REGULATIONS AND CURRICULUM GOVERNING

MDS PROGRAM

PROSTHODONTIC AND CROWN AND BRIDGE

(Academic year from which the curriculum is implemented/ revised/ amended)

Name of the Constituent Unit/Centre: Yenepoya Dental College

YENEPOYA
(DEEMED TO BE UNIVERSITY)

Deralakatte, Mangalore, Karnataka.

YENEPOYA
(DEEMED TO BE UNIVERSITY)

NOTIFICATIONS FROM THE UNIVERSITY

YENEPOYA

Office of the Registrar
University Road
Deralakatte, Mangalore – 575 018
Ph: 0824 – 2204667/68/69/70/71
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Ref: No. Y/REG/ACA/43-ACM/2021 26.07.2021

The Principal
Yenepoya Dental College

Sub: Curriculum enrichment in MDS Prosthodontics and Crown and Bridge

Ref: Resolution of the Academic council at its 43rd meeting held on 07.07.2021, vide agenda –4

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The Academic Council at its 43rd meeting held on 07.07.2021 and subsequently the Board of Management at its 54th meeting held on 08.07.2021 have resolved to approve the proposed enrichment in postgraduate program of Prosthodontics and Crown and Bridge as follows:-

Course	Existing	Now Amended
PG (MDS) Curriculum of Prosthodontics and Crown and Bridge	Five cases to be treated by MDS students using CAD CAM technology. However, CAD CAM training is not mandatory as per DCI / YU regulations.	- Structured module based lectures (7 hours) - Live demonstration of the digital workflow - Hands on training in the application of the CAD CAM software (85 hours)

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Copy to:

1. Controller of Examinations
2. Professor & HoD, Department of Prosthodontics & Crown & Bridge
3. File copy

DEAN / PRINCIPAL
Yenepoya Dental College
Yenepoya Deemed to be University
University Road, Deralakatte
Mangaluru-575018

Recognized under Sec 3(A) of the UGC Act 1956 as per Notification No. F.9-11/2007-U.3 (A) dated 27th February 2008

Ref: No. YU/REG/ACA/ACM-30/2017 05.02.2018

NOTIFICATION

Sub: Incorporation of new course content/amendment to the syllabus/teaching & Evaluation methodology

Ref: Proceedings of the 30th minutes of Academic Council meeting held on 20.10.2017 Vide Agenda - 12

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The Academic Council at its 30th meeting held on 20.10.2017 approved the recommendation of the Faculty of Dentistry for incorporating new course content/amendment to the syllabus/teaching & evaluation methodology as follows to be implemented prospectively

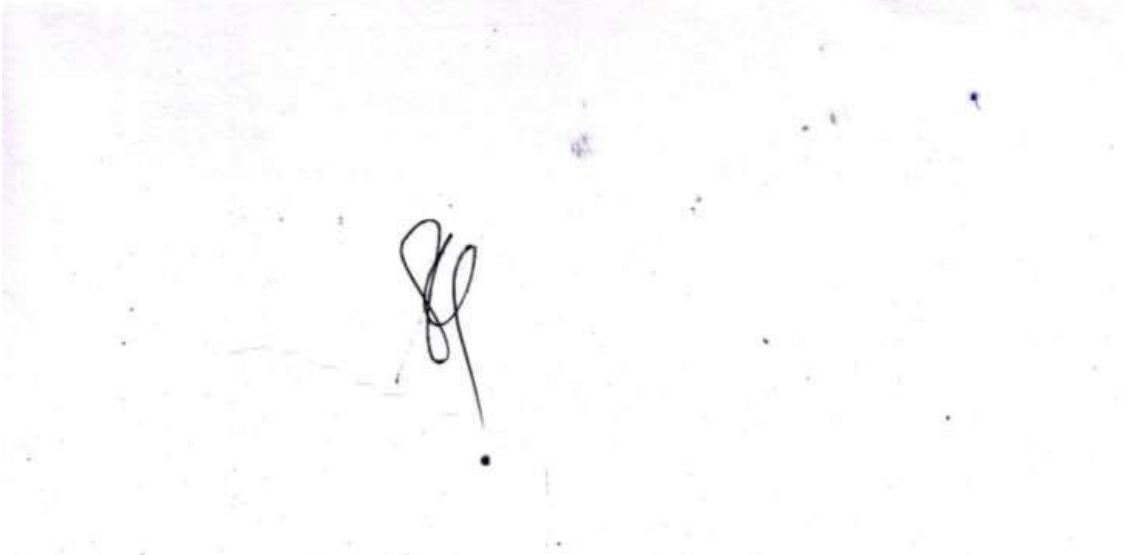
ESSENTIAL SKILLS:

*Key
0 - Washes up and observes
A - Assists a senior
PA - Performs procedure under the direct Supervision of a senior specialist
PI - Performs independently

PROCEDURE	CATEGORY			
	O	A	PA	PI
Tooth and tooth surface restoration a. Composites - fillings, laminates, inlay, onlay b. Ceramics - laminates, inlays, onlays c. Glass Ionomer	 2 2 1	 2 2 1	 2 2 1	 10 10 10
CROWNS				
PVC for metals	1	2	2	10
Zirconia Full coverage crown	-	-	-	2
FVC for ceramics	1	2	2	10
Precious metal crowns	1	-	1	5
Galvanoformed crown	-	-	1	1
3/4th crowns (premolars, canines and centrals)	1	-	-	5
7/8th posterior crown	1	-	-	5
Proximal half crown	1	-	-	5
Pinledge and pinhole crowns	1	-	-	5
Telescopic crowns	1	-	-	5
Intraradicular crowns (central, lateral, canine, pre molar, and molar)	1	-	-	5
Crown as implant supported prosthesis	1	-	1	5
FIXED PARTIAL DENTURES				
Zirconia(3 Unit)	-	-	-	1
Cast porcelain (3 unit)	1	-	-	5
Cast metal - precious and non precious (3 unit posterior)	1	-	-	5
Porcelain fused metal (anterior and posterior)	1	1	1	10
Multiple abutment - maxillary and Mandibular full arch	1	1	1	5

Incorporation of custom made and ready made precision joint or attachments	1	1	1	4
Adhesive bridge for anterior/ posterior	1	-	1	10
Metal fused to resin anterior FPD	-	-	1	5
Interim provisional restorations (crowns and FPDs)	1	1	1	10
Immediate fixed partial dentures (interim)	1	-	-	5
Fixed prosthesis as a retention and rehabilitation for acquired and congenital defects maxillofacial prosthetics	1	1	1	5
Implant supported prosthesis	1	-	1	1
Implant - tooth supported prosthesis	1	-	1	1
REMOVABLE PARTIAL DENTURES				
Provisional partial denture prosthesis	1	1	1	10
Cast removable partial denture (for Kennedy's Applegate classification with modification)	1	1	1	6
Removable bridge with precision attachments and telescopic crowns for anterior and posterior	1	1	2	4
Immediate RPD	1	1	1	5
Partial denture for medically compromised and handicapped patients	1	1	1	5
COMPLETE DENTURES				
Neurocentric occlusion & characterized prosthesis	-	-	1	5
Anatomic characterized prosthesis (by using semi adjustable articulator)	-	-	1	25
Single dentures	-	-	1	5
Overlay dentures	-	-	1	5
Interim complete dentures as a treatment prosthesis for abused denture supporting tissues	-	-	1	5
Complete denture prosthesis (for abnormal ridge relation, ridge form and ridge size)	-	-	1	5
Complete dentures for patients with TMJ syndromes	-	-	1	5
Complete dentures for medically compromised and handicapped patients	-	-	1	5
GERIATRIC PATIENTS				
Tooth and tooth surface restorations, crowns, fixed prosthesis, removable prosthesis	-	-	1	5
IMPLANT SUPPORTED COMPLETE PROSTHESIS				
Implant supported complete prosthesis (maxillary and Mandibular)	-	-	1	1
MAXILLOFACIAL PROSTHESIS				
Guiding flange and obturators	-	-	1	4
Speech and palatal lift prosthesis	-	-	1	2
Eye prosthesis	-	-	1	2
Ear prosthesis	-	-	1	2
Nose prosthesis	-	-	1	2
Face prosthesis	-	-	-	1
Maxillectomy	-	-	1	2
Hemimandibulectomy	-	-	1	2
Cranioplasty	-	-	1	1
Finger / hand, foot	-	-	1	2
Body prosthesis	-	-	1	1
Management or burns, scars	-	-	-	1
TMJ SYNDROME MANAGEMENT				
Splints - periodontal, teeth, jaws	-	-	1	4

TMJ supportive and treatment prosthesis	-	-	1	1
Stabilization appliances for maxilla and mandible with freedom to move from IP to CRCP	-	-	-	1
In IP without the freedom to move to CRCP	-	-	-	1
Repositioning appliances, anterior discussion	-	-	-	1
Chrome cobalt and acrylic resin stabilization appliances for modification to accommodate for the irregularities in the dentition	-	-	-	2
Occlusal adjustment and occlusal equilibrium	-	-	1	4
FULL MOUTH REHABILITATION				
Full mouth rehabilitation - restoration of esthetics and function of stomatognathic system	-	-	1	4
INTER-DISCIPLINARY TREATMENT MODALITIES				
Inter-disciplinary management - rest oration of Oro craniofacial defects for esthetics, phonation, mastication and psychological comforts	-	-	1	2
MANAGEMENT OF FAILED RESTORATION				
Tooth and tooth surface restorations	-	-	-	5
Removable prosthesis	-	-	-	10
Crowns and fixed prosthesis	-	-	-	5
Maxillofacial prosthesis	-	-	-	2
Implant supported prosthesis	-	-	-	1
Occlusal rehabilitation and TMJ syndrome	-	-	-	2
Restoration failure of psychogenic origin	-	-	-	5
Restoration failure of age changes	-	-	-	2



The topics assigned to the different paper 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.

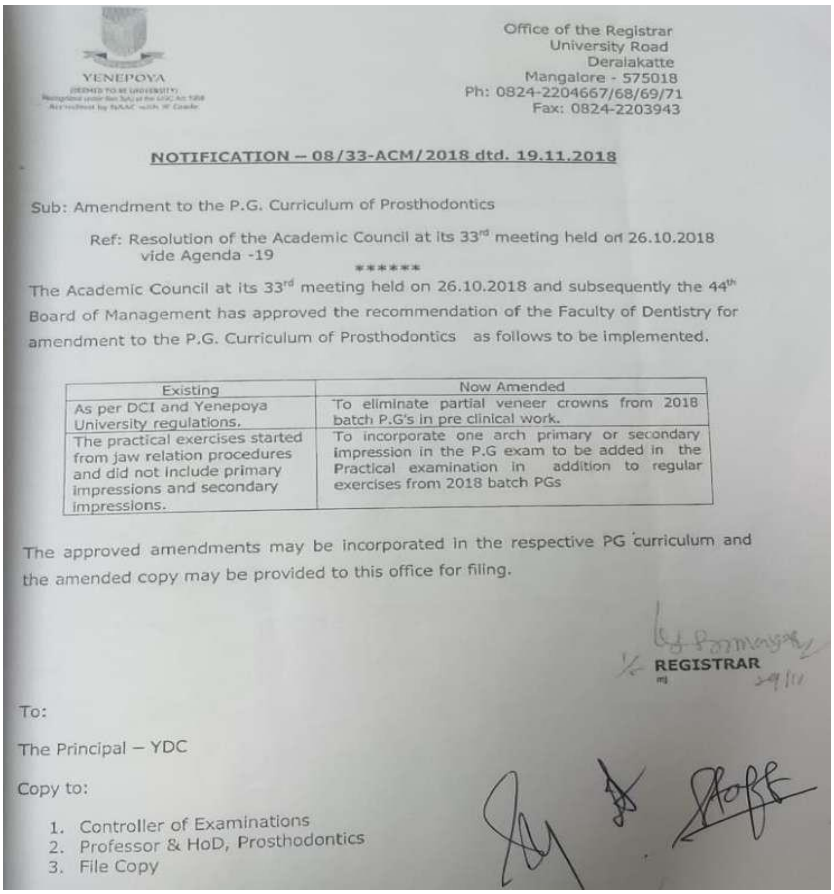
B. Practical / Clinical Examination: 200 marks
Examination shall be for three days. If there more than 6 candidates, it may be extended for one day. Each candidate shall be examined for minimum of three days, six hours per day including viva voce.

(Dr. G. Shreekumar Menon)
REGISTRAR
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Copy to:

1. The Principal – YDC
2. HoD, Department of Prosthodontics
3. CoE
4. Academic Section

Prof.(Dr.) Sanath Kumar Shetty
M.D.S., Ph.D.
H.O.D. Dept. of Prosthodontics
Yenepoya Dental College
Deralakatte, Mangalore - 575 018



YENEPOYA

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NOTIFICATION – 08/33-ACM/2018 dtd. 19.11.2018

Sub: Amendment to the P.G. Curriculum of Prosthodontics

Ref: Resolution of the Academic Council at its 33rd meeting held on 26.10.2018 vide Agenda -19

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The Academic Council at its 33rd meeting held on 26.10.2018 and subsequently the 44th Board of Management has approved the recommendation of the Faculty of Dentistry for amendment to the P.G. Curriculum of Prosthodontics as follows to be implemented.

Existing	Now Amended
As per DCI and Yenepoya University regulations.	To eliminate partial veneer crowns from 2018 batch P.G's in pre clinical work.
The practical exercises started from jaw relation procedures and did not include primary impressions and secondary impressions.	To incorporate one arch primary or secondary impression in the P.G exam to be added in the Practical examination in addition to regular exercises from 2018 batch PGs

The approved amendments may be incorporated in the respective PG curriculum and the amended copy may be provided to this office for filing.

REGISTRAR

To:

The Principal – YDC

Copy to:

1. Controller of Examinations
2. Professor & HoD, Prosthodontics
3. File Copy

YENEPOYA UNIVERSITY

Ref: No. YU/REG/ACA/ACM-30/2017 04.10.2017

NOTIFICATION

Sub: Incorporation of new course content/amendment to the syllabus/teaching & evaluation methodology

Ref: Proceedings of the 30th Minutes of Academic Council meeting held on 20.10.2017, vide Agenda - 12

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The Academic Council at its 30th meeting held on 20.10.2017 approved the recommendation of the Faculty of Dentistry for incorporating news course content/amendment to the syllabus/teaching & evaluation methodology to the PG curriculum as follows to be implemented prospectively from the admission batch of 2017-18.

Department of Oral & Maxillofacial Surgery

Existing	Now Amended
No lectures on Bio statistics and Research methodology are taken at present	PG Curriculum: Inclusion of Bio statistics and Research methodology in PG training (Minimum 10 lectures of 1 hour each to be conducted)
Teaching methodology	
Utilization of skill lab for Post Graduate & Under Graduate students not yet introduced	To post Post Graduate & Under Graduate students in batches in skill lab for training in B.L.S and other ha nds on procedures
Evaluation	
Presently there is no University examination at the end of 1st MDS course for basic science	To Introduce University examination for 1st MDS students at the end of 1st year as directed by D.C.I. (From 2018-19 batch onwards)

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Department of Pedodontics

Sl.No	Existing	Now Amended
1	Presently case history is being conventionally hand written and recorded in log book	Introduction of a software to record and store case history in a mobile/web based application (soft copy) along with copies of all the supportive documents/photographs saved for instant future reference at finger tip apart from the usual manual recording of files. YENGRAM app was proposed for the same.

Department of Prosthodontics

Sl.No	Existing	Now Amended
1	CAD-CAM training is not mandatory as per DCI/ Yenepoya University regulations.	Chairman, Board of Studies, put forwarded the Proposal for Introduction of practical training in CAD-CAM for P.G students. It was proposed that five cases to be treated by MDS students using CAD-CAM technology. Proposed for 2017 MDS batch onwards.

The approved amendments may be incorporated the respective P.G. curriculum and the amended copy may be provided to this office for filing.

(Dr. G. Shreekumar Menon)
REGISTRAR

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Copy to:

- Principal – YDC
- HoD, Department of Oral & Maxillofacial Surgery
- HoD, Department of Pedodotnics
- HoD, Department of Prosthodontics
- Controller of Examinations
- Academic Section

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PREAMBLE :

Yenepoya University, the first Deemed University (recognized under Section 3(A) of the UGC Act 1956) in Dakshina Kannada district was established in 2008. The University consists of four constituent Colleges under its ambit namely Yenepoya Medical College, Yenepoya Dental College, Yenepoya nursing College and Yenepoya Physiotherapy College. The institutions ensure high standards of academic performance and are rendering quality health care services.

The aim of Dental profession is to render quality oral health care to all the needy people and Dental education aims at creating a new generation of Dental surgeons who are competent to meet the emerging challenges in the clinical and community environment through quality education. The educational paths tobecome a Dental professional vary greatly worldwide, but all involve extensive study of theoretical, practical and training in clinical skills. The minimum standard requirement for entry in to Dental profession is determined by Dental Council of India.

The Dental Council of India is a National regulatory body that maintains uniform standards in Dental education and prescribes the syllabus and regulations for various Dental programmes in India. Keeping the recommendations of Dental Council of India as minimum requirement syllabus for BDS Degree have been revised at par with the current developments and trends in the Dental profession globally after proper discussions at the levels of Board of Studies, Faculty and Academic Council.

The students of Yenepoya University are also privileged to undergo the core module on environmental studies as per the UGC recommendation in addition to other Add on Courses.

I hope the revamping of syllabus will help the students to update and expand their knowledge to a great extent. The academic transaction is now going to be shifted from conventional methods to E-learning from 2015 onwards. I congratulate and appreciate the efforts put by the Dental faculty in the revision of curriculum.



Dr. M. Vijaya Kumar *Vice Chancellor Yenepoya University*

PROSTHODONTICS AND CROWN & BRIDGE

AIM:

To train the dental graduates so as to ensure higher level of competence in both general and specialty areas of Prosthodontics and prepare candidates with teaching, research and clinical abilities including prevention and after care in Prosthodontics – removable dental prosthodontics, fixed dental prosthodontics (Crown &Bridge), implantology, maxillofacial prosthodontics and esthetic dentistry.

GENERAL OBJECTIVES OF THE COURSE:

Training program for the dental graduates in Prosthetic dentistry– removable dental prosthodontics, fixed dental prosthodontics (Crown & Bridge), implantology, maxillofacial prosthodontics and esthetic dentistry and Crown & Bridge including Implantology is structured to achieve knowledge and skill in theoretical and clinical laboratory, attitude, communicative skills and ability to perform research with a good understanding of social, cultural, educational and environmental background of the society.

- To have adequate acquired knowledge and understanding of applied basic and systemic medical sciences, both in general and in particularly of head and neck region.
- The postgraduates should 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 graduates and MDS graduates of other specialties,
- To demonstrate evaluative and judgment skills in making appropriate decisions regarding prevention, treatment, after care and referrals to deliver comprehensive care to patients.

KNOWLEDGE:

The candidate should possess knowledge of applied basic and systemic medical

sciences.

- On human anatomy, embryology, histology, applied in general and particularly to head and neck, Physiology & Biochemistry, Pathology 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 & syndromes and Anthropology, Bioengineering, Bio-medical & Biological Principles
- The student shall acquire knowledge of various Dental Materials used in the specialty and be able to provide appropriate indication, understand the manipulation characteristics, compare with other materials available, be adept with recent advancements of the same.
- Students shall acquire knowledge and practice of history taking, Diagnosis, treatment planning, prognosis, record maintenance of oral, craniofacial and systemic region.
- Ability for comprehensive rehabilitation concept with pre prosthetic treatment plan including surgical re-evaluation and prosthodontic treatment planning, impressions, jaw relations, utility of face bows, articulators, selection and positioning of teeth, teeth

  arrangement for retention, stability, esthetics, phonation, psychological comfort, fit and insertion.
- Instructions for patients in after care and preventive Prosthodontics and management of failed restorations shall be possessed by the students.
- Understanding of all the applied aspects of achieving physical, psychological well- being of the patients for control of diseases and / or treatment related syndromes with the patient satisfaction and restoring function of Cranio mandibular system for a quality life of a patient.

- Ability to diagnose and plan treatment for patients requiring Prosthodontic therapy

- Ability to read and interpret radiographs, and other investigations for the purpose of diagnosis and treatment planning.
- The theoretical knowledge and clinical practice shall include principles involved for support, retention, stability, esthetics, phonation, mastication, occlusion,

Behavioral, psychological, preventive and social aspects of Prosthodontics science of Oral and Maxillofacial Prosthodontics and Implantology

- Tooth and tooth surface restorations, Complete denture Prosthodontics, removable partial denture Prosthodontics, fixed prosthodontics and maxillofacial and Craniofacial Prosthodontics, implants and implant supported Prosthodontics, T.M.J. and occlusion, craniofacial esthetics, and biomaterials, craniofacial disorders, problems of psychogenic origin.
- Should have knowledge of age changes, geriatric psychology, nutritional considerations and prosthodontic therapy in the aged population.
- Should have ability to diagnose failed restoration and provide prosthodontic therapy and after care.
- Should have essential knowledge on ethics, laws, and Jurisprudence and Forensic Odontology in Prosthodontics.
- Should know general health conditions and emergency as related to prosthodontics treatment like allergy of various materials and first line management of aspiration of prosthesis
- Should identify social, cultural, economic, environmental, educational and emotional determinants of the patient and consider them in planning the treatment.
- Should identify cases, which are outside the area of his specialty / competence, refer them to appropriate specialistsand perform interdisciplinary case management.
- To advice regarding case management involving surgical and interim treatment
- Should be competent in specialization of team management in craniofacial prosthesis design.
- To have adequate acquired knowledge, and understanding of applied basic, and systemic medical science knowledge in general and in particular to head and neck regions.
- Should attend continuing education programmes, seminars and conferences related to Prosthodontics, thus updating himself/herself.
- To teach and guide his/her team, colleagues and other students.
- Should be able to use information technology tools and carry out research both in

basic and clinical areas, with the aim of publishing his/ her work and presenting his/her work at various scientific forums.

- Should have an essential knowledge of personal hygiene, infection control, prevention of cross infection and safe disposal of waste, keeping in view the risk of transmission of potential communicable and transmissible infections like Hepatitis and HIV.
- Should have an ability to plan and establish Prosthodontics clinic/hospital teaching department and practice management.
- Should have a sound knowledge (of the applications in pharmacology, effects of drugs on oral tissues and systems of body and in medically compromised patients.

SKILLS:

- The candidate should be able to examine the patients requiring Prosthodontic therapy, investigate the patient systemically, analyze the investigation results, radiographs, diagnose the ailment, plan the treatment, communicate it with the patient and execute it.
- To understand the prevalence and prevention of diseases of craniomandibular system related to prosthetic dentistry.
- The candidate should be able to restore lost functions of stomatognathic system like mastication, speech, appearance and psychological comforts by understanding biological, biomedical, bioengineering principles and systemic conditions of the patients to provide quality health care in the craniofacial regions.
- The candidate should be able to demonstrate good interpersonal, communication skills ***and*** team approach in interdisciplinary care by interacting with other specialties including medical specialty for planned team management of patients for craniofacial ***&*** oral acquired and congenital defects, temporomandibular joint syndromes, esthetics, Implant supported Prosthetics and problems of Psychogenic origins.
- 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 with a patient centered approach.

- Should be able to interpret various radiographs like IOPA, OPG, CBCT and CT Should and be able to plan and modify treatment plan based on radiographic findings.
- Should be able to critically appraise articles published and understand various components of different types of articles and be able to gather the weight of evidence from the same
- To identify target diseases and create awareness amongst the population regarding Prosthodontic therapy.
- To perform Clinical and Laboratory procedures with a clear understanding of biomaterials, tissue conditions related to prosthesis and have required dexterity & skill for performing clinical and laboratory all procedures in fixed, removable, implant, maxillofacial, TMJ and esthetics Prosthodontics.
- To carry out necessary adjunctive procedures to prepare the patient before prosthesis like tissue preparation and preprosthetic surgery and to prepare the patient before prosthesis / prosthetic procedures
- To understand demographic distribution and target diseases of Cranio mandibular region related to Prosthodontics.

ATTITUDES:

- To adopt ethical principles in Prosthodontic practice, Professional honesty, credibility and integrity are to be fostered. Treatment to be delivered irrespective of social status, caste, creed or religion of patient.
- Should be willing to share the knowledge and clinical experience with professional colleagues.
- Should develop an attitude towards quality, excellence, ***non-compromising*** in treatment.
- Should be able to self-evaluate, reflect and improve on their own.
- Should pursue research in a goal to contribute significant, relevant and useful information, concept or methodology to the scientific fraternity.
- Should be able to demonstrate ***evidence-based*** practice while handling cases

- Should be willing to adopt new methods and techniques in prosthodontics from time to time based on scientific research, which are in patient's best interest.

- Should respect patient's rights and privileges, including patient's right to information and right to seek second opinion.

COMMUNICATIVE ABILITIES:

- To develop communication skills, in particular ***and*** to explain treatment options available in the management.
- To provide leadership and get the best out of his / her group in a congenial working atmosphere.
- Should be able to communicate in simple understandable language with the patient and explain the principles of prosthodontics to the patient. He/She should be able to guide and counsel the patient with regard to various treatment modalities available.
- To develop the ability to communicate with professional colleagues through various media like Internet, e-mails, videoconferences etc. to render the best possible treatment. Should demonstrate good explanatory and demonstrating ability as a teacher in order to facilitate learning among students

PROGRAM OUTCOMES
PROSTHODONTICS & CROWN &BRIDGE

A post graduate student having qualified the MDS (Prosthodontics & Crown & Bridge) examination should be able to:

PO1: Describe normal and abnormal human structure, development, function and behaviour that is relevant to the practice of Dentistry.

PO2: Apply basic knowledge of biomedical, technical and clinical sciences for the effective practice of Dentistry.

PO3: Elicit detailed Dental and relevant Medical history, perform an oral and general physical examination and choose relevant laboratory diagnostic tests for identification of oral disorders, prevention of oral disease and promotion of oral health.

PO4: Demonstrate the ability to interpret available clinical and laboratory data and effective clinical problem solving, in order to generate differential diagnoses and to manage oral health disorders.

PO5: Perform and interpret a basic oral radiological examination safely.

PO6: Plan and administer, safely, appropriate treatments, including surgical procedures, for common oral disorders in adults as well as children.

PO7: Identify and manage common medical emergencies encountered in general dental practice. PO8: Identify and refer patients who may require specialist care.

PO9: Demonstrate knowledge of global and national needs, policies and regulatory frameworks relevant to oral health.

PO10: Function effectively as an oral health care team member in health care settings.

PO11: Communicate effectively and sensitively with patients, care-givers, colleagues and the public in a manner that will improve health care outcomes and patient / client satisfaction.

PO12: Demonstrate the ability to continue refining existing knowledge / skills and acquire new knowledge/skills.

PO13: Select and pursue an appropriate career pathway that is professionally rewarding and personally fulfilling.

PO14: Recognize and manage medico-legal, ethical and professional issues in dental practice.

PO15: Demonstrate and practice integrity, responsibility, respect and selflessness.

PROGRAM / COURSE SPECIFIC OUTCOMES PROSTHODONTICS &CROWN &BRIDGE

A. Cognitive Domain

1. The candidate should possess knowledge of applied basic and systemic medical sciences, knowledge to diagnose and plan treatment for patients requiring Prosthodontic therapy, ability to read and interpret a radiograph and other investigations for the purpose of diagnosis and treatment plan.
2. Candidates should have theoretical, clinical and practical knowledge regarding tooth and tooth surface restorations, complete denture Prosthodontics, removable partial denture Prosthodontics, fixed Prosthodontics, maxillofacial and craniofacial Prosthodontics, implants and implant supported Prosthodontics, T.M.J and occlusion, craniofacial esthetic,

and biomaterials, craniofacial disorders, problems of psychogenic origin.

3. Interact with other departments by rendering services in advanced laboratory work and relevant expert opinion.
4. Participate actively in various workshops/demonstration in the allied departments, to acquire various skills for collaborative research.
5. Contribute to society by imparting understanding of oral health problems.
6. Plan a research study and conduct the study to come up with new equipment or new treatment modality.

B Affective domain

1. Demonstrate self-awareness and personal development in routine conduct. (*Self-awareness*).
2. Communicate effectively with peers, students and teachers in various teaching-learning activities. (*Communication*).
3. Acquire capacity of not letting his/her personal beliefs, prejudices and limitations come in the way of duty.

C. Psychomotor Domain

The student should acquire competencies in the following tasks:

1. Diagnostic skill 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.
2. Clinical and practical skills 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.
3. The candidate should be able to restore lost functions of stomatognathic system namely mastication, speech, appearance and psychological comforts. By understanding biological, biomedical, bioengineering principles and systemic condition of the patient to provide a quality health care of the craniofacial region.
4. Perform clinical and laboratory procedures with understanding of biomaterials,tissue conditions related to prosthesis and have competent dexterity and skills forperforming clinical and laboratory procedures in fixed, removable, implant, maxillofacial, TMJ and

esthetics Prosthodontics.

5. Laboratory technique management based on skills and knowledge of dental materials and dental equipment and instrument management.
6. Research skills in handling scientific problems pertaining to diagnosis and treatment in Prosthodontic therapy.
7. Clinical and didactic skills in encouraging younger doctors to attain learning objectives.

COURSE CONTENTS

The course content has been identified and categorized as essential knowledge given below.

ESSENTIAL KNOWLEDGE:

The topics to be considered are Applied Basic Sciences, Oral and Maxillofacial Prosthodontics and Implantology

APPLIED BASIC SCIENCES:

Should develop thorough knowledge on the applied aspects of Anatomy, Embryology, Histology particularly head and neck, Physiology, Biochemistry, Pathology, Microbiology, Virology, Pharmacology, Health and systematic diseases principles in surgery medicine and Anesthesia, Nutrition, Behavioral sciences, age changes, genetics, Dental Material Science, congenital defects and Syndromes and Anthropology, Biomaterial Sciences, Bio-engineering and Bio-medical and Research Methodology as related to Masters degree Prosthodontics and Crown & Bridge including Implantology

It is desirable to have adequate knowledge in Bio-statistics, Research Methodology and use of computers to develop necessary teaching skills in the specialty of Prosthodontics including crown and bridge.

APPLIED ANATOMY OF HEAD AND NECK:

General Human Anatomy –Gross Anatomy, anatomy of Head and Neck in detail:Cranial and facial bones, TMJ and function, muscles of mastication and facial expression, muscles of neck and back including muscles of deglutition and tongue, arterial supply and venous drainage of the head and neck, anatomy of the Para nasal sinuses in relation to the V^{th} cranial nerve. General considerations of the structure and function of the brain, brief considerations of V, VII, XI, XII, cranial nerves and autonomic nervous system of the head and neck. The salivary glands, Pharynx, Larynx Trachea, Oesophagus, Functional Anatomy of masticatory muscles, Deglutition, speech, respiration, and circulation, teeth eruption, morphology, occlusion and function. Anatomy of TMJ, its movements and myofacial pain dysfunction syndrome.

Embryology –Development of the face, tongue, jaws, TMJ, Paranasal sinuses,pharynx, larynx, trachea, esophagus, Salivary glands, Development of oral and Para oral tissues including detailed aspects of tooth formation.

Growth & Development –Facial form and Facial growth and development overview ofDentofacial growth process and physiology from foetal period to maturity and old age,. General physical growth, functional and anatomical aspects of the head, changes in craniofacial skeletal development, relationship between development of the dentition and facial growth.

Dental Anatomy –Anatomy of primary and secondary dentition, concept of occlusion,mechanism of articulation, and masticatory function. Detailed structural and functional study of the oral and Para oral tissues, normal occlusion, development of occlusion in deciduous mixed and permanent dentitions, root length, root configuration & tooth-numbering systems.

Histology –histology of enamel, dentin, Cementum, periodontal ligament and alveolarbone, pulpal anatomy, histology and biological consideration. Salivary glands and Histology of epithelial tissues including glands.

Histology of general and specific connective tissue including bone, , Salivary glands, Histology of skin, oral mucosa, respiratory mucosa, connective tissue, bone, cartilage, cellular elements of blood vessels, blood, lymphatics, nerves, muscles, tongue and tooth

Cell biology –Brief study of the structure and function of the mammalian cell Components of the cell and functions of various types of cells and their consequences with tissue injury

APPLIED PHYSIOLOGY AND NUTRITION :

Introduction, Mastication, deglutition, digestion and assimilation, Homeostasis, fluid and electrolyte balance, blood composition, volume, function, blood groups and hemorrhage, Blood transfusion, circulation, Heart, Pulse, Blood pressure, capillary and lymphatic circulation. Shock, respiration, control, anoxia, hypoxia, asphyxia, artificial respiration. Endocrine glands in particular reference to pituitary, parathyroid and thyroid glands and sex hormones. Role of calcium and Vit D in growth and development of teeth, bone and jaws. Role of Vit. A, C and B complex in oral mucosal and periodontal health. Physiology and function of the masticatory system. Speech mechanism, mastication, swallowing and deglutition mechanism, salivary glands and Saliva

Endocrines – General principles of endocrine activity and disorders relating to pituitary, thyroid, pancreas, parathyroid, adrenals, gonads, including pregnancy and lactation. Physiology of saliva, urine formation, normal and abnormal constituents, Physiology of pain, Sympathetic and parasympathetic nervous system, neuromuscular co-ordination of the stomatognathic system.

Applied Nutrition – General principles, balanced diet, effect of dietary deficiencies and starvation, Diet, digestion, absorption, transportation and utilization & diet for elderly patients.

APPLIED BIOCHEMISTRY:

General principles governing the various biological activities of the body, such as osmotic pressure, electrolytic dissociation, oxidation-reductionCarbohydrates, proteins, liquids and their metabolism, Enzymes, Vitamins, and minerals, Hormones, Blood, Metabolism of inorganic elements, Detoxification in the body & anti metabolites.

APPLIED PHARMACOLOGY AND THERAPEUTICS:

Dosage and mode of administration of drugs. Action and fate of drugs in the body, Drug addiction, tolerance and hypersensitive reactions, Drugs acting on the central nervous system, general anesthetics hypnotics, analeptics and tranquilizers. Local anesthetics, Chemotherapeutics and antibiotics, Antitubercular and anti syphilitic drugs, Analgesics and antipyretics, Antiseptics, styptics, Sialogogues and antisialogogues, Haematinics, Cortisones, ACTH, insulin and other antidiabetics vitamins: A, D, B – complex group C, K etc. Chemotherapy and Radiotherapy. Drug regime for antibiotic prophylaxis and infectious endocarditis and drug therapy following dental surgical treatments like placement of implants, pre and peri prosthetic surgery

APPLIED PATHOLOGY:

Inflammation, repair and degeneration, Necrosis and gangrene, Circulatory disturbances, Ischaemia, hyperaemia, chronic venous congestion, oedema, thrombosis, embolism and infarction. Infection and infective granulomas, Allergy and hypersensitive reactions, Neoplasms; Classification of tumors, Carcinogenesis, characteristics of benign and malignant tumors, spread of tumors. Applied histo pathology and clinical pathology.

APPLIED MICROBIOLOGY:

Immunity, knowledge of organisms commonly associated with diseases of the oral cavity (morphology cultural characteristics etc) of strepto, staphylo, , Clostridia group of organisms, Spirochaetes, organisms of tuberculosis, leprosy, diphtheria, actinomycosis and moniliasis etc. Virology, Cross infection control, sterilization and hospital waste management

APPLIED ORAL PATHOLOGY:

Developmental disturbances of oral and Para oral structures, Regressive changes of teeth, Bacterial, viral and mycotic infections of the oral cavity. Dental caries,

diseases of pulp and periapical tissues, Physical and chemical injuries of the oral cavity, oral manifestations of metabolic and endocrine disturbances, Diseases of the blood and blood forming organism in relation to the oral cavity, Periodontal diseases, Diseases of the skin, nerves and muscles in relation to the Oral cavity.

LABORATORY DETERMINATIONS:

Blood groups, blood matching, R.B.C. and W.B.C. count, Bleeding and clotting time, PT, PTT and INR Smears and cultures – urine analysis and culture. Interpretation of RBS, Glycosylated Hb, GTT

BIOSTATISTICS:

Characteristics and limitations of statistics, planning of statistical experiments, sampling, collection, classification and presentation of data (Tables, graphs, pictograms etc) & Analysis of data, parametric and non parametric tests

Introduction to Biostatistics - Scope and need for statistical application to biological data. Definition of selected terms – scale of measurements related to statistics, Methods of collecting data, presentation of the statistical diagrams and graphs.

Frequency curves, mean, mode of median, Standard deviation and co-efficient of variation, Correlation – Co-efficient and its significance, Binominal distributions normal distribution and Poisson's distribution, Tests of significance.

RESEARCH METHODOLOGY:

Understanding and evaluating dental research, scientific method and the behavior of scientists, understanding to logic – inductive logic – analogy, models, authority, hypothesis and causation,. Measurement and Errors of measurement, presentation of results, Reliability, Sensitivity and specificity diagnosis tests and measurements, Research Strategies, Observation, Correlation, Experimentation and Experimental design. Logic of statistical in(ter)ferences, balance judgements, judgement under uncertainty, clinical vs., scientific judgement, problems with clinical judgement, forming scientific judgements, the problem of contradictory

evidence, citation analysis as a Means of literature evaluation, influencing judgement :

Protocol writing for experimental, observational studies, survey including hypothesis, PICO statement, aim objectives, sample size justification, use of control/placebo, standardization techniques, bias and its elimination, blinding, evaluation, inclusion and exclusion criteria.

APPLIED RADIOLOGY:

Introduction, radiation, background of radiation, sources, radiation biology, somatic damage, genetic damage, protection from primary and secondary radiation, Principles of X-ray production, Applied principles of radio therapy and after care.

ROENTGENOGRAPHIC TECHNIQUES:

Intra oral, extra oral roentgenography, Methods of localization digital radiology and ultra sounds. Normal anatomical landmarks of teeth and jaws in radiograms, temporomandibular joint radiograms, neck radiograms.

Use of CT and CBCT in prosthodontics.

APPLIED MEDICINE:

Systemic diseases and (its) their influence on general health and oral and dental health. Medical emergencies like syncope, hyperventilation, angina, seizure, asthma and allergy/anaphylaxis in the dental offices – Prevention, preparation, medico legal consideration, unconsciousness, respiratory distress, altered consciousness, seizures, drug related emergencies, chest pain, cardiac arrest, premedication, prophylaxis and management of ambulatory patients, resuscitation, applied psychiatry, child, adult and senior citizens.

APPLIED SURGERY & ANESTHESIA:

General principles of surgery, wound healing, incision wound care, hospital care, control of hemorrhage, electrolyte balance. Common bandages, sutures, splints, shifting of critically ill patients, prophylactic therapy, bone surgeries, grafts, etc, surgical techniques, nursing assistance, anesthetic assistance.

Principles in speech therapy, surgical and radiological craniofacial oncology, applied surgical ENT and ophthalmology.

APPLIED PLASTIC SURGERY:

Applied understanding and assistance in programs of plastic surgery for prosthodontics therapy.

APPLIED DENTAL MATERIALS:

- Students should have understanding of all materials used for treatment of craniofacial disorders – Clinical, treatment, and laboratory materials, associated materials, technical considerations, shelf life, storage, manipulations, sterilization, and waste management.
- Students shall acquire knowledge of testing biological, mechanical and other physical properties of all materials used for the clinical and laboratory procedures in prosthodontic therapy.
- Students shall acquire full knowledge and practice of Equipments, instruments, materials, and laboratory procedures at a higher level of competence with accepted methods.

All clinical practices shall involve personal and social obligation of cross infection control, sterilization and waste management.

ORAL AND MAXILLOFACIAL PROSTHODONTICS AND IMPLANTOLOGY:

I. NON-SURGICAL AND SURGICAL METHODS OF PROSTHODONTICS AND IMPLANTOLOGY

a. Prosthodontic treatment for completely edentulous patients – Complete dentures, immediate complete dentures, single complete dentures, tooth supported complete dentures & Implant supported Prosthesis for completely edentulous patients for typical and atypical cases

b. Prosthodontic treatment for partially edentulous patients: - Clasp-retained acrylic and cast partial dentures, transitional dentures, immediate dentures, intra coronal and extra coronal precision attachments retained partial dentures & maxillofacial prosthesis for typical and atypical cases

Prosthodontic treatment for edentulous patients: - Complete Dentures and Implant supported Prosthesis.

Complete Denture Prosthesis – Definitions, terminologies, G.P.T., Boucher's clinical dental terminology

Scope of Prosthodontics – The Cranio Mandibular system and its functions, the reasons for loss of teeth, consequences of loss of teeth and treatment modality with various restorations and replacements

a) **Edentulous Predicament**, Biomechanics of the edentulous state, Support mechanism for the natural dentition and complete dentures, Biological considerations, Functional and Para functional considerations, Esthetic, behavioral and adaptive responses, Temporomandibular joints changes.
b) **Effects of aging of edentulous patients** –aging population, distribution and edentulism in old age, impact of age on edentulous mouth – Mucosa, Bone, saliva, jaw movements in old age, taste and smell, nutrition, aging, skin and teeth, concern for personal appearance in old age
c) **Sequelae caused by wearing complete denture** –the denture in the oral environment – Mucosal reactions, altered taste perception, burning mouth syndrome, gagging, residual ridge (reduction) resorption, denture stomatitis, flabby ridge, denture irritation hyperplasia, traumatic Ulcers, Oral cancer in denture wearers, nutritional deficiencies, masticatory ability and performance, nutritional status and masticatory functions.
d) **Temporomandibular disorders in edentulous patients** –Epidemiology, etiology and management, Pharmacotherapy, Physical modalities, and Bio-behavioral modalities
e) **Nutrition Care for the denture wearing patient** –Impact of dental status onfood intake, Gastrointestinal functions, nutritional needs and status of older adults, Calcium and bone health, vitamin and herbal supplementation, dietary counseling and risk factor for malnutrition in patients with dentures and when teeth are extracted.
f) **Preparing patient for complete denture patients** –Diagnosis and treatment planning for edentulous and partially edentulous patients – familiarity with patients, principles of perception, health questionnaires and identification data, problem identification, prognosis and treatment identification data, problem identification, prognosis and treatment planning – contributing history – patient's history, social information, medical status –

systemic status with special reference to debilitating diseases, diseases of the joints, cardiovascular disorders, diseases of the skin, neurological disorders, oral malignancies, climacteric, use of drugs, mental health – mental attitude, psychological changes, adaptability, geriatric changes – physiologic, pathological, pathological and intra oral changes. Intra oral health – mucus membrane, alveolar ridges, palate and vestibular sulcus and dental health.

Data collection and recording, visual observation, radiography, palpation, measurement of sulci or fossae, extra oral measurement, the vertical dimension of occlusion, diagnostic casts.Specific observations – existing dentures, soft tissue health, hard tissue health – teeth, bone Biomechanical considerations – jaw relations, border tissues, saliva, muscular development – muscle tone, neuromuscular co-ordination, tongue, cheek and lips.

Interpreting diagnostic findings and treatment planning

Pre prosthetic surgery –Improving the patients denture bearing areas and ridge relations.

g) **Non surgical methods** –rest for the denture supporting tissues, occlusal correction of the old prosthesis, good nutrition, conditioning of the patients musculature,

h) **Surgical methods** – Correction of conditions, that preclude optimal prosthetic function – hyper plastic ridge – epulis fissuratum and papillomatosis, frenular attachments and pendulous maxillary tuberosities, ridge augmentation, maxillary and mandibular oral implants, corrections of congenital deformities, discrepancies in jaw size, relief of pressure on the mental foramen, enlargement of denture bearing areas, vestibuloplasty, ridge augmentation, replacement of tooth roots with Osseo integrated denture implants.

i) **Immediate Denture** –Advantages, Disadvantages, Contraindications ,Diagnosis, treatment planning and Prognosis, Explanation to the patient, Oral examinations, Examination of existing prosthesis, Tooth modification, Prognosis, Referrals/adjunctive care, oral prophylaxis and other treatment needs.

First visit, preliminary impressions and diagnostic casts, management of loose teeth, custom trays, final impressions and master casts, two tray or sectional custom impression tray, location of posterior limit and jaw relation records,

setting of the posterior denture teeth / verifying jaw relations and the patient try in.

Laboratory phase, setting of anterior teeth, Wax contouring, flasking and boil out, processing and finishing, surgical templates, surgery and immediate denture insertion, post operative care and patient instructions, subsequent service for the patient on the immediate denture.

j) **Over dentures** (tooth supported complete dentures)–indications andtreatmenT planning, advantages and disadvantages, selection of abutment teeth, loss of abutment teeth, tooth supported complete dentures. Non-coping abutments, abutment with copings, abutments with attachments, submerged vital roots, preparations of the retained teeth.

k) **Single Dentures:** Single Mandibular denture to oppose natural maxillaryteeth, single complete maxillary denture to oppose natural Mandibular teeth to oppose a partially edentulous Mandibular arch with fixed prosthesis,

l) partially edentulous Mandibular arch with removable partial dentures. Opposing existing complete dentures, preservation of the residual alveolar ridge, necessity for retaining maxillary teeth and preventing mental trauma.

m) **Art of communication in the management of the edentulous predicament** – Communication–scope, a model of communication, why communication is important? What are the elements of effective communication? special significance of doctor / patient communication, doctor behavior, The iatro sedative (doctor & act of making calm) recognizing and acknowledging the problem, exploring and identifying the problem, interpreting and explaining the problem, offering a solution to the problem for mobilizing their resources to operate in a most efficient way, recognizing and acknowledging the problem, interpreting and explaining the problem, offering a solution to the problem.

n) **Materials prescribed in the management of edentulous patients -** Denture base materials, General requirements of biomaterials for edentulous patients, requirement of an ideal denture base, chemical composition of denture base resins, materials used in the fabrication of prosthetic denture teeth, requirement of prosthetic denture teeth, denture lining materials and tissue conditioners, cast metal alloys as denture bases – base metal alloys.

o) **Articulators** – **Evolution of concepts,** Classification, selection, limitations, precision, accuracy andsensitivity, and Functions of the articulator and their uses.

Recent advancements including virtual articulator

p) **Fabrication of complete dentures** –complete denture impressions– muscles of facial expressions and anatomical landmarks, support, retention, stability, aims and objectives of preservation, support, stability, aesthetics, and retention. Impression materials and techniques – need of 2 impressions the preliminary impression and final impressions.

Developing an analogue / substitute for the maxillary denture bearing area – anatomy of supporting structures – mucous membrane, hard palate, residual ridge, shape of the supporting structure and factors that influence the form and size of the supporting bones, incisive foramen, maxillary tuberosity, sharp spiny process, torus palatinus, Anatomy of peripheral or limiting structures, labial vestibule, Buccal vestibule, vibrating lines. Preliminary and final impressions, impression making, custom tray and refining the custom tray, preparing the tray to secure the final impression, making the final impression, boxing impression and making the casts

Developing an analogue / substitute for the Mandibular denture bearing area- anatomy of supporting structure, crest of the residual ridge, buccal shelf, shape of supporting structure, mylohyoid ridge, mental foramen, genial tubercles, torus mandibularis, Anatomy of peripheral or limiting structure – labial vestibule, Buccal vestibule, lingual border, mylohyoid muscle, retromylohyoid fossa, sublingual gland region, alveolingual sulcus, Mandibular impressions – preliminary impressions, custom tray, refining, preparing the tray\, final impressions.

q) **Mandibular movements, Maxillo mandibular relations and concepts of occlusion –** Gnathology, identification of shape and location of arch form– Mandibular and maxillary occlusion rims, level of occlusal plane and recording of trail denture base, tests to determine vertical dimension of occlusion, interocclusal & centric relation records. Biological and clinical considerations in making jaw relation records and transferring records from the patients to the articulator, Recording of Mandibular movements – influence of opposing tooth contacts, temporomandibular joint, muscular involvements, neuromuscular regulation of Mandibular motion, the envelope of motion, rest position.

Maxillo – Mandibular relations – the centric, eccentric, physiologic rest

position, vertical dimension, occlusion, recording methods – mechanical, physiological, Determining the horizontal jaw relation – Functional graphics, tactile or interocclusal check record method, Orientation / sagittal relation records, Arbitrary

/ Hinge axis and face bow record, significance and requirement, principles and biological considerations and securing on articulators.

r) Selecting and arranging artificial teeth and occlusion for the edentulous patient – anterior tooth selection, posterior tooth selection, and principles in arrangement of teeth, and factors governing the position of teeth – horizontal & vertical relations. The inclinations and arrangement of teeth for aesthetics, phonetics and mechanics – to concept of occlusion.

s) **The Try in** –verifying vertical dimension, centric relation, establishment ofposterior palatal seal, creating a facial and functional harmony with anterior teeth, harmony of spaces of individual teeth position, harmony with sex, personality and age of the patient, co-relating aesthetics and incisal guidance.

t) **Speech considerations with complete dentures & speech production** – structural and functional demands, neuropsychological background, speech production and the oll of teeth and other oral structures – bilabial sounds, labiodental(s) sounds, linguodental sounds, linguoalveolar sound, articulatoric characteristics, acoustic characteristics, auditory characteristics, linguopalatal and linguoalveolar sounds, speech analysis and prosthetic considerations.

u) **Waxing contouring and processing the dentures their fit and insertion and after care** –laboratory procedure–wax contouring, flasking andprocessing, laboratory remount procedures, ***selective grinding***, finishing and polishing.

Critiquing the finished prosthesis – doctors evaluation, patients evaluation, friends evaluation, elimination of basal surface errors, errors in occlusion, interocclusal records for remounting procedures – verifying centric relation, eliminating occlusal errors.

Special instructions to the patient – appearance with new denture, mastication with new dentures, speaking with new dentures, oral hygiene with dentures, preservation of residual ridges and educational material for patients, maintaining the comfort and health of the oral cavity in the rehabilitated edentulous patients. Twenty-four hours oral examination and treatment and (preventive) Prosthodontic - periodontic recall for oral examination 3 to 4 months intervals

andyearlyintervals.

v) **Implant supported Prosthesis for partially edentulous patients** – Scienceof Osseo integration, clinical protocol ***(diagnostic,surgical and prosthetic***) for treatment with implant supported over dentures, managing problems and complications. Implant Prosthodontics for edentulous patients: current and future directions.

Implant supported prosthesis for partially edentulous patients – Clinical and laboratory protocol: Implant supported prosthesis, managing problems and complications

- Introduction and Historical Review
- Biological, clinical and surgical aspects of oral implants
- Diagnosis and treatment planning
- Radiological interpretation for selection of fixtures
- Splints for guidance fort surgical placement of fixtures
- ***Surgical and*** Intra oral plastic surgery, if any
- Guided bone and Tissue regeneration consideration for implants fixture.
- Implant supported prosthesis for complete edentulism and partial edentulism
- Occlusion for implant supported prosthesis.
- Peri-implant tissue and Management of peri-implantitis
- Maintenance and after care
- Management of failed restoration.
- Work authorization for implant supported prosthesis – definitive instructions, legal aspects, delineation of responsibility.

Prosthodontic treatment for partially edentulous patients – Removable partial Prosthodontics

a. **Scope, definition** and terminology, Classification of partially edentulous arches - requirements of an acceptable method of classification, Kennedy's classification, Applegate's rules for applying the Kennedy classification

b. **Components of RPD** –

i) major connector–mandibular and maxillary

ii) minor connectors, design, functions & form and location of major and minor connectors, tissue stops, finishing lines, reaction of tissue to metallic coverage

iii) Rest and rest seats – form of the Occlusal rest and rest seat, interproximal Occlusal rest seats, internal Occlusal rests, possible movements of partial dentures, support for rests, lingual rests on canines and incisor teeth, incisal rest and rest seat.

iv) Direct retainers- Internal attachments & extracoronal direct retainers. Relative uniformity of retention, flexibility of clasp arms,

stabilizing reciprocal clasp, criteria for selecting a given clasp design, the basic principles of clasp design, circumferential clasp, bar clasp, combination clasp and other type of retainers.

v) Indirect Retainers – denture rotation about an axis, factors

influencing effectiveness of indirect retainers, forms of indirect retainers, auxiliary Occlusal rest, canine extensions from Occlusal rests, canine rests, continuous bar retainers and linguoplates, modification areas, rugae support, direct – indirect retention.

(vi) Teeth and denture bases – types, materials, advantages and dis- advantages, indications and contraindications and clinical use.

Principles of removable partial Denture design – Bio mechanical considerations, and the factors influencing after mouth preparations – Occlusal relationship of remaining teeth, orientation of Occlusal plane, available space for restoration, arch integrity, tooth morphology, response of oral structure to previous stress, periodontal conditions, abutment support, tooth supported and tooth and tissue supported, need for indirect retention, clasp design, need for rebasing, secondary impression, need for abutment tooth modification, type of major connector, type of teeth selection, patients past experience, method of replacing single teeth or missing anterior teeth.

Difference between tooth supported and tissue supported partial dentures. Essentials of partial denture design, components of partial denture design, tooth support, tissue support, stabilizing components, guiding planes, use of splint bar for denture support, internal clip attachments, overlay abutment as support for a denture base, use of a component partially to gain support.

c. **Education of patient**

d. **Diagnosis and treatment planning**

e. **Design, treatment sequencing and mouth preparation**

f. **Surveying** –Description of dental surveyor, purposes of surveying, Aims And objectives in surveying of diagnostic cast and master cast, Final path of insertion, factors that determine path of insertion and removal, Recording relation of cast to surveyor, measuring amount of retentive area Blocking of master cast – paralleled blockout, shaped blockout, arbitrary blockout and relief.

g. **Diagnosis and treatment planning** –Infection control and cross infectionbarriers – clinical and laboratory and hospital waste management, Objectives of prosthodontic treatment, Records, systemic evaluation, Oral examination, preparation of diagnostic cast, interpretation of examination data, radiographic interpretation, periodontal considerations, caries activity, prospective surgical preparation, endodontic treatment, analysis of occlusal factors, fixed restorations, orthodontic treatment, need for determining the design of components, impression procedures and occlusion, need for reshaping remaining teeth, reduction of unfavorable tooth contours, differential diagnosis : fixed or removable partial dentures, choice between complete denture and removable partial dentures, choice of materials

h. **Preparation of Mouth for removable partial dentures** –Oral surgicalpreparation, conditioning of abused and irritated tissues, periodontal preparation – objectives of periodontal therapy,

periodontal diagnosis, control therapy, periodontal surgery.

i. **Impression Materials and Procedures for Removable Partial Dentures** –Rigid materials, thermoplastic materials, Elastic materials, Impressions of the partially edentulous arch, Tooth supported, tooth tissue supported, Individual impression trays.

j. **Support for the Distal Extension Denture Base** –Distal extensionremovable partial denture, Factors influencing the support of distal extension base, Methods of obtaining functional support for the distal extension base.

k. **Laboratory Procedures** –Duplicating a stone cast, Waxing the partialdenture framework, Anatomic replica patterns, Spruing, investing, burnout, casting and finishing of the partial denture framework, making record bases, occlusion rims, making a stone occlusal template from a functional occlusal record, arranging posterior teeth to an opposing cast or template, arrangement of anterior teeth, waxing and investing the partial denture before processing acrylic resin bases, processing the denture, remounting and occlusal correction to an occlusal template, polishing the denture.

l. Initial placement, adjustment and servicing of the removable partial denture –adjustments to bearing surfaces of denture framework, adjustmentof occlusion in harmony with natural and artificial dentition, instructions to the patient, follow – up services

m. **Relining and Rebasing the removable partial denture** –Relining toothsupported dentures bases, relining distal extension denture bases, methods of reestablishing occlusion on a relined partial denture.

n. **Repairs and additions to removable partial dentures** –Broken clasp arms,fractured occlusal rests, distortion or breakage of other components – major and minor connectors, loss of a tooth or teeth not involved in the support or retention of the restoration, loss of an abutment tooth necessitating its replacement and making a new direct retainer, Other types of repairs & repair by soldering.

o. **Removable partial denture considerations in maxillofacial prosthetics** – Maxillofacial prosthetics, intra oral prosthesis, design considerations,maxillary prosthesis, Obturators, speech aids, palatal lifts, palatal augmentations, mandibular prosthesis, treatment planning, framework design, class I resection, Class II resection, mandibular flange prosthesis, jaw relation records.

p. Management of failed restorations and work authorization details.

II. MAXILLOFACIAL REHABILITATION:

Scope, terminology, definitions, cross infection control and hospital waste management, work authorization.

Behavioral and psychological issues in Head and neck cancer, Psychodynamic interactions between clinician and patient. **Cancer Chemotherapy:** Oral Manifestations, Complications, and management, **Radiation therapy of head and neck tumors:** Oral effects, Dental manifestations and dental treatment: Etiology, treatment and rehabilitation (restoration).

Acquired defects of the mandible, acquired defects of hard palate, soft palate, clinical management of edentulous and partially edentulous maxillectomy patients, Facial defects, Restoration of speech, Velopharyngeal function, cleft lip and palate, cranial implants, maxillofacial trauma, Lip and cheek support prosthesis, Laryngectomy aids, Obstructive sleep apnoea, Tongue prosthesis, Oesophageal prosthesis, radiation carriers, Burn stents, Nasal stents, Vaginal and anal stents, Auditory inserts, Trismus appliances, mouth controlled devices for assisting the handicapped, custom prosthesis, conformers, and orbital prosthesis for ocular and orbital defects. Osseo integrated supported facial and maxillofacial prosthesis. Resin bonding for maxillofacial prosthesis, cranial prosthesis Implant rehabilitation of the mandible compromise by radiotherapy, Prosthodontic treatment, Material and laboratory procedures for maxillofacial prosthesis.

III. OCCLUSION

EVALUATION, DIAGNOSIS AND TREATMENT OF OCCLUSAL PROBLEMS:

Scope, definition, terminology, optimum oral health, anatomic harmony, functional harmony, occlusal stability, causes of deterioration of dental and oral health. Anatomical, physiological, neuro – muscular, psychological considerations of teeth; muscles of mastication; temporomandibular joint; intra oral and extra oral and facial musculatures and the functions of Cranio mandibular system.

Occlusal therapy, the stomatognathic system, centric relation, vertical dimension, the neutral zone, the occlusal plane, differential diagnosis of temporomandibular disorders, understanding and diagnosing intra articular problems, relating treatment

to diagnosis of internal derangements of TMJ, Occlusal splints. Selecting instruments for occlusal diagnosis and treatment, mounting casts, Pankey-Mann-Schuyler philosophy of complete occlusal rehabilitation, long

centric, anterior guidance, restoring lower anterior teeth, restoring upper anterior teeth, determining the type of posterior occlusal contours, methods for determining the plane of occlusion, restoring lower posterior teeth, restoring upper posterior teeth, functionally generated path techniques for recording border movements intra orally, occlusal equilibration.

Bruxism, Procedural steps in restoring occlusion, requirements for occlusal stability, solving occlusal problems through programmed treatment planning, splinting, solving

– occlusal wear problems, deep overbite problems, anterior overjet problems, anterior open bite problems. Treating – end to end occlusion, splaed anterior teeth, cross bite problems, Crowded, irregular, or interlocking anterior bite. Using Cephalometric for occlusal analysis, solving severe arch malrelationship problems, transcranial radiography, postoperative care of occlusal therapy.

FIXED PROSTHODONTICS

Scope, definitions and terminology, classification and principles, design, mechanical and biological considerations of components – Retainers, connectors, pontics, work authorization.

- **Diagnosis and treatment planning** –patients history and interview, patientsdesires and expectations and needs, systemic and emotional health, clinical examinations – head and neck, oral – teeth, occlusal and periodontal, Preparation of diagnostic cast, radiographic interpretation, Aesthetics, endodontics considerations, abutment selection – bone support, root proximities and inclinations, selection of abutments for cantilever, pier abutments, splinting, available tooth structures and crown morphology, TMJ and muscles of mastication and comprehensive planning and prognosis.

- **Management of Carious teeth** –caries in aged population, caries

  control, removal caries, protection of pulp, reconstruction measure for compromised teeth – retentive pins, horizontal slots, retentive grooves, prevention of caries, diet, prevention of root caries and vaccine for caries.

- **Periodontal considerations** –attachment units, ligaments, prevention

  Of gingivitis, periodontitis. Microbiological aspect of periodontal diseases, marginal lesion, occlusal trauma, periodontal pockets in attached gingiva, interdental papilla, gingival embrasures, gingival/periodontal prosthesis, radiographic interpretations of Periodontia, intraoral, periodontal splinting – Fixed prosthodontics with periodontially compromised dentitions, placement of margin restorations.

- **Biomechanical principles of tooth preparation** –individual tooth preparations – Complete metal Crowns – P.F.C., All porcelain – Cerestore crowns, dicor crowns, incer**a**m etc. porcelain jacket crowns; partial 3/4, 7/8, telescopic, pin–ledge, laminates, inlays, onlays. Preparations for restoration of teeth– amalgam, glass Ionomer and composite resins. Resin bond retainers, Gingival marginal

preparations – Design, material selection, and biological and mechanical considerations – intracoronal retainer and precision attachments – custom made and prefabricated.

- **Isolation and fluid control –** Rubber dam application(s), tissue dilation– softtissue management for cast restoration, impression materials and techniques, provisional restorations, interocclusal records, laboratory support for fixed Prosthodontics, Occlusion, Occlusal equilibration, articulators, recording and transferring of occlusal relations, cementing of restorations.
- **Resins, Gold and gold alloys, glass Ionomer, restorations.**
- **Restoration of endodontically treated teeth,**
  Stomatognathic Dysfunction and management
- **Management of failed restorations**

Osseo integrated supported fixed Prosthodontics –Osseo integratedsupported and tooth supported fixed Prosthodontics

- **CAD – CAM Prosthodontics**

IV. TMJ – Temporomandibular joint dysfunction – Scope, definitions, and terminology

Temporomandibular joint and its function, Orofacial pain, and pain from the temporomandibular joint region, temporomandibular joint dysfunction, temporomandibular joint sounds, temporomandibular joint disorders, Anatomy related, trauma, disc displacement, Osteoarthrosis/Osteoarthritis, Hyper mobility and dislocation, infectious arthritis, inflammatory diseases, Eagle's syndrome (Styloid – stylohyoid syndrome), Synovial chondromatosis, Osteochondrosis disease, Ostonecrosis, Nerve entrapment process, Growth changes, Tumors, Radiographic imaging

- Etiology, diagnosis and cranio mandibular pain, differential diagnosis and management of orofacial pain – pain from teeth, pulp, dentin, muscle pain,

TMJ pain

– psychologic, physiologic – endogenous control, acupuncture analgesia, Placebo

effects on analgesia, Trigeminal neuralgia, Temporal arteritis

- Occlusal splint therapy – construction and fitting of occlusal splints, management of occlusal splints, therapeutic effects of occlusal splints, occlusal splints and general muscles performance, TMJ joint uploading and anterior repositioning appliances, use and care of occlusal splints.

- Occlusal adjustment procedures – Reversible – occlusal stabilization splints and physical therapies, jaw exercises, jaw manipulation and other physiotherapy or irreversible therapy – occlusal repositioning appliances, orthodontic treatment, Orthognathic surgery, fixed and removable prosthodontic treatment and occlusal adjustment, removable prosthodontic treatment and occlusal adjustment. Indication for occlusal adjustment, special nature of orofacial pain, Psychopathological considerations, occlusal adjustment philosophies, mandibular position, excursive guidance, occlusal contact scheme, goals of occlusal adjustment, significance of a slide in centric, Preclinical procedures, clinical procedures for occlusal adjustment.

V. ESTHETICS

SCOPE,

DEFINITIONS :

Morpho psychology and esthetics, structural esthetic rules –facial components, dental components, gingival components and physical components. Esthetics and its relationship to function – Crown morphology, physiology of occlusion, mastication, occlusal loading and clinical aspect in bio esthetic aspects, Physical and physiologic characteristic and muscular activities of facial muscle, perioral anatomy and muscle retaining exercises Smile – classification and smile components, smile design, esthetic restoration of smile, Esthetic management of the dentogingival unit, intraoral

materials for management of gingival contours, and ridge contours, Periodontal esthetics, Restorations – Tooth colored restorative materials, the clinical and laboratory aspects, marginal fit, anatomy, inclinations, form, size, shape, color, embrasures & contact point.

Prosthodontic treatment should be practiced by developing skills, by treating various and more number of patients to establish skill to diagnose and treatment and after care with bio-mechanical, biological, bio-esthetics, bio-phonetics. All treatments should be carried out in more numbers for developing clinical skills.

- Infection control, cross infection barrier – clinical & lab ; hospital & lab waste management

Teaching / Learning Activities

The post graduate is expected to complete the following at the end of :

I YEAR M.D.S.

- Theoretical exposure of all applied sciences
- ***Pre-clinical*** exercises involved in prosthodontic therapy for assessment
- Commencement of library assignment within six months
- To carry out short epidemiological study relevant to prosthodontics.
- Acquaintance with books, journals and referrals.
- To differentiate various types of articles published in and critically appraise based on standard reference guidelines.
- To develop the ability to gather evidence from published articles.
- To acquire knowledge of published books, journals and websites for the purpose of gaining knowledge and reference – in the field of ***Oral and Maxillofacial***

Prosthodontics and Implantology

- Acquire knowledge of instruments, equipment, and research tools in Prosthodontics.
- To acquire knowledge of Dental Material Science – Biological and biomechanical & bio-esthetics, knowledge of using material in laboratory and clinics including testing methods for dental materials.
- Submit a protocol for their dissertation before Institutional Review Board And Institutional Ethics Committee.
- Participation and presentation in seminars, didactic lectures.

II YEAR M.D.S.

- Acquiring confidence in obtaining various phases and techniques in removable and fixed prosthodontics therapy
- Acquiring confidence by clinical practice with sufficient number of Patient srequiring tooth and tooth surface restorations
- Fabrication of adequate number of complete denture prosthesis following, higher clinical approach by utilizing semi-adjustable articulators, face bow and graphic tracing.
- Understanding the use of dental surveyor and its application in diagnosis and treatment plan in R.P.D.
- Adequate number of R.P.D's covering all partially edentulous situations.
- Adequate number of Crowns, Inlays, laminates, ***FDP (fixed dental prosthesis)*** covering all clinical situations.
- Selection of cases and following principles in treatment of partially or complete edentulous patients by implant supported prosthesis.
- Treating single edentulous arch situations by implant supported prosthesis.
- Diagnosis and treatment planning for implant prosthesis.
- Ist stage and IInd stage implant surgery
- Understanding the maxillofacial ***Prosthodontics, treating craniofacial and management of orofacial defects***

- Prosthetic management of TMJ syndrome
- Occlusal rehabilitation
- Management of failed restorations.
- Prosthodontic management of patient with psychogenic disorder.
- Practice of child and geriatric prosthodontics.
- Participation and presentation in seminars, didactic and non didactic Teaching and Training students.

III YEAR M.D.S

- Clinical and laboratory practice continued from IInd year.
- Occlusion equilibration procedures – fabrication of stabilizing splint for para functional disorders, occlusal disorders and TMJ functions.
- Practice of dental, oral and facial esthetics
- The clinical practice of all aspects of Prosthodontic therapy for elderly patients.
- Implants Prosthodontics – Rehabilitation of Partial Edentulism, Complete edentulism and craniofacial rehabilitation.
- Failures in all aspects of Prosthodontics and their management and after care.
- Team management for esthetics, TMJ syndrome and Maxillofacial & Craniofacial Prosthodontics
- Management of Prosthodontic emergencies, resuscitation.

- Candidate should complete the course by attending a large number and variety of patients to master the prosthodontic therapy. This includes the practice management, examinations, treatment planning, communication with patients, clinical and laboratory techniques materials and instrumentation required in different aspects of prosthodontic therapy, Tooth and Tooth surface restoration, Restoration of root treated teeth, splints for periodontal rehabilitations and fractured jaws, complete dentures, R.P.D's, F.D.P's, Immediate dentures, over dentures, implant

supported prosthesis, maxillofacial and body prosthesis, occlusal rehabilitation.

- Prosthetic management of TMJ syndrome
- Management of failed restorations
- Should complete and submit Main Dissertation assignment 6 months prior to examination.
- Candidates should acquire complete theoretical and clinical knowledge through seminars, symposium, workshops and reading.
- Participation and presentation in seminars, didactic lectures

PROSTHODONTIC TREATMENT MODALITIES

1) Diagnosis and treatment planning prosthodontics

2) Tooth and tooth surface restorations

- Fillings
- Veneers – composites and ceramics
- Inlays- composite, ceramic and alloys
- Onlay – composite, ceramic and alloys
- Partial crowns – ¾ th, 4/5th, 7/8th, Mesial ½ crowns
- Pin-ledge
- Radicular crowns
- Full crowns

3) Tooth replacements

	Partial	**Complete**
• Tooth supported	Fixed partial denture	Overdenture
• Tissue supported	Interim partial denture	Complete denture
	Intermediate partial denture	Immediate denture
		Immediate complete denture

	• Tooth and tissue Supported	Cast partial denture Precision attachment	Overdenture
	• Implant supported	Cement retained Screw retained Clip attachment	Bar attachment Ball attachment
	• Tooth and implant Supported	Screw retained Cement retained	Screw retained Cement retained
Root supported	Dowel and core		
	Over denture		
Pin retained			
	• Precision attachments • Intra coronal attachments • Extra coronal attachments • Bar – slide attachments • Joints and hinge joint attachments		

4) Tooth and tissue defects (Maxillo- facial and Cranio-facial prosthesis)

A. Congenital Defects

a. Cleft lip and palate

b. Pierre Robin Syndrome

c. Ectodermal dysplasia

d. Hemifacial microstomia — cast partial dentures

e. Anodontia — implant supported prosthesis

f. Oligodontia — complete dentures

g. Malformed teeth — fixed partial dentures

B. Acquired defects

a. Head and neck cancer patients – prosthodontic splints and stents

b. Restoration of facial defects

- Auricular prosthesis
- Nasal prosthesis
- Orbital prosthesis
- Craniofacial implants

c. Midfacial defects

d. Restoration of maxillofacial trauma

e. Hemimandibulectomy } cast partial denture

f. Maxillectomy — implant supported Dentures

g. Lip and cheek support prosthesis — complete dentures

h. Ocular prosthesis

i. Speech and Velopharyngeal prosthesis

j. Laryngectomy aids

k. Esophageal prosthesis

l. Nasal stents

m. Tongue prosthesis

n. Burn stents

o. Auditory inserts

p. Trismus appliances

5) T.M.J and Occlusal disturbances

a. Occlusal equilibration

b. Splints – Diagnostic

- Repositioners / Deprogrammers

c. Anterior bite planes

d. Posterior bite planes

e. Bite raising appliances

f. Occlusal rehabilitation

6) Esthetic/Smile designing

a. Laminates / Veneers

b. Tooth contouring (peg laterals, malformed teeth)

c. Tooth replacements

d. Team management

7) Psychological therapy

a. Questionnaires

b. Charts, papers, photographs

c. Models

d. Case reports

e. Patient counseling

f. Behavioral modifications

g. Referrals

8) Geriatric Prosthodontics

a. Prosthodontics for the elderly

b. Behavioral and psychological counseling

c. Removable Prosthodontics

d. Fixed Prosthodontics
e. Implant supported Prosthodontics
f. Maxillofacial Prosthodontics
g. Psychological and physiological considerations

9) Preventive measures

a. Diet and nutrition modulation and counseling
b. Referrals

The bench work should be completed before the start of clinical work during the first year of the MDS Course

I. Complete dentures

1. Arrangements on adjustable articulator for
   - Class I
   - Class II
   - Class III
2. Various face bow transfers to adjustable articulators
3. Processing of characterized anatomical dentures

***II*. Removable partial dentures**

1. Design for Kennedy's Classification (Survey, block out and design)
   a. Class I
   b. Class II
   c. Class III
   d. Class IV
2. Designing of various components of RPD
3. Wax pattern on refractory cast
   a. Class I

b. Class II
c. Class III
d. Class IV

4. Casting and finishing of metal frameworks

5. Acrylisation on metal frameworks for
   Class I
   Class III with modification

III. Fixed Partial Denture

1. Preparations on ivory teeth / natural teeth
   - FVC for metal
   - FVC for ceramic
   - Porcelain jacket crown
   - Acrylic jacket crown
   - PFM crown
   - 3/4th (canine, premolar and central)
   - 7/8th posterior
   - Proximal half crown
   - Inlay – Class I, II, V
   - Onlay – Pin ledged, pinhole
   - Laminates

IV. Maxillofacial prosthesis

- Eye
- Ear
- Nose
- Face
- Body defects
  - Cranial

- Maxillectomy
- Hemimandibulectomy

- Finger prosthesis
- Guiding flange
- Obturator

V. Implant supported prosthesis

1. Step by step procedures –***Surgical and*** laboratory phase

VI. Other exercises

1. TMJ splints – stabilization appliances, maxillary and Mandibular repositioning appliances
2. Anterior disocclusion appliances
3. Chrome cobalt and acrylic resin stabilization appliances
4. Modification in accommodation of irregularities in dentures
5. Occlusal splints
6. Periodontal splints
7. Precision attachments – custom made
8. Over denture coping
9. Full mouth rehabilitation (by drop wax technique, ceramic build up)
10. TMJ appliances – stabilization appliances

Note : To eliminate Partial Veneer Crowns in pre clinical work

Note: - Structured module based lectures (7 hours)

-Live demonstration of the digital workflow

- Hands on training in the application of the CAD-CAM software(85 Hours)

thinking, patient centered approach, use of evidence based approach, professionalism, systems based practice approach and communication skills of the student. The

mentioned numbers denote minimal requirement. However, the head of the department has the discretion to fix the quota and assess them systematically. There may be procedures which the student has observed [O] or assisted [A]. The student can however make his entry into his log book or portfolio wherein he/she can make his comments with remarks of the facilitator in the form of a feedback which would reinforcehislearning

PROCEDURE	CATEGORY			
	O	**A**	**PA**	**PI**
Tooth and tooth surface restoration a) Composites – fillings, laminates, inlay, onlay b) Ceramics – laminates, inlays, onlays c) Glass Ionomer				 5 5 5
CROWNS				
FVC for metal				10
Zirconia Full coverage crown	-	-	-	2
FVC for ceramic				10
Precious metal crown or Galvanoformed crown	1	-	1	5
Intraradicular crowns (central, lateral, canine, premolar, and molar)		-	-	5

Crown as implant supported prosthesis	As many	5	5	5
FIXED PARTIAL DENTURES				
Zirconia (3 unit)	-	-	-	01
Porcelain fused to metal (anterior and posterior)				10
Multiple abutments – maxillary and Mandibular full arch				5

Incorporation of custom made and prefabricated precision attachments			2	
Adhesive bridge for anterior/posterior		-		5
CAD – CAM Anterior/Posterior FPD	-	-		5
Interim provisional restorations (crowns and FPDs)				for all crowns and bridges
Immediate fixed partial dentures (interim) with ovate pontic		-	-	5
Fixed prosthesis as a retention and rehabilitation means				
for acquired and congenital defects – maxillofacial Prosthetics				5
Implant supported prosthesis		-		1
Implant – tooth supported prosthesis		-		1
REMOVABLE PARTIAL DENTURE				
Provisional partial denture prosthesis				10

Cast removable partial denture (for Kennedy's Applegate classification with modifications)				3
Removable bridge with precision attachments and Telescopic crowns for anterior and posterior edentulous Spaces				1
Immediate RPD				5
Partial denture for medically compromised and Handicapped patients				2
COMPLETE DENTURES				
Anatomic characterized prosthesis (by using semi adjustable articulator)	-	-		25
Single dentures	-	-		5
Overlay dentures	-	-		5
Interim complete dentures as a treatment prosthesis for abused denture supporting tissues	-	-		5
Complete denture prosthesis (for abnormal ridge relation, ridge form and ridge size)	-	-		5
Complete dentures for patients with TMJsyndromes	-	-		2

Complete dentures for medically compromised and handicapped patients	-	-		2
GERIATRIC PATIENTS				
Handling geriatric patients requiring nutritional counseling, psychological management and management of co-morbitity including xerostomia and systemic problems. Palliative care to elderly.				
IMPLANT SUPPORTED COMPLETE PROSTHESIS				
Implant supported complete prosthesis (maxillary				
and Mandibular)	-	-		1
MAXILLOFACIAL PROSTHESIS				
e.g. Guiding flange/ obturators/ Speech and palatal lift prosthesis/ Eye/ Ear/ Nose/ Face/Finger/Hand/Foot	5 different types as PI			
TMJ SYNDROME MANAGEMENT				
Splints – periodontal, teeth, jaws	-	-	1	1
TMJ supportive and treatment prosthesis	-	-	1	1
Stabilization appliances for maxilla and mandible with freedom to move from IP to CRCP	-	-	-	1
In IP without the freedom to move to CRCP	-	-	-	1

Repositioning appliances, anterior disocclusion appliances	-	-	-	1
Chrome cobalt and acrylic resin stabilization appliances for modification to accommodate for the irregularities in the dentition	-	-	-	1
Occlusal adjustment and occlusal equilibrium appliances	-	-	1	4
FULL MOUTH REHABILITATION				
Full mouth rehabilitation – restoration of esthetics and function of stomatognathic system	-	-	1	2
INTER-DISCIPLINARY TREATMENT MODALITIES				
Inter-disciplinary management – restoration of Oro craniofacial defects for esthetics, phonation, mastication and psychological comforts	-	-	1	2
MANAGEMENT OF FAILED RESTORATION				
Tooth and tooth surface restorations	-	-	-	5
Removable prosthesis	-	-	-	5
Crowns and fixed prosthesis	-	-	-	5

Maxillofacial prosthesis	-	-	-	2
Implant supported prosthesis	-	-	-	1

Occlusal rehabilitation and TMJ syndrome	-	-	-	2
Restoration failures of psychogenic origin	-	-	-	2
Restoration failures to age changes	-	-	-	2

(a) SCHEME OF EXAMINATION:

Theory: Part-I: Basic Sciences Paper - **100 Marks**

Part-II: Paper-I, Paper-II & Paper-III - **300 Marks** (100 Marks for each Paper)

Written examination shall consist of Basic Sciences (Part-I) of three hours duration shall be conducted at the end of First year of MDS course. Part-II Examination shall be conducted at the end of Third year of MDS course. Part-II Examination shall consist of Paper-I, Paper-II and Paper-III, each of three hours duration. Paper-I & Paper-II shall consist of two long answer questions carrying 25 marks each and five questions carrying 10 marks each. Paper-III will be on Essays. In Paper-III three Questions will be given and student has to answer any two questions. Each question carries 50 marks. 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, embryology, growth and development Genetics, Immunology, anthropology, Physiology, nutrition & Biochemistry, Pathology & Microbiology, virology, Applied pharmacology, Research Methodology and bio statistics,. Applied Dental anatomy & histology, Oral pathology & oral Microbiology, Adult and geriatric psychology. Applied dental materials.

Part-II

Paper-I : Removable Prosthodontics and Implant supported prosthesis (Implantology), Geriatric dentistry and Cranio facial Prosthodontics

Paper-II : Fixed Prosthodontics, occlusion, TMJ and esthetics. Paper-III : Essays

**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) DISTRIBUTION OF MARKS:

Theory : (Total 400 Marks)

(1) Part I University Examination (100 Marks):-

There shall be 10 questions of 10 marks each (Total of 100 Marks)

(2) Part II (3 papers of 100 Marks):-

(i) Paper-I: 2 long essay questions of 25 marks each and 5 short essays of 10 marks each. (Total of 100 Marks)

(ii) Paper-II: 2 long essay questions of 25 marks each and 5 short essays of 10 marks each. (Total of 100 Marks)

(iii) Paper III: 2 out of 3 essay questions (50 x 2 = 100 Marks)

Practical and Clinical Examination: 200 Marks

Viva-voce and Pedagogy : 100 Marks

A. Practical / Clinical Examination : 200 Marks

1. **Presentation of treated patients and records during their 3 years Training period** 35 Marks

a.	C.D.	1 mark
b.	R. P.D.	2 marks
c.	F.P.D. including single tooth and surface restoration	2 marks
d.	I.S.P.	5 marks
e.	Occlusal rehabilitation	5 marks

f. T.M.J. 5 marks

g. Maxillofacial Prosthesis 5 marks

h. Pre Clinic Exercises 10 marks

2.Presentation of Clinical Exam CD patient's prosthesis including insertion

75 Marks

1.	Discussion on treatment plan and patient review	10 marks
2.	Tentative jaw relation records	5 marks
3.	Face Bow – transfer	5 marks
4.	Transferring it on articulators	5 marks
5.	Extra oral tracing and securing centric and	15 marks
	protrusive/lateral, record	
6.	Transferring records on articulator and programming.	5 marks
7.	Selection of teeth	5 marks
8.	Arrangement of teeth	10 marks
9.	Waxed up denture trial	10 marks
10.	Check of Fit, insertion and instruction of previously	5 marks
	processed characterised, anatomic complete denture	
	Prosthesis	

ALL STEPS WILL INCLUDE CHAIRSIDE, LAB AND VIVA VOCE

2. Fixed Partial Denture 35 Marks

a. Case discussion including treatment planning and selection of patient for F.P.D. 5 Marks

b. Abutment preparation isolation and fluid control 15 marks

c. Gingival retraction and impressions (conventional/ CAD CAM impressions 10 marks

d. Cementation of provisional restoration 5 marks

3. Removable Partial Denture **25 Marks**

a. Surveying and designing of partial dentate cast. *5 marks*

b. Discussion on components and material selection including occulsal schemes. *10 marks*

4. Implant supported prosthesis (2nd stage- protocol) ***30 marks***

a. Case discussion including treatment planning and selection of patient for ISP *10 marks*

b. II stage preparation, Abutment selection, placement, evaluation *10 marks*

c. Implant impression and making of cast *10 marks*

B. Viva Voce : **100 Marks**

I. Viva-Voce examination: *80 marks*

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

II. **Pedagogy** *20 marks*

To incorporate one each primary or secondary impression in the PG exam to be added in the practical examination in addition to regular exercises.

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POST GRADUATE LOG BOOK

INDEX

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I	ACADEMIC ACTIVITIES	
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SEMINARS

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JOURNAL REVIEW

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UG-TEACHING

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CONTINUED DENTAL EDUCATION PROGRAMME

SL.NO	DATE	TOPIC	REMARKS

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WORKSHOPS/CONFERENCES

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PRE CLINICAL WORK

SL.NO	PRE CLINICAL EXERECISE	DATE	SIGNATURE
I	**Complete Denture:**		
1	Anatomical Land marks: Maxilla and mandible		
2	Various Spacer Designs		
3	Special trays: Maxilla and mandible		
4	Arrangements in mean value articulator		
a	Class I Arrangement(I)		
	Class I Arrangement(II)		
	Class I Arrangement(III)		
b	Class II Arrangement		
c	Class III Arrangement		
d	Cross Arch Arrangement		
5	Arrangement for anatomical articulation- Class I		
a	Processing with characterization of the same		
b	Lab remounting and selective grinding of the same		
II	Removable partial Denture		
1	Design for Kennedy's Classification: (Survey, Block Out , Design and Color Coding)		
a	Class I		
b	Class II		
c	Class III		
d	Class IV		
2	Designing of various components of R.P.D		
3	Wax pattern on Cast		
a	Class I- Dental stone cast		
b	Class II- Refractory cast		
c	Class III- Refractory cast		
d	Class IV- Dental stone cast		
4	Casting and finishing of metal frame works- Class III		
5	Casting and finishing of metal frameworks with teeth		

	arrangement and acrylisation		
III	Fixed Partial Denture:		
1	Preparation on typodont teeth:		
a	FVC for metal-Posterior teeth-36/46		
b	FVC for ceramic-Anterior teeth-11/21		
c	FVC for ceramic-Posterior teeth-16/26		
d	Porcelain Jacket Crown-Anterior teet-11/21		
e	¾ Crown (Canine and premolar)-13,23/14/24		
f	7/8 Crown-17/27		
g	Proximal half Crown-37/47		
h	Inlay-ClassI,II-36/46		
i	Laminates-11/21		
2	Preparation of die system (Pindex) for full arch		
3	Fabrication of wax pattern on all prepared teeth		
4	Fabrication of wax pattern on trimmed occlusal surface of maxillary cast (Full mouth)		
5	Pontic Design in wax pattern:		
a	Ridge lap- Anterior and Posterior		
b	Modified ridge lap-Anterior and posterior		
c	Sanitary		
d	Modified sanitary		
e	Spheroidal,Conical		
f	Ovate		
6	Fabrication of metal framework		
a	Full metal bridge for posterior(3 unit)		
b	Coping for anterior (3 unit)		
c	Full metal with ceramic facing		
d	Metal ceramic crown		
e	Full metal crown		
f	All ceramic crown with characterisation		

g	Post and core		
h	Adhesive bridge for anterior		
7	Laminates		
IV	Maxillofacial Prosthesis:		
a	Eye		
b	Ear		
c	Nose		
d	Obturator		
e	Finger Prosthesis		
V	Other exercises		
	1. TMJ splints- Stabilization Anterior repositioning splints 2. Over denture coping-33,43		
	Precision attachments-custom made (key and key way)		
VI	Implant supported prosthesis		
	Step by step procedures- laboratory phase		

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Clinical Cases

SL.NO	CASES	DATE	O.P Number	Patient name	SIGNATURE
	Complete Denture(Minimum 25)				
I	Neutro centric occlusion(Min 1)				
1					
2					
II	Lingualised occlusion(Min 1)				
1					
2					
III	Monoplane occlusion(Min 1)				
1					
2					
IV	Characterized complete denture(Min 1)				
1					
2					
V	Complete denture with neutral zone concept(Min 1)				
1					
2					
VI	Balanced complete denture using mean value articulator				
1					
VII	Anatomic articulation (using semi adjustable articulator, Min 5)				
1					
2					
3					

4					
5					
6					
7					
VIII	Single complete dentures(Min 2)				
1					
2					
3					
4					
5					
IX	Over dentures(Min 1)				
1					
2					
3					
X	Interim/immediate complete dentures(Min 1)				
1					
2					
XI	Complete Dentures(Using mean value articulator)				
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					

13					
14					
15					
16					
17					
18					
19					
20					
XII	Relining and rebasing (Min 2)				
1					
2					
3					
4					
	Removable partial Dentures				
I	Provisional Partial Denture Prosthesis(Min 8)				
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
II	Cast partial denture(Min 4 arches)				
1					
2					

3					
4					
5					
6					
III	Immediate removable partial dentures(Min 2)				
1					
2					
3					
4					
	CROWNS(min 40)				
I	Metal free ceramic crowns(Min 5)				
1					
2					
3					
4					
5					
6					
7					
8					
II	PFM crowns (Posterior/Anterior, Min 30)				
1					
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39					
40					

III	FVC Metal Crown(Min 5)				
1					
2					
3					
4					
5					
6					
7					
8					
IV	Laminates(Min 2)				
1					
2					
3					
4					
5					
V	Intra radicular crowns/Post &Core (Anterir/Posterior)				
a	Pre fabricated(Min 2)				
1					
2					
3					
4					
5					
b	Custom made(Min 3)				
1					
2					
3					
4					
5					
	FIXED PARTIAL DENTURE(Min 20 units)				
I	Metal free ceramic FPD(Min 3				

	units)				
1					
2					
3					
4					
5					
6					
II	PFM (Anterior/Posterior, Min 17 units)				
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
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24					
25					
III	Precision and semi precision attachments(Min 3)				
1					
2					
3					
4					
5					
	IMPLANTS				
I	Implant Prosthesis(Min 6)				
1					
2					
3					
4					
5					
6					
	MAXILLOFACIAL PROSTHESIS				
I	Definitive Obturator(min 1)				
2					
3					
II	Eye Prosthesis(Min 1)				
1					
	Full mouth rehabilitation				
	TMJ Syndrome Management				
	Splints- Stabilizing and repositioning(min 2)				
1					
2					
3					
4					

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CASE PRESENTATION

SL. NO	DATE	CASE PRESENTED	SIGNATURE
1			
2			
3			
4			
5			

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INTERNAL ASSESSMENT EXAMINATION MARKS

SL NO	Exam	Date	Marks obtained	Signature
1	Entry level bridge course exam			
2	Evaluation exam at the end of 1st year			
	Paper I			
	Paper II			
	Paper III			
3	Evaluation exam at the end of 2nd			
	Paper I			
	Paper II			
	Paper III			
4	Preparatory exam 3rd year			
	Paper I			
	Paper II			
	Paper III			
	Clinical Exam			

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SUMMARY OF AMENDMENTS

YEAR	ACM NOTIFICATIONS	AMENDMENTS	PAGE NO
2021	ACA/43-ACM/2021	– Structured module based lectures (7 hours) – Live demonstration of the digital workflow – Hands on training in the application of the – CAD-CAM software(85 Hours)	39 40
2018	08/33-ACM/2018	– To eliminate Partial Veneer Crowns in pre clinical work – To incorporate one each primary or secondary impression in the PG exam to be added in the practical examination in addition to regular exercises.	39 45
2017	ACA/ACM-30/32017	– Zirconia full coverage Crown	40