the basics of educating the community on health especially school children and oral health matters and a basic idea of preparing an outline of a health talk.
- Students should start developing basic teaching aptitude & skills.
- Students must be familiar with the basics of preventive dentistry procedures.
- Students must be well versed with the delivery of basic oral health care services among rural masses through satellite centres.

#### **SECOND YEAR:**

##### **FIRST MODULE:**

- Seminars in Public Health - 2
- Conducting journal clubs - 2
- Short term research project on assigned topic – 1
- Monthly assessment in the form of written tests covering basic Public health Topics.
- Periodic review of dissertation at two monthly interval.

#### Clinical Training-Continuation of the Clinical Training:

1. Providing Comprehensive Dental Care to patients in clinics
2. Learning different criteria and instruments used in various oral indices – 5 cases each
  - Oral Hygiene Index – Greene and Vermillion, Oral Hygiene Index – Simplified, DMF – DMF (T), DMF (S), Def, Fluorosis Indices – Dean’s Fluorosis Index, Tooth Surface Index for Fluorosis, Thylstrup and Fejerskov Index, Community Periodontal Index (CPI), Plaque Index-Silness and Loe
  - WHO Oral Health Assessment Form – 1997
  - Carrying out treatment (under comprehensive oral health care) of 5 patients – maintaining complete records.

#### Field Program – Continuation of Field Program:

1. Carrying out school dental health education
2. School based preventive programs-
  - Topical Fluoride application-Sodium Fluoride, Stannous Fluoride, Acidulated Phosphate Fluoride preparations and Fluoride varnishes, Fluoride mouth rinses
  - Pit and Fissure Sealant – chemically cured (GIC), light cured
  - Minimal Invasive Treatment-Preventive Resin Restorations (PRR), Atraumatic Restorative Treatment (ART)
  - Organizing and carrying out dental camps in both urban and rural areas.
3. Assessing oral health status of various target groups like School children, Expectant mothers Handicapped, Underprivileged, and geriatric populations. Planning dental manpower and financing dental health care for the above group.
4. Application of the following preventive measures in clinic-5 Cases each.
  - Topical Fluoride application – Sodium Fluoride, Stannous Fluoride, Acidulated Phosphate Fluoride preparations and Fluoride varnishes.
  - Pit and Fissure Sealant
5. Planning total health care for school children in an adopted school:
  - a) Periodic surveying of school children
  - b) Incremental dental care
  - c) Comprehensive dental care
6. Organizing and conducting community oral health surveys for all oral conditions-1 survey
7. In addition the post graduate shall assist and guide the under graduate students in their clinical and field programs

8. To take lecture classes (2-3) for Undergraduate students in order to learn teaching methods (pedagogy) on assigned topic.
9. Posting at dental satellite centers/ nodal centers.

#### **INTENDED LEARNING OBJECTIVES:**

- Students must be well versed with Practical application of research methodology & Biostatistics.
- Students should be familiar with the basics of Public Health.
- Students should be well versed in recording the oral health status of different target groups in the community using WHO Oral Health Assessment form: this will help them to identify oral health problems in the community.
- Students should start developing orientation towards periodic survey of school children, providing Incremental & Comprehensive oral health Care services particularly to school children & Oral health programme planning for school children.
- Students should be well versed with basic teaching aptitude & skills.
- Students must be thorough with the basics of preventive dentistry procedures.
- Students should be well versed with the delivery of basic oral health care services among rural masses through satellite centers.

#### **SECOND MODULE:**

- Seminars in Public Health - 3
- Conducting journal clubs - 3
- Short term research project on assigned topic – 1
- Monthly assessment in the form of written tests covering Public health Topics.
- Periodic review of dissertation at two monthly interval.

#### Clinical Training-Continuation of the Clinical Training:

1. Providing Comprehensive Dental Care to patients in clinics
2. Learning different criteria and instruments used in various oral indices – 5 cases each
  - Oral Hygiene Index – Greene and Vermillion, Oral Hygiene Index – Simplified, DMF – DMF (T), DMF (S), Def, Fluorosis Indices – Dean's Fluorosis Index, Tooth Surface Index for Fluorosis, Thylstrup and Fejerskov Index, Community Periodontal Index (CPI), Plaque Index-Silness and Loe.
  - WHO Oral Health Assessment Form – 1997
  - Carrying out treatment (under comprehensive oral health care) of 5 patients – maintaining complete records

#### Field Program – Continuation of Field Program:

1. Carrying out school dental health education
2. School based preventive programs-

- Topical Fluoride application-Sodium Fluoride, Stannous Fluoride, Acidulated Phosphate Fluoride preparations and Fluoride varnishes, Fluoride mouth rinses
  - Pit and Fissure Sealant – chemically cured (GIC), light cured
  - Minimal Invasive Treatment-Preventive Resin Restorations (PRR), Atraumatic Restorative Treatment (ART)
  - Organizing and carrying out dental camps in both urban and rural areas.
3. Assessing oral health status of various target groups like School children, Expectant mothers Handicapped, Underprivileged, and geriatric populations. Planning dental manpower and financing dental health care for the above group.
  4. Application of the following preventive measures in clinic-5 Cases each.
    - Topical Fluoride application – Sodium Fluoride, Stannous Fluoride, Acidulated Phosphate Fluoride preparations and Fluoride varnishes.
    - Pit and Fissure Sealant
  5. Planning total health care for school children in an adopted school:
    - d) Periodic surveying of school children
    - e) Incremental dental care
    - f) Comprehensive dental care
  6. Organizing and conducting community oral health surveys for all oral conditions-2 surveys
  7. In addition the post graduate shall assist and guide the under graduate students in their clinical and field programs
  8. To take lecture classes (2-3) for Undergraduate students in order to learn teaching methods (pedagogy) on assigned topic.
  9. Posting at dental satellite centers/ nodal centers.

#### **INTENDED LEARNING OBJECTIVES:**

- Students should start developing confidence with Practical application of research methodology & Biostatistics.
- Students should acquire complete knowledge of Public Health & its practical application in Oral health.
- Students should be well versed in critically evaluating a research article.
- Students should develop full confidence in all types of Presentations.
- Students should be confident in providing Incremental & Comprehensive oral health Care services particularly to school children.
- Students should be well versed with basic teaching aptitude & skills.
- Students should be thorough with the preventive dentistry procedures.
- Students must be well versed with the common oral health problems in the community & Planning oral health care services accordingly through satellite centers.

#### **THIRD YEAR:**

## **FIRST MODULE:**

- Seminars on Dental Public Health & Preventive Dentistry - 3
- Critical evaluation of scientific articles – 3 articles
- Completion and submission of dissertation as per academic calendar.
- Monthly assessment in the form of written tests covering Dental Public health & Preventive Dentistry Topics.

### Clinical Training:

1. Providing Comprehensive Dental Care to patients in clinics
2. Learning different criteria and instruments used in various oral indices – 5 each
  - Oral Hygiene Index – Greene and Vermillion, Oral Hygiene Index – Simplified, DMF – DMF (T), DMF (S), Def, Fluorosis Indices – Dean's Fluorosis Index, Tooth Surface Index for Fluorosis, Thylstrup and Fejerskov Index, Community Periodontal Index (CPI), Plaque Index-Silness and Loe
  - WHO Oral Health Assessment Form – 2013
  - Carrying out treatment (under comprehensive oral health care) of 5 patients – maintaining complete records
3. Carrying out school dental health education
4. School based preventive programs-
  - Topical Fluoride application – Sodium Fluoride, Stannous Fluoride, Acidulated Phosphate Fluoride preparations and Fluoride varnishes.
  - Pit and Fissure Sealant
  - Minimal Invasive Techniques – Preventive Resin Restorations (PRR), Atraumatic Restorative Treatment (ART)
5. To take lecture classes (2) for Undergraduate students in order to learn teaching methods (pedagogy) on assigned topic
6. Exercise on solving community health problems – 2 problems
7. Application of the following preventive measures in clinic – 5 cases each.
  - Topical Fluoride application – Sodium Fluoride, Stannous Fluoride, Acidulated Phosphate Fluoride preparations
  - Pit and Fissure sealants
8. Dental – health education training of school teachers, social workers, health workers.
9. In addition the post graduate shall assist and guide the under graduate students in their clinical and field programs

## **INTENDED LEARNING OBJECTIVES:**

- Students should be well versed with the different oral indices & their practical applications in detail.
- Students should acquire complete knowledge of Dental Public Health & its practical application in Oral health.
- Students should start orientation towards solving community oral health problems in hypothetical situations.
- Students should be well versed in preparing training modules for Teachers Training Programme & Training of others Health care workers.
- Students should be confident in providing Incremental & Comprehensive oral health Care services to the community.

- Students must be thorough with the Preventive Dentistry procedures.
- Students should develop skills of Public health Administration & Knowledge.

## **SECOND MODULE:**

- Seminars on Dental Public Health & Recent advances in Preventive Dentistry - 2
- Critical evaluation of scientific articles – 2 articles
- Monthly assessment in the form of written tests covering Dental Public health & Preventive Dentistry Topics.
- Overall assessment in the form of Mock Examinations (Theory & Practical).

### Clinical Training:

1. Providing Comprehensive Dental Care to patients in clinics
2. Learning different criteria and instruments used in various oral indices – 5 each
  - Oral Hygiene Index – Greene and Vermillion, Oral Hygiene Index – Simplified, DMF – DMF (T), DMF (S), Def, Fluorosis Indices – Dean's Fluorosis Index, Tooth Surface Index for Fluorosis, Thylstrup and Fejerskov Index, Community Periodontal Index (CPI), Plaque Index-Silness and Loe
  - WHO Oral Health Assessment Form – 1997 & 2013
  - Carrying out treatment (under comprehensive oral health care) of 5 patients – maintaining complete records
3. Carrying out school dental health education
4. School based preventive programs-
  - Topical Fluoride application – Sodium Fluoride, Stannous Fluoride, Acidulated Phosphate Fluoride preparations and Fluoride varnishes.
  - Pit and Fissure Sealant
  - Minimal Invasive Techniques – Preventive Resin Restorations (PRR), Atraumatic Restorative Treatment (ART)
5. To take lecture classes (2) for Undergraduate students in order to learn teaching methods (pedagogy) on assigned topic
6. Exercise on solving community health problems – 3 problems
7. Application of the following preventive measures in clinic – 5 cases each.
  - Topical Fluoride application – Sodium Fluoride, Stannous Fluoride, Acidulated Phosphate Fluoride preparations
  - Pit and Fissure sealants.

## **INTENDED LEARNING OBJECTIVES:**

At the end of three years of training the candidate should be able to:

### ***Knowledge:***

- Apply basic sciences knowledge regarding etiology, diagnosis and management of the prevention and treatment 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 program.

- Ability to conduct oral health surveys in order to identify all the oral health problems affecting the community and find solutions using multidisciplinary approach.
- 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 levels.

***Skills:***

The candidate should be able to:

1. Take history, conduct clinical examination including all diagnostic procedures to arrive at the individual level and conduct survey of the community at state and national level of all conditions related to oral health to arrive at community diagnosis.
2. Plan and perform all necessary treatments, prevention and promotion of oral health at the individual and community level.
3. Plan appropriate community oral health program, conduct the program and evaluate, at the community level.
4. Ability to make use of knowledge of epidemiology to identify cause and plan appropriate preventive and control measures.
5. Develop appropriate person power at various levels and their effective utilization.
6. Conduct survey and use appropriate methods to impart oral health education.
7. Develop ways to helping the community toward easy payment plan and followed by evaluation for their oral health care needs.
8. Develop the planning, implementation, evaluation and administrative skills to carry out successful community oral health care programs.

***Values:***

1. Adopt ethical principles in all aspects of community oral health activities.
2. To apply ethical and moral standards while carrying out epidemiological researches.
3. Develop communication skills, in particular to explain the cause and prevention of oral diseases to the patient.
4. Be humble and accept the limitation in his knowledge and skill and to ask for help from colleagues when needed and promote teamwork approach.
5. Respect patient's rights and privileges including patient's right to information and right to seek a second opinion.

Before completing the third year M.D.S., a student must have attended two national conferences. Attempts should be made to present minimum one scientific paper & one poster, publication of a research article in Pub med indexed journal.

**MONITORING LEARNING PROCESS:**

It is essential to monitor the learning progress of each candidate through continuous appraisal and regular assessment. It not only helps teachers to evaluate students, but also students to evaluate themselves. The monitoring should be done by the staff of the department based on participation of students in various teaching / learning activities.

## **SCHEME OF EXAMINATION**

**A. Theory;** 100 Marks (Part-I) - Basic Sciences Paper

225 Marks (Part-II) - Paper I,II,III

Written examination shall consist of Basic Sciences Paper (Part-I) of three hours duration. Three question papers each of three hours duration (Part-II). Total marks for each paper will be 75. Paper I, II shall consist of two long questions carrying 20 marks each and 5 short essay questions each carrying 7 marks each. Paper III will be on Essays. Questions on recent advances may be asked in any or all the papers. Distribution of topics for each paper will be as follows: \*

**PART-I** : Applied Basic Sciences: Applied Anatomy and Histology, Applied Physiology and Biochemistry, Applied Pathology, Microbiology, Oral Pathology, Physical and Social Anthropology, Applied Pharmacology and Research Methodology and Biostatistics.

**PART-II** :

**Paper-I** : Public Health

**Paper-II** : Dental Public Health

**Paper-III** : Essay

*\* The topics assigned to the different papers are generally evaluated under those sections. However a strict division of the subject may not be possible and some overlapping of topics is inevitable. Students should be prepared to answer overlapping topics.*

**B. Practical / Clinical Examination** : **200 Marks**

1. Clinical examination of at least 2 patients representing the community – includes history, main complaints, examination and recording of the findings, using indices for the assessment of oral health and presentation of the observation including diagnosis, comprehensive treatment planning.  
(50 Marks – 1 ½ Hrs)
2. Performing
  - a. One of the treatment procedures as per treatment plan. (Restorative, surgical, rehabilitation)
  - b. Preventive oral health care procedure. (50 Marks - 1 ½ Hrs)
  - c. One of the procedures specified in the curriculum
- 3 Critical evaluation of a given research article published in an international journal



(50 Marks – 1 Hour)

- 4 Problem solving – a hypothetical oral health situation existing in a community is given with sufficient data. The student as a specialist in community dentistry is expected to suggest practical solutions to the existing oral health situation of the given community.

(50 Marks – 1 Hour)

**C. Viva Voce**

:

**100 Marks**

***i. Viva-Voce examination: 80 marks***

All examiners will conduct viva-voce conjointly on candidate's comprehension, analytical approach, expression, interpretation of data and communication skills. It includes all components of course contents. It includes presentation and discussion on dissertation also.

***ii. Pedagogy Exercise: 20 marks***

A topic be given to each candidate in the beginning of clinical examination. He/she is asked to make a presentation on the topic for 8-10 minutes.