Programme Structure

School of Dental Sciences

BDS

(Bachelor of Dental Surgery)

Programme Code: SDS0101

Batch: (2024-29)

1. Standard Structure of the Programme at University Level

1.1 Vision, Mission and Core Values of the University

Vision of the University

To serve the society by being a global University of higher learning in pursuit of academic excellence, innovation and nurturing entrepreneurship.

Mission of the University

1. Transformative educational experience
2. Enrichment by educational initiatives that encourage global outlook
3. Develop research, support disruptive innovations and accelerate entrepreneurship
4. Seeking beyond boundaries

Core Values

1. Integrity
2. Leadership
3. Diversity
4. Community

1.2 Vision, Mission and Core Values of the School

Vision of the School

To serve the society by being a global center in pursuit of academic and professional excellence in the field of dentistry.

Mission of the School

1. Creating a stimulating and flexible learning environment amongst the faculty and students
2. Strongly promoting research, innovation, clinical excellence
3. Promote and inculcate ethical values and continued betterment in the dental profession and in all facets of life.

Core Values

1. Integrity
2. Leadership
3. Diversity
4. Community

1.3 Programme Educational Objectives (PEO)

1.3.1 Programme Educational Objectives (PEO)

PEO1 Adequate knowledge of the scientific foundations on which dentistry is based and good understanding of various relevant scientific methods, principles of Biological functions and be able to evaluate and analyse scientifically various established facts and data.

PEO2 Adequate knowledge of the development, structure and function of the teeth, mouth and jaws and associated tissues both in health and disease and their relationship and effect on general state of health and also bearing on physical and social well-being of the patient.

PEO3 Adequate knowledge of clinical disciplines and methods which provide a coherent picture of anomalies, lesions and diseases of the teeth, mouth and jaws and preventive diagnostic and therapeutic aspects of dentistry.

PEO4 Adequate clinical experience required for general dental practice.

PEO5 Adequate knowledge of the constitution, biological function and behavior of persons in health and sickness as well as the influence of the natural and social environment on the state of health in so far as it affects dentistry.

1.3.2 Map PEOs with Mission Statements:

PEO Statements	School Mission 1	School Mission 2	School Mission 3
PEO1:	3	3	1
PEO2:	3	3	2
PEO3:	2	2	1
PEO4:	2	3	1
PEO5:	1	2	2

1. Slight (Low)
2. Moderate (Medium)
3. Substantial (High)

1.3.3 Programme Outcomes (PO's)

PO1	A graduate should be able to diagnose and manage various common dental problems encountered in general dental practice keeping in mind the expectations and the right of the society to receive the best possible treatment available wherever possible.
PO2	A graduate should acquire the skill to prevent and manage complications if encountered while carrying out various surgical and other procedures.
PO3	A graduate should possess skill to carry out certain investigative procedures and ability to interpret laboratory findings.
PO4	A graduate should Promote oral health and help prevent oral diseases where possible.
PO5	A graduate should be Competent enough to control of pain and anxiety among the patients during dental treatment.
PO6	A graduate should maintain a high standard- of professional ethics and conduct and apply these in all aspects of professional life.
PO7	A graduate should seek to improve awareness and provide possible solutions for oral health problems and needs throughout the community.
PO8	Willing to apply the current knowledge of dentistry in the best interest of the patients and the community.
PO9	Willingness to participate in the CPED Programs to update the knowledge and professional skill from time to time. To help and participate in t implementation of the national oral health policy.
PSO1	A graduate should be sound and able to diagnose and plan out the treatment options for the patient including referral to specialist, where required.
PSO2	A graduate should be keen on inculcating life-long learning process and should have instilled him or her the ethical values of the profession

1.3.4 Mapping of Programme Outcome Vs Programme Educational Objectives

	PEO1	PEO2	PEO3	PEO4	PEO5
PO1	3	2	2	2	1
PO2	2	2	-	3	2
PO3	2	3	1	2	1
PO4	3	1	1	2	2
PO5	1	-	2	2	1
PO6	1	3	1	2	-
PO7	-	1	3	2	2
PO8	2	2	2	1	1
PO9	-	1	2	3	-
PSO1	1	2	-	3	2
PSO2	2	-	3	1	2

1. Slight (Low)

2. Moderate (Medium)

3. Substantial (High)

1.3.5 Programme Articulation Matrix

PROGRAMME OUTCOME COURSES	COURSE NAMES	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PSO 1	PSO 2
CO1	General Human Anatomy including head and neck	-	2	3	-	1	-	-	1	1	-	1
CO2		1	1	3	-	-	-	-	2	2	1	-
CO3		3	2	2	3	2	2	2	3	2	3	3
CO1	Bio Chemistry; General Human Physiology	1	1	1	-	1	-	2	-	1	2	-
CO2		3	1	2	1	1	-	2	1	1	2	-
CO3		1	-	3	1	2	1	2	2	2	3	2
CO1	Dental Anatomy; Embryology and Histology	3	2	2	2	1	-	-	2	1	2	1
CO2		3	1	3	1	-	-	2	1	2	3	1
CO3		3	1	3	1	-	-	1	1	1	3	3

1.3.6 Programme Articulation Matrix

Year-1

PROGRAMME OUTCOME COURSES	COURSE NAMES	PO1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PSO 1	PSO 2
CO1	General Human Anatomy including head and neck	-	2	3	-	1	-	-	1	1	-	1
CO2		1	1	3	-	-	-	-	2	2	1	-
CO3		3	2	2	3	2	2	2	3	2	3	3
CO1	Bio Chemistry; General Human Physiology	1	1	1	-	1	-	2	-	1	2	-
CO2		3	1	2	1	1	-	2	1	1	2	-
CO3		1	-	3	1	2	1	2	2	2	3	2
CO1	Dental Anatomy; Embryology and Histology	3	2	2	2	1	-	-	2	1	2	1
CO2		3	1	3	1	-	-	2	1	2	3	1
CO3		3	1	3	1	-	-	1	1	1	3	3

Year-2

PROGRAMME OUTCOME COURSES	COURSE NAMES	PO1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PSO 1	PSO 2
CO1	General Pathology; Microbiology	2	1	2	-	-	-	1	2	1	2	1
CO2		2	1	2	1	-	1	1	1	1	2	1
CO3		3	2	1	2	1	2	2	3	2	3	1
CO4		3	2	3	1	-	2	1	2	1	1	1
CO1	General & Dental Pharmacology	3	3	1	2	3	2	2	3	2	3	3
CO2		3	3	3	2	1	1	1	1	1	2	3
CO3		3	3	1	1	3	2	2	1	1	2	1
CO1	Dental Materials	1	1	1	1	1	1	-	2	2	3	3
CO2		1	1	1	-	-	-	-	2	2	1	3
CO1	Pre-Clinical Prosthodontics	3	2	1	1	1	2	1	2	2	3	2
CO2	Pre-Clinical Conservative	3	3	-	-	2	2	2	3	3	-	3
CO3		3	3	-	2	2	2	-	3	2	-	3

Year-3

PROGRAMME OUTCOME COURSES	COURSE NAMES	PO1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PSO1	PSO2
CO1	General Medicine	3	3	-	2	3	3	2	3	1	1	3
CO2		3	3	2	1	-	1	1	2	1	3	1
CO3		3	3	-	2	2	1	2	2	1	1	3
CO1	General Surgery	3	3	1	1	-	2	1	1	2	2	2
CO2		2	2	3	1	-	1	2	-	1	2	2
CO1	Oral Pathology and Microbiology	3	2	3	-	-	1	1	2	1	3	3
CO2		-	-	2	-	-	-	-	-	-	1	-
CO3		2	2	1	1	-	-	1	1	1	3	1

Year-4

PROGRAMME OUTCOME COURSES	COURSE NAMES	PO1	PO2	PO3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PSO1	PSO2
CO1	Public Health Dentistry	3	3	1	3	1	-	3	3	1	1	1
CO2		2	1	2	2	-	1	1	2	2	1	1
CO1	Periodontology	2	2	2	2	2	2	2	2	2	3	3
CO2		1	1	1	-	-	3	3	3	2	3	3
CO3		3	3	2	1	2	1	2	1	2	2	2
CO1	Orthodontics & Dentofacial Orthopedics	3	3	3	1	1	1	1	2	2	3	3
CO1	Oral Medicine & Radiology	3	2	1	-	1	1	-	-	1	3	3
CO2		3	3	1	-	1	2	1	2	-	2	2
CO1	Oral & Maxillofacial Surgery	3	2	1	-	2	-	1	1	1	2	1
CO2		3	2	2	-	-	2	1	2	1	3	3
CO3		3	3	1	2	-	-	2	2	2	1	1
CO1	Conservative Dentistry & Endodontics	3	3	2	1	-	-	-	1	-	2	3
CO2		3	3	3	3	3	3	3	3	2	3	3
CO3		2	1	-	-	1	3	3	1	2	1	1
CO4		2	2	-	-	-	1	1	1	3	-	-
CO1	Prosthodontics and Crown & Bridge	3	3	2	1	1	2	2	-	2	3	2
CO2		3	3	1	1	1	-	-	1	1	2	3
CO3		2	2	-	1	1	-	1	2	-	1	1
CO1	Paediatric and Preventive Dentistry	3	2	-	-	2	1	1	2	1	3	2
CO2		3	3	-	1	2	2	2	3	2	2	3

1. Slight (Low)
2. Moderate (Medium)
3. Substantial (High)

Programme Structure
School of Dental Sciences
Bachelor of Dental Surgery (BDS)
Batch: 2024-2029
Year-1

S.No.	Paper ID	Subject Code	Subjects	Teaching Load			Type of Course[1]- 1. CC, 2. AECC 3. SEC, 4.DSE
				L	T	P	
Theory Subjects							
1.	**BDS101**	**BDS101**	General Human Anatomy including head and neck	2	0	5	CC
2.	**BDS102**	**BDS102**	Bio Chemistry	2	0	6	CC
3.	**BDS102**	**BDS102**	General Human Physiology	2	0	6	CC
4.	**BDS103**	**BDS103**	Dental Anatomy; Embryology and Histology	3	0	6	CC
Practical/Viva-Voce/Jury							
5.	**BDS101**	**BDS101**	General Human Anatomy including head and neck	2	0	5	CC
6.	**BDS102**	**BDS102**	Bio Chemistry	2	0	6	CC
7.	**BDS102**	**BDS102**	General Human Physiology	2	0	6	CC
8.	**BDS103**	**BDS103**	Dental Anatomy; Embryology and Histology	3	0	6	CC

Programme Structure
School of Dental Sciences
Bachelor of Dental Surgery (BDS)
Batch: 2024-2029

Year-2

S.No.	Paper ID	Subject Code	Subjects	Teaching Load			Type of Course[1]- 1.CC, 2. AECC, 3.SEC, 4.DSE
				L	T	P	
Theory Subjects							
1.	**BDS201**	**BDS201**	General Pathology	3	0	4	CC
2.	**BDS201**	**BDS201**	Microbiology	3	0	4	CC
3.	**BDS202**	**BDS202**	General & Dental Pharmacology	2	0	4	CC
4.	**BDS203**	**BDS203**	Dental Materials	3	T	4	CC
Practical/Viva-Voce/Jury							
5.	**BDS251**	**BDS251**	Pre-Clinical Prosthodontics an	2	0	5	CC
6.	**BDS252**	**BDS252**	Pre-Clinical Conservative Dent	1	T	6	CC

Programme Structure Template
School of Dental Sciences
Bachelor of Dental Surgery (BDS)
Batch: 2024-2029
Year-3

S.No.	Paper ID	Subject Code	Subjects	Teaching Load			Type of Course[2]- 1.CC, 2.AECC, 3.SEC, 4.DSE
				L	T	P	
THEORY SUBJECTS							
1.	**BDS301**	**BDS301**	General Medicine	2	0	6	CC
2.	**BDS302**	**BDS302**	General Surgery	2	0	6	CC
3.	**BDS303**	**BDS303**	Oral Pathology and Microbiology	2	0	6	CC
Practical/Viva-Voce/Jury							
4.	**BDS301**	**BDS301**	General Medicine	2	0	6	CC
5.	**BDS302**	**BDS302**	General Surgery	2	0	6	CC
6.	**BDS303**	**BDS303**	Oral Pathology and Microbiology	2	0	6	CC

Programme Structure Template
School of Dental Sciences
Bachelor of Dental Surgery (BDS)
Batch: 2024-2029
Year-4

Paper ID	Subject Code	Theory Subjects	Teaching Load			Type of Course[3]- 1.CC, 2. AECC, 3.SEC, 4.DSE
			L	T	P	
BDS401	**BDS401**	Public Health Dentistry	2	0	6	CC
BDS402	**BDS402**	Periodontology	2	0	6	CC
BDS403	**BDS403**	Orthodontics & Dentofacial Orthopedics	2	0	6	CC
BDS404	**BDS404**	Oral Medicine & Radiology	2	0	6	CC
BDS405	**BDS405**	Oral & Maxillofacial Surgery	2	0	6	CC
BDS406	**BDS406**	Conservative Dentistry & Endodontics	2	0	6	CC
BDS407	**BDS407**	Prosthodontics and Crown & Bridge	2	0	6	CC
BDS408	**BDS408**	Paediatric and Preventive Dentistry	2	0	6	CC

Practical/Viva-Voce/Jury						
BDS401	**BDS401**	Public Health Dentistry	2	0	6	CC
BDS402	**BDS402**	Periodontology	2	0	6	CC
BDS403	**BDS403**	Orthodontics & Dentofacial Orthopedics	2	0	6	CC
BDS404	**BDS404**	Oral Medicine & Radiology	2	0	6	CC
BDS405	**BDS405**	Oral & Maxillofacial Surgery	2	0	6	CC
BDS406	**BDS406**	Conservative Dentistry & Endodontics	2	0	6	CC
BDS407	**BDS407**	Prosthodontics and Crown & Bridge	2	0	6	CC
BDS408	**BDS408**	Paediatric and Preventive Dentistry	2	0	6	CC

Course Module – Year 1

2.1 Course Module: Syllabus

School: School of Dental Sciences		Batch: 2024-2029
Program:		BDS (Bachelor of Dental Surgery)
1	**Course Code**	BDS101
2	**Course Title**	General Human Anatomy including embryology & histology
3	**Credits**	NA
4	**Contact Hours (L-T-P)**	2-0-5
	Course Type	Compulsory (CORE)
5	**Course Objective**	1. To know the normal disposition of the structures in the body while clinically examining a patient and while conducting clinical procedures. 2. To know the anatomical basis of disease and injury. 3. To know the microscopic structure of the various tissues, a pre-requisite for understanding of the disease processes. 4. To know the nervous system to locate the site of lesions according to the sensory and or motor deficits encountered. 5. To have an idea about the basis of abnormal development, critical stages of development, effects of teratogens, genetic mutations and environmental hazards. 6. To know the sectional anatomy of head neck and brain to read the features in radiographs and pictures taken by modern imaging techniques. 7. To know the anatomy of cardio-pulmonary resuscitation.
6	**Course Outcomes**	**CO1:** Dental student with knowledge on normal disposition of the structures in the body, microscopic structure of the various tissues, nervous system to locate the site of lesions, sectional anatomy of head neck and brain **CO2:** Dental student possessing skills to locate various structures of head and neck of the body, identify various tissues under microscope **CO3:** Dental student with an integrated knowledge on basic sciences and clinical subjects

7	**Course Description**	The course provides knowledge and insight into, the functional anatomy of the normal human head and neck, functional histology and an appreciation of the genetic basis of inheritance and disease, and the embryological development of clinically important structures

8	**Outline syllabus**			**CO Mapping**
	UNIT 1	**INTRODUCTION**		
	A	Topic	Anatomical terms. Skin, superficial fascia & deep fascia Cardiovascular system, portal system collateral circulation and arteries.	CO1,CO2,CO3
	B	Topic	Lymphatic system, regional lymph nodes. Osteology - Including ossification & growth of bones. Myology – Including types of muscle tissue & innervations.	CO1,CO2,CO3
	C	Topic	Syndesmology – Including classification of Joints. Nervous system	CO1,CO2,CO3
	UNIT 2	**HEAD & NECK**		
	A	Unit B Topic 1	Head and neck	CO1,CO2
	B	Unit B Topic 2	Thorax	CO1,CO2
	C	Unit B Topic 3	Abdomen, Clinical procedures	CO1,CO2,CO3
	UNIT3	**EMBRYOLOGY**		
	A	Unit C Topic 1	Oogenesis, Spermatogenesis, Fertilisation, Placenta, Primitive streak, Neural crest, Bilaminar and trilaminar embryonic disc, Intra embryonic mesoderm	CO1,CO2
	B	Unit C	Formation and face, notochord formation & fate, Pharyngeal arches, pouches & clefts	CO1,CO2

		Topic 3		

	C	Unit C Topic 4	Development of face, tongue, palate, thyroid gland, pituitary gland, salivary glands, and anomalies in their development, Tooth development in brief.	CO1,CO2
	UNIT4	**HISTOLOGY**		
	A	Unit D Topic 1	The Cell, Basic tissues - Epithelium, Connective tissue including cartilage and bone, Muscle Tissue, Nervous tissue: Peripheral nerve, optic nerve, sensory ganglion, motor ganglion, Skin	CO1,CO2
	B	Unit D Topic 2	Classification of Glands Salivary glands (serous, mucous and mixed gland), Blood vessels, Lymphoid tissue	CO1,CO2
	C	Unit D Topic 3	Tooth, lip, tongue, hard palate, oesophagus, stomach, duodenum ,ileum, colon, vermiform appendix Liver, Pancreas, Lung, Trachea ,Epiglottis, Thyroid gland, para thyroid gland, supra renal gland and pituitary gland, Kidney, Ureter, Urinary bladder, Ovary and testis.	CO1,CO2

	UNIT5	**Unit E** **MEDICAL GENETICS**		
	A	Topic 1	Mitosis, meiosis	CO1,CO2
	B	Topic 2	Chromosomes, gene structure	CO1,CO2
	C	Topic 3	Mendelism, modes of inheritance	CO1,CO2

1.	**Course evaluation**	Attendance	Minimum 75% is Needed for both theory and clinical practical
		Quizzes	Taken in every 3 months
		Presentations	Video Presentation
		Any Other	Project based learning, Assignments

		Annual examination	Theory-100 Marks Practical – 100 Marks
2.	**Text book/s***	1. SNELL (Richard S.) Clinical Anatomy for Medical Students, Ed. 5, 2. RJ LAST'S Anatomy –9th edition. 3. Cunningham Manual of Practical Anatomy: Head & Neck & Brain Ed.15.Vol.III, Oxford Medical publication. 4. Functional Histology, Ed. 2, Churchill Livingstone. 5. Medical Embryology, Ed. 6. 6. Grant's Atlas of Anatomy. Williams & Wilkins. 7. WILLIAMS, Gray's Anatomy, Ed.38. , Churchill Livingstone. 8. EMERY, Medical Genetics. 9. B. D. Chaurasia	
3.	**Other References**	TED learning EBSCOHOST Various scientific articles from various sources	

Course Modules –

2.1 Module A1: Syllabus

School: School of Dental Sciences		Batch: 2024-2029
Program:		BDS (Bachelor of Dental Surgery)
1	**Course Code**	BDS102
2	**Course Title**	Bio Chemistry; General Human Physiology
3	**Credits**	NA
4	**Contact Hours (L-T-P)**	2-0-6
	Course Type	Compulsory (CORE)
5	**Course Objective**	**1.** To provide a sound but crisp knowledge on the biochemical basis of the life processes relevant to the human system and to dental/medical practice. **2.** The chemistry portion should strive towards providing information on the functional groups, hydrophobic and hydrophilic moieties and weak valence forces that organise macromolecules.

6	**Course Outcomes**	**CO1:** Dental student with knowledge on normal functioning of all the organ systems and their interactions, relative contribution of each organ system towards the maintenance of total body function, physiological principles underlying the pathogenesis of various diseases and oral and para - oral structures. **CO2:** Dental student with basic skill to conduct and interpret experimental and investigative data **CO3:** Dental student with knowledge on biochemical agents related to dentistry, various micro and macro nutrients.
7	**Course Description**	Students will be able to excel in their knowledge about the human body, its various organ systems, their compositions and functions. Students will also be efficient to determine and to undertake various investigatory lab procedures, biochemical analysis and advanced diagnostic procedures prevalent in the medical field.

8	**Outline syllabus**			**CO Mapping**
	Unit1	**CHEMISTRY OF BIOORGANIC MOLECULES**		
	A	Unit A Topic 1	Carbohydrates	**CO1**
	B	Unit A Topic 2	proteins	**CO1**
	C	Unit A Topic 3	Lipids, Nucleic Acids	**CO1**
	UNIT 2	**MACRONUTERIENTS AND DIGESTION, MICRONUTRIENTS**		
	A	Topic 1	Energy needs: Basal metabolic rate,	**CO1, CO3**
	B		Enzymatic hydrolysis of dietary	**CO1,**

	Topic 2	carbohydrates,	**CO3**	
C	Topic 3	Vitamins, Minerals	**CO1, CO3**	
UNIT 3	**ENERGY METABOLISM**			
A	Unit C Topic 1	Overview: Outlines of glycolysis, pyruvate oxidation and citric acid cycle.	**CO1, CO2**	
B	Unit C Topic 2	Importance of pentose phosphate pathway. Formation of glucuronic acid. Outlines of cholesterol synthesis and breakdown	**CO1**	
C	Unit C Topic 3	Biochemical genetics and protein synthesis, enzyme and metabolic regulation .	**CO1, CO2**	

UNIT 4	**STRUCTURAL COMPONENTS AND BLOOD PROTEINS**		
A	Topic 1	Connective Tissue	**CO1, CO2, CO3**
B	Topic 2	Haemoglobin	**CO1, CO2, CO3**

	UNIT 5	**MEDICAL BIOCHEMISTRY**		
	A	Topic 1	Regulation of blood glucose. Diabetes mellitus and related disorders, Liver function tests	**CO1, CO2, CO3**
	B	Topic 2	Hyperthyroidism and Hypothyroidism: Biochemical evaluation.	**CO1, CO2, CO3**
	C	Topic 3	Inborn errors of amino acid metabolism and muscular dystrophy	**CO1, CO2, CO3**
	UNIT 6	**GENERAL PHYSIOLOGY**		
	A	Unit F Topic 1	Composition and functions of Blood, Muscles and Nerve, Digestive system	**CO1**
	B	Unit F Topic 21	Excretory system, Body temperature and functions of skin, Endocrinology	**CO1**
	C	Unit F Topic 3	Reproduction, Cardiovascular system, Respiratory system, Central nervous system	**CO1**
	UNIT 7	**PRACTICAL PHYSIOLOGY**		
	A	Topic	Physiologic procedures	**CO1,CO2**
	B	Topic	Demonstrations	**CO1,CO2**
	C	Topic	Electrocardiography, Clinical examinations of Organ systems	**CO1,CO2**

1.	**Course evaluation**	Attendance	Minimum 75% is Needed for both theory and clinical practical
		Quizzes	Taken in every 3 months
		Presentations	Video Presentation
		Any Other	Project based learning, flip learning, Assignments, Webinars
		Annual examination	Theory-100 Marks Practical – 100 Marks
2.	**Text book/s***	1. Guyton; Text book of Physiology, 9th edition. 2. Ganong; Review of Medical Physiology, 19th edition Vander; Human physiology, 5th edition 3. Choudhary; Concise Medical Physiology, 2nd edition Chaterjee; Human Physiology, 10th edition 4. A.K. Jain; Human Physiology for BDS students, 1st edition	

		5. Concise text book of Biochemistry (3rd edition) 2001, 6. Nutritional Biochemistry 1995, 7. Text book of Biochemistry with clinical correlations 1997, 8. Biochemistry, 1996. R.K. Murray et. Basic and applied Dental Biochemistry, 1979, R.A.D.	
3.	**Other References**	TED learning EBSCOHOST Various scientific articles from various sources	

2.1 Module A1: Syllabus

		School: School of Dental Sciences	**Batch:2024-29**
		Program:	BDS (Bachelor of Dental Surgery)
1		Course Code	BDS103
2		Course Title	**Dental Anatomy, Embryology & Oral Histology**
3		Credits	
4		Contact Hours (L-T-P)	3-0-6
		Course Status	Compulsory (CORE)
5		Course Objective	1. To make students learn about anatomy of teeth. 2. To educate students about histology of oral tissues. 3. To prepare students about understanding of clinical applications of teeth anatomy. 4. To make students competent about understanding of clinical applications of oral histology.
6		Course Outcomes	CO1: At the end of the course, student is expected to appreciate the normal development, morphology, structure and function of oral tissues & variations in different pathological/non-pathological states.

			CO2: The student should understand the histological basis of various dental treatment procedures. CO3: The students must know the basic knowledge of physiologic ageing process in the dental tissues. CO4: Professional honesty and integrity are to be fostered	
7		Course Description	Under dental anatomy we make students thoroughly understand about anatomy of teeth. Under histology they are made aware of all the tissues in the oral cavity. We also teach them about basic embryology pertaining to oral tissues.	
8		Outline syllabus		CO Mapping
		Unit 1	**Tooth Morphology**	
	A	Topic 1	Human dentition, types of teeth and functions, Tooth numbering systems, Tooth surfaces and their junctions- line angles and point angles. Definition of terms used in dental morphology, geometric concepts in tooth morphology, contact areas and embrasures- Clinical significance.	CO1, CO4
	B	Topic 2	Morphology of deciduous & permanent teeth	CO1, CO3,
	C	Topic 3	Occlusion	CO1
		Unit 2	**Oral Embryology**	
	A	Topic 1	Brief Review of Development of face, jaws, lip, palate and tongue with applied aspects.	CO1, CO3,
	B	Topic 2	Development of teeth with applied aspects.	CO1, CO3,
	C	Topic 3	Eruption of deciduous and permanent teeth. Applied aspect of eruption and Shedding of teeth and its complications	CO1, CO3,
		Unit 3	**Oral Histology of hard tissues**	
	A	Topic 1	Detailed microscopic study of enamel	CO1, CO2
	B	Topic 2	Dentin, cementum	CO1, CO2
	C	Topic 3	Alveolar bone, Temporomandibular joint	CO1, CO2
		Unit 4	**Oral histology of soft tissues**	CO1, CO2
	A	Topic 1	Pulp tissue Periodontal Ligament,	CO1, CO2
	B	Topic 2	Oral Mucosa, Salivary glands, Maxillary sinus	CO1, CO2

	C	Topic 3	Processing of hard and soft tissues for microscopic studies	CO1, CO2
		Unit 5	**Oral Physiology**	
	A	Topic 1	Saliva, Mastication, Deglutition	CO1
	B	Topic 2	Calcium, Phosphorus and Fluoride Metabolism	CO1
	C	Topic 3	Theories of mineralization, Physiology of taste and speech	CO1
1.	**Course Evaluation**	Attendance	Minimum 75% is needed for both theory and clinical practical	
		Quizzes	Taken every 3 months	
		Presentations	Video presentations	
		Any other	Project based learning, assignments	
		Annual Examination	Theory 100 Marks Practical 100 Marks	
		Attendance	Minimum 75% is needed for both theory and clinical practical	
2.		Text book/s*	Tencate, Orbans, Wheelers, James & Avery	
3.		Other References	LMS TED learning EBSCOHOST Scientific articles Webinars	

Course –

2.1 Module A1: Syllabus for Theory Subjects

School: School of Dental Sciences		Batch: 2024-2029
Program:		BDS (Bachelor of Dental Surgery)
1	**Course Code**	BDS201
2	**Course Title**	General Pathology & Microbiology
3	**Credits**	NA
4	**Contact Hours (L-T-P)**	3-0-4
	Course Type	Compulsory (CORE)
5	**Course Objective**	1. To demonstrate and apply basic facts, concepts and theories in the field of Pathology. 2. To recognize and analyse pathological changes at macroscopically and microscopical levels and explain their observations in terms of disease processes. 3. To integrate knowledge from the basic sciences, clinical medicine and dentistry in the study of Pathology. 4. To demonstrate understanding of the capabilities and limitations of morphological Pathology in its contribution to medicine, dentistry and biological research. 5. Understand the basics of various branches of microbiology and able to apply the knowledge relevantly. 6. Have a sound understanding of various infectious diseases and lesions in the oral cavity. 7. To demonstrate ability to consult resource materials outside lectures, laboratory and tutorial classes.
6	**Course Outcomes**	CO1 Dental student with knowledge on pathological changes at macroscopic and microscopic levels, capabilities and limitations of morphological pathology in its contribution to dentistry. CO2 Dental student with an ability to integrate knowledge from the basic sciences to clinical application in dentistry. CO3 Dental student with sound understanding of various infectious diseases and lesions in the oral cavity, various methods of Sterilisation and disinfection.

		CO4 Dental student with basic skills to select, collect and transport clinical specimens to the laboratory and be able to carry out proper aseptic procedures in the dental clinic.
7	**Course Description**	At the end of the course the student should be competent to: • Apply the scientific study of disease processes, which result in morphological and functional alterations in cells, tissues and organs to the study of pathology and the practice of dentistry. • Able to apply this knowledge in their clinical practice. • Apply the knowledge gained in related medical subjects like General Medicine and General Surgery and Dental subjects like Oral Pathology, Community Dentistry, Periodontics, Oral Surgery, Pedodontics, Conservative Dentistry and Oral medicine in higher classes. • Understand and practice various methods of Sterilisation and disinfection in dental clinics.

8	**Outline syllabus**			**CO Mapping**
	BDS-201 A	**Unit A**		
	A	Topic 1	Introduction to Pathology, etiology and Pathogenesis of Disease. General Microbiology: - History, Introduction, Scope, Aims and Objectives. - Morphology and Physiology of bacteria. - Bacterial Genetics and Drug Resistance in bacteria.	**CO1**
	B	Topic 2	Degenerations Amyloidosis, Fatty change, apoptosis, necrosis, gangrene, calcifications. Detail account of Sterlization and Disinfection. Brief account of Culture media and Culture techniques. Basic knowledge of selection, collection, transport, processing of clinical specimens and identification of bacteria	**CO1, CO2, CO3, CO4**

	C	Topic 3	Inflammation - Definition, causes types, and features: Acute inflammation, chronic inflammation. Healing - Regeneration - Repair Bacterial Genetics and Drug Resistance in bacteria.	**CO1, CO2, CO3,**
		Unit 2		
	A	Topic 1	Tuberculosis- (Epidemiology, Pathogenesis, Pathological features of Primary and secondary TB, complications and fate) Syphilis- (Epidemiology, types and stages of syphilis, Pathological features, diagnostic criteria, oral lesions) Typhoid- (Epidemiology, Pathogenesis, Pathological features, Diagnostic criteria) Immunology: - Infection - Definition, Classification, Source, - Mode of transmission and types of Infectious disease. - Immunity - Structure and functions of Immune system - The Complement System - Antigen - Immunoglobulins - Antibodies - General structure and the role played in defense mechanism of the body. - Immune response - Antigen - Antibody reactions - with reference to clinical utility. - Immuno deficiency disorders - a brief knowledge of various types of immunodeficiency disorders - A sound knowledge of immuno deficiency disorders relevant to dentistry. - Hypersensitivity reactions - Autoimmune disorders - Basic knowledge of various types - sound knowledge of	**CO1, CO3,**

			autoimmune disorders of oral cavity and related structures. - Immunology of Transplantation and Malignancy - Immunehaematology	
	B	Topic 2	Thrombosis, Embolism, Ischaemia and Infraction Systematic bacteriology: - Pyogenic cocci - Staphylococcus, Streptococcus, Pneumococcus,Gonococcus, - Meningococcus– brief account of each coccus - detailed account of mode of spread, laboratory diagnosis, Chemo therapy and prevention - Detailed account of Cariogenic Streptococci. - Corynebacterium diphtheriae - mode of spread, important clinical feature, Laboratory diagnosis, Chemotherapy and Active immunisation. - Mycobacteria - Tuberculosis and Leprosy - Clostridium - Gas gangrene, food poisoning and tetanus. - Non-sporing Anaerobes - in brief about classification and morphology, - Spirochaetes - Treponema pallidum - detailed account of Oral Lesions of syphilis, - Borrelia vincentii. - Actinomycetes.	**CO1** **CO3**
	C	Topic 3	Derangements of body fluids- Oedema Disorders of circulation - Hyperaemia - Shock Virology: - Introduction - General properties, cultivation, host - virus interaction with special reference to Interferon. - Brief account of Laboratory diagnosis, Chemotherapy and immuno prophylaxis in general. - A few viruses of relevance to dentistry.	**CO1** **CO3**

			• Herpes Virus • Hepatitis B Virus - brief about other types • Human Immunodeficiency Virus (HIV) • Mumps Virus • Brief - Measles and Rubella Virus • Bacteriophage - structure and significance	
		Unit 3		
	A	Topic 1	Nutritional Disorders: Common Vitamin Deficiencies Mycology: - Brief Introduction	**CO1, CO2, CO3**
	B	Topic 2	Immunological mechanisms in disease - Humoral & cellular immunity - Hypersensitivity & autoimmunity AIDS and Hepatitis. Hypertension - Definition, classification - Pathophysiology - Effects in various organs Diabetes Mellitus - Def, Classification, Pathogenesis, Pathology in different organs Candidiasis – in detail	**CO1, CO2, CO3**
	C	Topic 3	Adaptive disorders of growth - Atrophy & Hypertrophy, Hyperplasia, Metaplasia and Dysplasia Briefly on oral lesions of systemic mycoses.	**CO1, CO3**

		Unit 4		
	A	Topic 1	2. General Aspects of neoplasia a. Definition, terminology, classification b. Differences between benign and malignant neoplasms c. The neoplastic cell d. Metastasis e. Aetiology and pathogenesis of neoplasia, carcinogenesis f. Tumour biology g. Oncogenes and anti-oncogenes	**CO1, CO2, CO3, CO4**

			h. Diagnosis i. Precancerous lesions j. Common specific tumours, Sq papilloma & Ca, Basal cell Ca, Adenoma & Adenoma, Fibroma & Fibrosarcoma, Lipoma and liposarcoma Parasitology: Brief introduction - protozoans and helminths Brief knowledge about the mode of transmission and prevention of commonly seen parasitic infection in the region	
	B	Topic 2	Anaemias: Iron Deficiency anaemia, Megaloblastic anaemia Leukemia: acute and chronic leukemia, diagnosis & clinical features	**CO1, CO2, CO3,**
	C	Topic 3	Diseases of Lymph nodes - Hodgkin's disease, - Non-Hodgkins lymphoma - Metastatic carcinoma Diseases of oral cavity - Lichen planus, Stomatitis, Leukoplakia, Sq cell Ca, Dental caries, Dentigerious cyst, Ameloblastoma Diseases of salivary glands - Normal structure, Sialadenitis, Tumours	**CO1, CO2, CO3,**

		Unit 5		
	A	Topic 1	Common diseases of Bones - Osteomyelitis, Metabolic bone diseases, Bone Tumours, Osteosarcoma, Osteoclastoma, Giant cell Tumour, Ewing's sarcoma, Fibrous dysplasia, Aneurysmal bone cyst	**CO1, CO2, CO3,**
	B	Topic 2	Diseases of Cardiovascular system - Cardiac failure - Congenital heart disease - ASD, VSD, PDA - Fallot's Tetrology - Infective Endocarditis - Atherosclerosis - Ischaemic heart disease	**CO1, CO3, CO2**

	C	Topic 3	Haemorrhagic disorders (coagulation cascade, coagulation disorders) Platelet function, platelet disorders	**CO 201.2, CO 201.3**

1.	**Course evaluation**	Attendance	Minimum 75% is Needed for both theory and clinical practical
		Quizes	Taken in every 3 months
		Presentations	Video Presentation
		Any Other	Project based learning, flip learning, Assignments
		Annual Theory & Practical Examination	100 Marks 100 Marks

2.	**Text book/s***	SR.	Author	Title
		1	Robbins	Pathologic Basis of Disease
		2	Ivan Damjanov & James Linder	Anderson's Pathology Vol1&2 E
		3	Lee, Bithell, Foerster, Athens, Lukens	Wintrobe's clinical Haematolog
		4	R.Ananthanarayan & C.K. Jayaram Paniker	Text book of Microbiology
		5	David Greenwood etal.	Medical Microbiology
		6	Prescott,etal	Microbiology
		7	Bernard D. Davis, etal	Microbiology
		8	Barbara J Howard, etal.	Clinical & Pathogenic Microb
		9	Moselio Schaechter, etal.	Mechanisms of Microbial disea
		10	Tizard	Immunology an Introduction
		11	Evan Roitt et al.	Immunology 3rd edition
3.	**Other References**			

Course Module – Year 2

2.1 Module A1: Syllabus

School: School of Dental Sciences		Batch: 2024-2029
Program:		BDS (Bachelor of Dental Surgery)
1	**Course Code**	BDS202
2	**Course Title**	General & Dental Pharmacology and Therapeutics
3	**Credits**	NA
4	**Contact Hours (L-T-P)**	2-0-4
	Course Type	Compulsory (CORE)
5	**Course Objective**	At the end of the course the student shall be able to: 1. Prescribe drugs for common dental and medical ailments. 2. To appreciate adverse reactions and drug interactions of commonly used drugs. 3. Observe experiments designed for study of effects of drugs. 4. Critically evaluate drug formulations and be able to interpret the clinical pharmacology of marketed preparations commonly used in dentistry. 5. INTEGRATION: Practical knowledge of use of drugs in clinical practice will be acquired through integrated teaching with clinical departments.
6	**Course Outcomes**	**CO 202.1** Dental student with knowledge on indications contraindications interactions, allergies and adverse reactions of commonly used drugs, use of appropriate drugs in disease with consideration to its efficacy, safety for individual and mass therapy needs **CO 202.2** Dental student with an ability to advice special care in prescribing common and essential drugs in special medical situations such as pregnancy, lactation old age, renal, hepatic damage and immune compromised patients **CO202.3** Dental student with skills to prescribe drugs for common dental and medical ailments appreciate adverse reactions and drug interactions of commonly used drugs
7	**Course Description**	The broad goal of teaching under graduate students in pharmacology is to inculcate rational and scientific basis of therapeutics keeping in view of dental curriculum and Profession.

8	**Outline syllabus**			**CO Mapping**
	Unit 1	GENERAL PHARMACOLOGY		
	A	Unit A Topic 1	General principles of pharmacology; sources and nature of drugs dosage forms; prescription writing; pharmacokinetics (absorption, distribution, metabolism and excretion of drugs), mode of action of drugs, combined effects of drugs, receptor mechanism of drug action, factors modifying drug response, adverse drug reactions; drug interactions, Implications of General Principles in clinical dentistry. CNS drugs; General anaesthetics, hypnotics, analgesics psychotropic drugs, anti – epileptics, muscle relaxants, local anaesthetics, Implications of these drugs in clinical dentistry, Autonomic drugs; sympathomimetics,	**CO1,CO2**
	B	Unit A Topic 2	Cardiovascular drugs; Cardiac stimulants; antihypertensive drugs, vasopressor agents, treatment of shock, Antianginal agents and diuretics, Implications of these drugs in clinical dentistry, Autocoids: Histamine, antihistamines, prostaglandins, leukotriens and bronchodilators, Implications of Autocoids in clinical dentistry, G.I.T. Drugs, Purgatives, anti-diarrhoeal, antacids, anti-emetics, Implications of these drugs in clinical dentistry. ,	**CO2**
	C	Unit A Topic 3	Endocrines; Emphasis on treatment of diabetes and glucocorticoids, thyroid and antithyroid agents, drugs affecting calcium balance and anabolic steroids, Implications of these drugs in clinical dentistry,Chemotherapy: Antimicrobial agents (against bacteria, anaerobic infections,	**CO2**

			fungi, virus and broad spectrum). Infection management in dentistry. Phamacotherapy of Tuberculosis, leprosy and chemotherapy of malignancy in general. Implications of Chemotherpy in clinical dentistry, Vitamins: Water soluble vitamins, Vit. D, Vit.K. and Vit. E, Implications of Vitamins in clinical dentistry, Pharmacotherapy of emergencies in dental office and emergency drugs tray Implications of Pharmacotherapy in clinical dentistry, Chealating agents – BAL, EDTA and desferrioxamine,		

Unit 2	DENTAL PHARMACOLOGY		
A	Unit B Topic 1	Anti - septics, astrigents, obtundents, mummifying agents, bleaching agents, styptics, disclosing agents, dentifrices, mouth washes, caries and fluorides.	**CO3**
B	Unit B Topic 2	Pharmacotherapy of common oral conditions on dentistry,practicals and demonstration	**CO3**

1.	**Course evaluation**	Attendance	Minimum 75% is Needed for both theory and clinical practical
		Quizzes	Taken in every 3 months
		Presentations	Video Presentation
		Any Other	Project based learning, Assignments
		Annual examination	Theory-100 marks Practical-100 marks
2.	**Text book/s***	1. R.S.Satoskar, Kale Bhandarkar's Pharmacology and Pharmacolherapentics, 10th Edition, Bombay Popular Prakashan 1991. 2. Bertam G Katzung, Basic and Clinical pharmacology 6th ed. Appleton & Lange 1997. 3. Lauerence D.R. Clinical Pharmacology 8th ed. Churchill Livingstone 1997. 4. Satoskar R.S. & Bhandarkar S.D., Pharmacology and Pharmacotherapeutics part I & part ii, 13th Popular Prakashan Bombay 1993. 5. Tripathi K.D., Essentials of Medical Pharmacology 4th ed Jaypee Brothers 1999.	
3.	**Other References**	TED learning Various scientific articles from various sources	

Course Module–

2.1 Module A1: Syllabus for Theory Subjects

School: School of Dental Sciences		Batch: 2024-2029
Program:		BDS (Bachelor of Dental Surgery)
Branch:		Dental
1	**Course Code**	BDS203
2	**Course Title**	DENTAL MATERIALS
3	**Credits**	NA
4	**Contact Hours (L-T-P)**	3-0-4
	Course Type	Compulsory (CORE)
5	**Course Objective**	1. To understand the evolution and development of science of dental material. 2. To explain purpose of course in dental materials to personnel concerned with the profession of the dentistry. Knowledge of physical, chemical properties and biomechanical requirements of particular restorative procedure. 3. Search for newer and better materials to answer daily requirements with greater satisfaction. 4. To understand and evaluate the claims made by manufactures of dental materials. 5. To present basic chemical and physical properties of Dental materials as they are related to its manipulation to give a sound educational background so that the practice of the dentistry emerged from art to empirical status of science as more information through further research becomes available
6	**Course Outcomes**	CO1- Dental student will have knowledge of physical/chemical/biological & mechanical properties of all materials in dentistry. CO2- Dental students will be able to manipulate the various dental materials in dentistry.
7	**Course Description**	The course offers knowledge of diagnosis and basic chemical and physical properties of Dental materials as they are related to its manipulation to give a sound educational background so that the practice of the dentistry emerged from art to empirical status of science as more information through further research becomes available. It also aims to provide with certain criteria of selection

		and which will enable to discriminate between facts and propaganda with regards to claims of manufactures.

8	**Outline syllabus**			**CO Mapping**
	UNIT 1	**Structure of matter and principles of adhesion**		
	A	Topic 1	Change of state	**CO1, CO2**
	B	Topic 2	Interatomic bond distance and bonding energy	**CO2**
	C	Topic 3	Crystalline and non crystalline structures	**CO2**
	UNIT 2	**Important physical properties applicable to dental materials**		
	A	Topic 1	Physical properties –law of mechanics, acoustics, optics, thermodynamics, electricity, magnetism, radiation	**CO1**
	B	Topic 2	Hue, value, chroma and translucency- law of optics, dealing with phenomenon of light, vision and sight.	**CO1**
	C	Topic 3	Thermal conductivity, COTE,Stress, strain, proportional limit, elastic limit, yield strength, MOE, ductility, malleability,hardness, rheology, abrasion resistance, thixotropic, creep, static creep, dynamic creep, Munsell color system, metamerism, fluoroscence	**CO1**
	UNIT 3	**Biological considerations in use of dental materials**		
	A	Topic 1	Biocompatibility of dental materials, its classification based on contact with soft tissues, affecting vitality of pulp, used for root canal fillings affecting hard tissues of teeth	**CO1, CO2**
	B	Topic 2	Hazards associated with materials, pH affecting pulp, polymers causing chemical irritation, mercury toxicity	**CO1 , CO2**
	C	Topic 3	Microleakage, thermal changes, galvanism, toxic effect of materials, biological evaluation for systemic toxicity	**CO1**
	UNIT 4	**GYPSUM AND GYPSUM PRODUC**		

	A	Topic 1	GYPSUM- Origin, chemical formulae, products manufactured from gypsum, dental plaster, dental stone, die stone, high strength, high expansion stone (Application and manufacturing of each, Macroscopic and microscopic structure of each.	**CO203.1, CO203.2**
	B	Topic 2	**C**hemistry of setting, setting reaction, theories of setting, gauging water, Strength, factors affecting strength: wet strength, dry, strength, tensile strength.	**CO1**
	C	Topic 3	Setting time, working time, measurement of setting time and factors controlling setting time, Slurry: Need & Use, ADA Classification of Gypsum Products, Manipulation including recent methods and advanced methods., Disinfection: Infection Control, liquid, sprays, radiation methods, use of disinfectants, storage of materials.	**CO1,CO2**
	UNIT 5	**IMPRESSION MATERIALS USED IN DENTISTRY**		
	A	Topic 1	Impression Plaster, Impression compound, Zinc Oxide Eugenol Paste, Bite Registration Paste, Non- Eugenol Paste, Hydrocolloids (Reversible and Irreversible)	**CO1**
	B	Topic 2	Elastomeric impression materials, polysulphide, condensation silicones, addition silicones, polyether	**CO1**
	C	Topic 3	Visible light cure polyurethane dimethacrylate, Historical background, definition, purpose, ideal properties, application, composition, setting chemistry, recent advances, Study of properties: working time, setting time, flow, accuracy, strength, flexibility, tear strength, dimensional stability, biological properties, shelf life , infection control,	**CO1**
	UNIT 6	**Synthetic Resins**		
	A	Topic 1	Acrylic resins	**CO1**
	B	Topic 2	Restorative resins	**CO1**
	UNIT 7	**Metal and Alloys**		
	A	Topic 1	Amalgam	**CO1**
	B	Topic 2	Direct filling Gold	**CO1**
	C	Topic 3	Dental Casting Alloys	**CO1**
	UNIT 8	**Dental Waxes Including Inlay Casting Wax**		
	A	Topic 1	Introduction, classification, properties, Dental waxes, manipulation, applications	**CO1, CO2**

	UNIT 9	**Dental Casting Investments**		
	A	Topic 1	Definition, classification, Technical considerations, Defects in casting	**CO1 CO2**
	UNIT 10	**Soldering, Brazing and Welding**		
	A	Topic 1	Definitions, requirements, applications, properties	**CO1**
	UNIT 11	**Wrought Base Metal Alloys**		
	A	Topic 1	Applications, properties	**CO1**
	UNIT 12	**Dental Cements**		
	A	Topic 1	Definition, requirements, properties	**CO1, CO2**
	UNIT 13	**Dental Ceramics**		
	A	Topic 1	Definitions, Applications, Properties, Composition	**CO1**
	UNIT 14	**Abrasion and Polishing Agents**		
	A	Topic 1	Definition, types,	**CO1**
	B	Topic 2	Abrasive action, Technical considerations	**CO1**
	UNIT 15	**Die and Counter Die materials including Electroforming and Electropolishing**		
	A	Topic 1	Types of gypsum products, electroforming, Epoxy resins, Amalgam	**CO1**
	UNIT 16	**Dental implants**		
	A	Topic 1	Evolution, Types, materials	**CO1**
	UNIT 17	**Mechanics of Cutting**		
	A	Topic 1	Burs, points	**CO1, CO2**

1.	**Course evaluation**	Attendance	Minimum 75% is Needed for both theory and clinical practical	
		Quizzes	Taken in every 3 months	
		Presentations	Video Presentation	
		Any Other	Project based learning, flip learning, Assignments	
		Annual Exam	100 Marks Theory	
			100 Marks Practical	
2.	**Text book/s***	1. Phillips Science of Dental Materials – 10th edition 2. Restorative Dental Materials 3. Notes on Dental Materials		Kenneth J. Anusavice Robert G.Craig Notes on Dental Materials
3.	**Other References**	TED learning EBSCOHOST Various scientific articles from various sources		

2.1 Module A1: Syllabus

School: School of Dental Sciences		Batch: 2024-2029
Program:		BDS (Bachelor of Dental Surgery)
Branch:		Dental
1	**Course Code**	BDS251
2	**Course Title**	PRE-CLINICAL PROSTHODONTICS
3	**Credits**	NA
4	**Contact Hours (L-T-P)**	2-0-5
	Course Type	Compulsory (CORE)
5	**Course Objective**	**1:** To introduce students to laboratory and clinical procedures involved in the fabrication of complete dentures in preclinical settings and provide opportunity for deliberate practice.
6	**Course Outcomes**	**CO1** Dental student will have sound knowledge on landmarks in edentulous patients and would be able to do all lab procedures to make a conventional complete denture.
7	**Course Description**	The course offers Knowledge of all procedures to be performed in the clinical appointments in coming years. The Students are given hands-on training on ideal models for practice and learning.

8	**Outline syllabus**			**CO Mapping**
	UNIT 1	**TEETH ARRANGEMENT SCHEDULE**		
	A	Topic 1	Fabrication of Record Base, Fabrication of Occlusal Rims, Articulation, Anterior Teeth Arrangement, Posterior Teeth Arrangement	**CO1**

	B	Topic 2	1st Teeth Arrangement ,2ndTeeth Arrangement,3rd Teeth Arrangement,4th Teeth Arrangement,5th Teeth Arrangement	**CO1**
	C	Topic 3	6th Teeth Arrangement ,7th Teeth Arrangement,8th Teeth Arrangement,9th Teeth Arrangement,10th Teeth Arrangement,11th Teeth Arrangement	**CO1**

1.	**Course evaluation**	Attendance	Minimum 75% is Needed for both theory and clinical practical	
		Quizzes	Taken in every 3 months	
		Presentations	Video Presentation	
		Any Other	Project based learning, flip learning, Assignments	
		Annual Examination	100 Marks	
2.	**Text book/s***	1. Essentials of Complete Prosthodontics		Sheldon Winkler
3.	**Other References**	TED learning EBSCOHOST Various scientific articles from various sources		

Module A1: Syllabus for Theory Subjects

School: School of Dental Sciences		Batch: 2024-2029
Program:		BDS (Bachelor of Dental Surgery)
1	**Course Code**	BDS252
2	**Course Title**	Pre-Clinical Conservative Dentistry
3	**Credits**	NA
4	**Contact Hours (L-T-P)**	1-0-6
	Course Type	Compulsory (CORE)
5	**Course Objective**	**1:** Students are introduced to the pre-clinical conservative dentistry to make them more acquainted to the new dental subject. Students are told about this branch of dentistry, what it deals in & what benefits we can provide to patients after rendering treatment. **2:** Students are provided with knowledge to diagnose dental caries and skilled to treat it. **3:** Students are geared to maintain high standard of professional ethics and conduct and apply it willingly in all aspects of professional life
6	**Course Outcomes**	**CO1: Students will have sound knowledge on hand and rotary cutting instruments** **CO2 Students have basic skills to prepare cavity designs to receive various restorative materials on typhodont**.
7	**Course Description**	The Pre-Clinical Conservative training programme offers students to apply knowledge, skill and ethics in day to day practice. Students gear to have sound knowledge of the hand and rotary cutting instruments and know their application. Students are able to correctly diagnose all caries lesions and have knowledge to manage it. They are skilled to analyse the outcomes of treatment. Students are capable of self- assessment in the end of the programme and are confident and competent to accomplish and execute the knowledge and skills for managing the patient in clinics.

8	**Outline syllabus**			**CO Mapping**
	UNIT 1	**Introduction to Conservative Dentistry**		
	A	Topic 1	Nomenclature	CO2
	B	Topic 2	Fundamental	CO2
	C	Topic 3	Contacts & Contour	CO2
	UNIT 2	**Caries and Its Management**		
	A	Topic 1	Dental Caries	CO2
	B	Topic 2	Management of Deep caries	CO1, CO2
	C	Topic 3	Pulp Protection	CO1, CO2
	UNIT 3	**Fundamentals of Amalgam Restoration**		
	A	Topic 1	Tooth Preparation for amalgam	CO1, CO2
	B	Topic 2	Dental cements	CO1, CO2
	C	Topic 3	Failures of amalgam restoration	CO1, CO2

	UNIT 4	**Isolation Concepts and Barrier Techniques**		
	A	Topic 1	Concepts of Isolation	CO2
	B	Topic 2	Barrier Techniques	CO2
	C	Topic 3	Basic concept of Sterilization	CO2
	UNIT 5	**Introduction to Root Canal and Composites**		
	A	Topic 1	Concepts of RCT in Single rooted tooth	CO1, CO2
	B	Topic 2	Introduction to Cl I Composites restoration	CO1, CO2
	C	Topic 3	finishing & Polishing	CO1, CO2

1.	**Course evaluation**	Attendance	Minimum 75% is Needed for both theory and clinical practical	
		Quizzes	Taken in every 3 months	
		Presentations	Video Presentation	
		Any Other	Project based learning, , Assignments, Class test	
		Annual Examination	100 Marks	
2.	**Text book/s***	1. Pre-Clinical Conservative Dentistry 2. Text Book of Conservative Dentistry		Dr. V. Gopikrishna Sturdevant
3.	**Other References**	LMS TED learning EBSCOHOST Various scientific articles from various sources		

Course Module – III year

2.1 Module A1: Syllabus

School:		**School of Dental Sciences**
Program:		BDS (Bachelor of Dental Surgery)
Batch		2024-29
1	**Course Code**	BDS301
2	**Course Title**	GENERAL MEDICINE
3	**Credits**	NA
4	**Contact Hours (L-T-P)**	2-0-6
	Course Type	Compulsory (CORE)
5	**Course Objective**	Training the student for: • General superficial examination of the body and recording all the necessary vitals. • To correlate various oral manifestations with systemic conditions. • Deal with various medical emergencies in dental practice.
6	**Course Outcomes**	**CO1**Dental student with sound knowledge on oral manifestations of systemic diseases, medical emergencies in dental practice. special precautions/ contraindication of aesthesia **CO2**Dental students with ability to diagnose and manage various common medical problems encountered in general, dental practice and dental emergencies. **CO3**Dental student with basic skill to prevent and manage complications encountered while carrying out various dental surgical and other procedures

	UNIT 1	**Introduction to general medicine**		
	A	Topic 1	Aims of medicine, definition of Signs & Symptoms.	CO2
	B	Topic 2	Diagnosis and its types. Treatment	CO2

	UNIT 2	**Infections**		
	A	Topic 1	Enteric fever, AIDS, Herpes Simplex, Herpes Zoster,	CO1 CO2
	B	Topic 2	Syphilis, Diphtheria, Infectious mononucleosis	CO1 CO2
	C	Topic 3	Mumps, Measles, Rubella, Malaria.	CO1 CO2
	UNIT 3	**Systemic Medicine**		
	A	Topic 1	GIT- Stomatitis, gingival hyperplasia, dysphagia, acid peptic disease, jaundice, acute and chronic hepatitis, cirrhosis of liver ascites.	CO1 CO2
	B	Topic 2	CVS- Acute rheumatic fever rheumatic valvular heart disease, hypertension, ischemic heart disease, infective endocarditis, common arrhythmias, congenital heart disease, congestive cardiac failure.	CO1 CO2 CO3
	C	Topic 3	Respiratory System- Pneumonia, COPD, Pulmonary TB, Bronehial Asthma, Renal System- Acute nephritis Nephrotic syndrome, CNS- Facial palsy, facial pain including trigeminal neuralgia, epilepsy, headache including migraine	CO1 CO2 CO3

	UNIT 4	**Hematology**		
	A	Topic 1	Anemias, Bleeding & Clotting disorders,	CO1 CO2 CO3
	B	Topic 2	leukemias, lymphomas, agranulocytosis, splenomegaly,	CO1 CO2 CO3
	C	Topic 3	Oral manifestations of hematologic disorders, generalized Lymphadenopathy.	CO1 CO2 CO3

	UNIT 5	**Nutrition**		
	A	Topic 1	Macro and Micro Nutrients	CO1 CO2
	B	Topic 2	Deficiency disorders	CO1 CO2

	UNIT 6	**Endocrines**		
	A	Topic 1	Diabetes Mellitus Acromegaly, Hypothyroidism,	CO1 CO2 CO3
	B	Topic 2	Thyrotoxicosis, Calcium metabolism and Parathyroids.	CO1 CO2 CO3
	UNIT 7	**Critical Care**		
	A	Topic 1	Syncope, cardiac arrest, CPR, shock	CO3

1.	**Course evaluation**	Attendance	Minimum 75% is Needed for both theory and clinical practical	
		Quizzes	Taken in every 3 months	
		Presentations	Video Presentation	
		Any Other	Assignments	
		Annual examination	Theory - 100 Marks Practical – 100 Marks	
2.	**Text book/s***	4. Text Book of Medicine 5. Textbook of Medicine		Davidson Hutchinson
3.	**Other References**	LMS TED learning EBSCOHOST Various scientific articles from various sources		

2.1 Module A1: Syllabus

School:		**School of Dental Sciences**
Program:		BDS (Bachelor of Dental Surgery)
Batch		2024-29
1	**Course Code**	BDS302
2	**Course Title**	GENERAL SURGERY
3	**Credits**	NA
4	**Contact Hours (L-T-P)**	2-0-6
	Course Type	Compulsory (CORE)
5	**Course Objective**	• To acquaint the student with various diseases, which may require surgical expertise and to train the student to analyze the history and be able to do a thorough physical examination of the patient. Student will have a good theoretical knowledge of various ailments, and be practically trained to differentiate benign and malignant diseases and be able to decide which patient requires further evaluation.
6	**Course Outcomes**	**CO1** Dental student with sound surgical knowledge on anomalies, lesions and diseases of the teeth, mouth and jaws **CO2** Dental student with ability to diagnose and manage various common surgical problems encountered in general, dental practice and dental emergencies.
7	**Course Description**	Understanding various diseases, that may require surgical expertise and training to do thorough examination. The diseases as related to head and neck region are to be given due importance, at the same time other relevant surgical problems are also to be addressed. Thorough knowledge of various ailments, benign and malignant diseases both related to oral and systemic health. Skills to be developed by the end of teaching are to examine a routine swelling, ulcer and other related diseases and to perform minor surgical procedures such as draining an abscess, taking a biopsy etc.

8	**Outline syllabus**			**CO Mapping**
	UNIT 1	**Introduction to general surgery**		
	A	Topic 1	History of Surgery	CO2
	B	Topic 2	General Principles of Surgery	CO2
	UNIT 2	**Wounds**		
	A	Topic 1	Classification Wound Healing	CO1 CO2
	B	Topic 2	Repair of Wounds Treatment of Wounds Complications of Wounds.	CO1 CO2
	C	Topic 3	Medico-Legal Aspects of Accidental Wounds	CO2
	UNIT 3	**Inflammation & Infection**		
	A	Topic 1	Inflammation of Soft and Hard Tissues. Causes of Inflammation, Varieties, Treatment and Sequelae, Acute and Chronic Abscess Skin Infections, Cellulitis, Carbuncle, and Erysepelas.	CO1 CO2
	B	Topic 2	Specific Infections Such As Tetanus, Gangrene, Syphilis, Gonorrhoea, Tuberculosis, Actinomycosis, Vincents Angina, Cancrum Oris.	CO1 CO2
	C	Topic 3	Pyaemia, Toxaemia and Septicaemia	CO1 CO2
	UNIT 4	**Viral Infections**		
	A	Topic 1	HIV and Hepatitis B with special reference to their prevention and precautions to be taken in treating patients in a carrier state.	CO1

	UNIT 5	**Shock and Haemorrhage**			
	A	Topic 1	Classification, causes, clinical features and management of various types of shock.	CO1	
	B	Topic 2	Syncope, Circulatory collapse. Haemorrhage – different types, causes, clinical features and management	CO1 CO2	
	C	Topic 3	Blood groups, blood transfusion, precautions and complications of blood and their products. Hemophilia's, their transmission, clinical features and management especially in relation to minor dental procedures.	CO1 CO2	
	UNIT 6	**Tumours, Ulcers, Cysts, Sinus and Fistulae**			
	A	Topic 1	Classification, clinical examination and treatment principles in various types of benign and malignant tumours.	CO1 CO2	
	B	Topic 2	Classification, clinical examination and treatment principles in various types of ulcers, cysts, sinus and fistulae.	CO1 CO2	
	UNIT 7	**Diseases of Lymphatic System**			
	A	Topic 1	Head and Neck Region, Tubercular Infection, Lymphomas, Leukaemia's, Metastatic Lymph Node Diseases.	CO1 CO2	

	UNIT 8	**Diseases of The Oral Cavity, Larynx, Nasopharynx**			
	A	Topic 1	Infective and malignant diseases of the oral cavity and oropharynx and salivary glands,	CO1 CO2	
	B	Topic 2	Preventive aspects of premalignant and malignant diseases of the oral cavity.	CO1 CO2	
	C	Topic 3	Infections and tumours affecting these sites. Indications, procedure and complications of tracheostomy	CO1 CO2	
	UNIT 9	**Nervous System**			
	A	Topic 1	Peripheral nerve injuries and related surgical procedures.	CO1 CO2	
	B	Topic 2	Facial and Trigeminal Nerve.	CO1 CO2	
	UNIT 10	**Fractures**			
	A	Topic 1	Principles and Clinical Presentation	CO1 CO2	
	B	Topic 2	Treatment and Healing	CO1 CO2	

	UNIT 11	**Principles of Surgery**			
	A	Topic 1	Principles, Asepsis, Antiseptics, Sterilisation,	CO2	
	B	Topic 2	Principles of anaesthesia and principles of tissue replacement. Knowledge of sutures, drains,	CO2	
	C	Topic 3	Diathermy, cryosurgery and use of Laser in surgery.	CO2	
	UNIT 12	**Anomalies of Face and Jaw**			
	A	Topic 1	Surgical anatomy and development of face. Cleft lip and cleft palate—principles of management.	CO1 CO2	
	B	Topic 2	Differential diagnosis and management of different types of swellings of the jaw.	CO1 CO2	
	UNIT 13	**Biopsy**			
	A	Topic 1	Different types of biopsies routinely used in surgical practice.	CO2	
	UNIT 14	**Thyroid and Parathyroid**			
	A	Topic 1	Surgical anatomy, pathogenesis, clinical features and management of dysfunction of thyroid and parathyroid glands.	CO1 CO2	

1.	**Course evaluation**	Attendance	Minimum 75% is Needed for both theory and clinical practical	
		Quizzes	Taken in every 3 months	
		Presentations	Video Presentation	
		Any Other	Assignments	
		Annual examination	Theory - 100 Marks Practical – 100 Marks	
2.	**Text book/s***	6. Short practice of surgery		Bailey & Love
3.	**Other References**	LMS TED learning		

		EBSCOHOST Various scientific articles from various sources	

2.1 MODULE: Syllabus

	School: School of Dental Sciences		**Batch:2024-29**
	Program:		BDS (Bachelor of Dental Surgery)
1		Course Code	BDS303
2		Course Title	**Oral & Maxillofacial Pathology & Oral Microbiology**
3		Credits	NA
4		Contact Hours (L-T-P)	2-0-6
		Course Status	Compulsory
5		Course Objective	1. To make students learn about various types of diseases occurring in the oral cavity. 2. To educate students about the diagnosis of oral diseases. 3. To make students understand about the correlation of clinical signs & symptoms with pathological processes in the oral cavity. 4. To make students competent about identification of oral diseases through microscopic features. 5. To make students aware about basic aspects of Forensic Odontology.
6		Course Outcomes	**CO1:** At the end of the oral pathology course, student should be able to comprehend different types of pathologies in the oral cavity. **CO2**: The student should understand manifestations of common diseases, their diagnosis & pathogenesis. **CO3**: Student should also be able to understand oral manifestations of systemic diseases. **CO4**: Student should know basic aspects of Forensic Odontology. **CO5**: Professional honesty and integrity are to be fostered.
7		Course Description	Oral Pathology represents the confluence of basic sciences and clinical dentistry. Knowledge of the subject is acquired through gross & microscopic examination of tissues, along with information obtained from clinical history of the patients. Through the science of Oral Pathology, an attempt is made to correlate human biology with signs & symptoms of the disease so that it can be properly diagnosed & adequately treated.
8		Outline syllabus	CO Mapping

	UNIT 1		**Developmental disturbances of oral cavity & Forensic Odontology**	
	A	Topic 1	Developmental disturbances of oral &paraoral structures and forensic odontology	CO1, CO2, CO4, CO5
	B	Topic 2	Benign & malignant tumors of the oral cavity & salivary glands	CO1, CO2, CO5
	C	Topic 3	Cysts & tumors of odontogenic origin	CO1, CO2, CO5
	UNIT 2		**Diseases of microbial origin**	
	A	Topic 1	Bacterial, viral & mycotic infections of the oral cavity	CO1, CO2, CO5
	B	Topic 2	Diseases of periodontium & dental caries	CO1, CO2, CO5
	C	Topic 3	Diseases of pulp & periapical tissues & spread of oral infections	CO1, CO2, CO5
	UNIT 3		**Injuries & repair**	CO1, CO2, CO5
	A	Topic 1	Physical & chemical injuries of the oral cavity	CO1, CO2, CO5
	B	Topic 2	Regressive alterations of teeth	CO1, CO2, CO5
	C	Topic 3	Healing of oral wounds	CO1, CO2, CO5
	UNIT 4		**Disturbances of metabolism & immunologic diseases**	
	A	Topic 1	Oral aspects of metabolic diseases	CO1, CO2,CO3, CO5
	B	Topic 2	Allergic & immunologic diseases of the oral cavity	CO1, CO2,CO3, CO5
	C	Topic 3	Diseases of blood & blood forming organs	CO1, CO2, CO5
	UNIT 6		**Diseases of specific systems**	
	A	Topic 1	Diseases of bone & joints	CO1, CO2,CO5
	B	Topic 2	Diseases of skin	CO1, CO2,CO5
	C	Topic 3	Diseases of nerves & muscles	CO1, CO2,CO5
1	Course Evaluation	Attendance	Minimum 75% is needed for both theory and clinical practical	
		Quizzes	Taken every 3 months	
		Presentations	Video presentations	
		Any other	Project based learning, assignments	

		Annual Examination	Theory	100 Marks	
			Practical	100 Marks	
2		Text book/s*	Shafer's, Neville, Regezi, Cawson, Soames & Southam, Eversole		
3		Other References	LMS TED learning EBSCOHOST Scientific articles Webinars		

Course Module– IV year

2.1 Module: Syllabus

School:		**School of Dental Sciences**
Program:		BDS (Bachelor of Dental Surgery)
Batch		2024-29
1	**Course Code**	BDS401
2	**Course Title**	PUBLIC HEALTH DENTISTRY
3	**Credits**	NA
4	**Contact Hours (L-T-P)**	2-0-6
	Course Type	Compulsory (CORE)
5	**Course Objectives**	1. **Knowledge:** At the conclusion of the course the student shall have a knowledge of the basis of public health, preventive dentistry, public health problems in India, Nutrition, Environment and their role in health, basics of dental statistics, epidemiological methods, National oral health policy with emphasis on oral health policy. 2. **Skill and Attitude:** At the conclusion of the course the students shall have require at the skill of identifying health problems affecting the society, conducting health surveys, conducting health education classes and deciding health strategies. Students should develop a positive attitude towards the problems of he society and must take responsibilities in providing health. 3. **Communication abilities:** At the conclusions of the course the student should be able to communicate the needs of the community efficiently, inform the society of all the recent methodologies in preventing oral disease.

6	**Course Outcomes**	**CO1** Student would be able to understand the community aspects of oral health care delivery. **CO2** Student would be able to carry out proficiently the collection of statistical data (demographic) among Indian Population, birth rates, morbidity and mortality, literacy, per capita income.
7	**Course Description**	Understanding the provision of health care in the community and prevalence of common dental conditions in India. To prevent and control oral diseases and promote oral health through organized community efforts. Understand the community aspects of dentistry and take up leadership role in solving community oral health problems. Teaching how to communicate with the patients by constant emphasis on behavioural modifications. Understanding the concept of oral health programs and policies. Applying the principles of health promotion and disease prevention. Have knowledge of community based preventive measures. Contribution of social, cultural and environmental factors in health and illness. Administer oral hygiene instructions and preventive measures like fluoride application and fissure sealing.

8	**Outline syllabus**			**CO Mapping**
	UNIT 1	**Unit A** **Introduction to Dentistry**		
	A	Topic 1	Introduction to Dentistry: Definition of Dentistry, Scope, aims and objectives of Dentistry.	CO401.1

	B	Topic 2	History of dentistry	CO401.1
	UNIT 2	**Public Health**		
	A	Topic 1	Health & Disease, Public Health	CO1
	B	Topic 2	Epidemiology, Environmental Health	CO1
	C	Topic 3	Health Education, Health Care Delivery System	CO1 CO2
	UNIT 3	**Dental Public Health**		
	A	Topic 1	Epidemiology of dental diseases, Nutrition in dental diseases	CO1 CO2
	B	Topic 2	Survey	CO1
	C	Topic 3	Payments in Dentistry, Preventive Dentistry	CO1 CO2
	UNIT 4	**Research Methodology and Dental Statistics**		
	A	Topic 1	Sampling	CO1 CO2
	B	Topic 2	Biostatistics	CO1 CO2
	C	Topic 3	Research Methodology	CO1 CO2

1.	**Course evaluation**	Attendance	Minimum 75% is Needed for both theory and clinical practical
		Quizzes	Taken in every 3 months
		Presentations	Video Presentation
		Any Other	Project based learning, Assignments, Field trips, Camps
		Annual examination	Theory-100 Marks Practical- 100 Marks
2.	**Text book/s***	7. Essentials of public health dentistry 8. Text Book of Preventive and Social Medicine 9. Textbook of public health dentistry 10. Text book of Preventive and Community Dentistry	Soben Peter K.Park CM Marya SS Hiremath

3.	**Other References**	LMS TED learning EBSCOHOST Various scientific articles from various sources	

Course Module –

2.1 Module : Syllabus

School:		**School of Dental Sciences**
Program:		BDS (Bachelor of Dental Surgery)
Batch:		2024-2029
1	**Course Code**	BDS402
2	**Course Title**	Periodontology
3	**Credits**	NA
4	**Contact Hours (L-T-P)**	2-0-6
	Course Type	Compulsory (CORE) CC
5	**Course Objective**	1. Knowledge of the development, structure and function of tissues both in periodontal health and disease and their relationship with and effect on general health of the patient. 2. Knowledge of diagnosis, prevention and treatment of various gingival and periodontal diseases. 3. Maintain high standard of professional ethics and conduct and apply these in all aspects of professional life 4. Improve awareness and provide possible solutions for periodontal problems throughout the community
6	**Course Outcomes**	**CO1:** Able to diagnose patients' periodontal problems, plan appropriate periodontal treatment and make appropriate decision regarding referral to a specialist wherever required **CO2:** Competent to educate and motivate the patient, give proper instructions to the patients and do periodic recall and evaluation. **CO3:** Competent to perform thorough oral prophylaxis, subgingival scaling, root planing and minor periodontal surgical procedures with familiarization to concept of osseointegration and basic surgical aspects of Implantology
7	**Course Description**	Periodontology is the science dealing with the health and disease of the investing and supporting structures of the teeth and oral mucous membrane. The student shall acquire the skill to perform dental scaling, diagnostic tests of periodontal diseases, prevent periodontal diseases, use instruments to perform treatment with full aseptic precaution, periodontal maintenance and refer the patients who require specialist care.

8	Outline syllabus			CO Mapping
	UNIT 1		**Biologic Basis of Periodontology**	
	A	Topic 1	Normal Periodontium	CO1
	B	Topic 2	Classification and Epidemiology of Periodontal Diseases	CO1
	C	Topic 3	Evidence based Decision Making	CO1, CO2
	UNIT 2		**Etiopathogenesis of Periodontal Diseases**	
	A	Topic 1	Etiology of Periodontal Diseases	CO1
	B	Topic 2	Periodontal pathology	CO1
	C	Topic 3	Relationship between Periodontal Diseases and Systemic Health	CO1, CO2
	UNIT 3	**Unit 3**	**Treatment of Periodontal Diseases**	
	A	Topic 1	Diagnosis, Prognosis and Treatment Plan	CO1, CO2,CO3
	B	Topic 2	Non-Surgical and Surgical Treatment	CO402.3
	C	Topic 3	Periodontal Maintenance	CO1, CO2
	UNIT 4		**Multidisciplinary Periodontics**	
	A	Topic 1	Endodontic – Periodontics Interrelationship	CO1, CO2
	B	Topic 2	Periodontal – Restorative Interrelationship	CO1, CO2
	C	Topic 3	Periodontal – Orthodontic Interrelationship	CO1, CO2
	UNIT 4		**Oral Implantology**	
	A	Topic 1	Biologic aspects or Dental Implants	CO1, CO3
	B	Topic 2	Clinical Aspects of Dental Implants	CO3
	C	Topic 3	Implant Complications and Supportive Implant Care	CO2, CO3

1.	**Course Evaluation**	Attendance	Minimum 75%			
		Annual Examination	**Theory 100 Marks**	Written Exam 70 Marks	Viva Voce 20 Marks	Internal assessment 10 Marks
			Practical	Clinical case	Viva Voce	Internal

			100 Marks	60 Marks	30 Marks	assessment 10 Marks
2.	**Text book/s***	Carranza's Clinical Periodontology, 12th Edition				
3.	**Other References**	Clinical Periodontology and Implantology – Lindhe Contemporary Periodontics – Cohen Oral Health Survey – WHO Various scientific articles from various sources				

Course Modules –

2.1 Module A1: Syllabus for Theory Subjects

School: School of Dental Sciences		Batch: 2024-2029
Program:		BDS (Bachelor of Dental Surgery)
1	**Course Code**	BDS403
2	**Course Title**	ORTHODONTICS & DENTOFACIAL ORTHOPEDICS
3	**Credits**	NA
4	**Contact Hours (L-T-P)**	2-0-6
	Course Type	Compulsory (CORE)
5	**Course Objective**	1. This course is intended to give the student an introduction of orthodontic diagnosis, evaluation and treatment planning with the emphasis on the in elements of orthodontics which the general practitioner should be familiar with in order to treat limited orthodontic cases. 2. The student will learn orthodontic triage: separating patients who can be treated by a general practitioner and those who will require referral to a dental specialist. 3. Orthodontic problems of a dental nature and skeletal are covered as well as the surgical Orthognathic surgery. 4. Different orthodontic treatments are presented in general. Simple orthodontic procedures which the general practitioner can perform to control disease and restore function as part general dental work are discussed and implemented as part of the laboratory requirement.
6	**Course Outcomes**	CO1 Be able to diagnose and treat common orthodontic problems. CO2 Be able to gather an appropriate and complete data base on each patient to provide a strong foundation for diagnosis, treatment planning, treatment consultation, treatment and retention of the patient CO3 Be able to identify all types dental malocclusion and perform necessary counselling.

		CO4 Be able to utilize craniofacial growth and development knowledge in planning and carrying out patient treatment.

7	**Course Description**	Undergraduate programme in Orthodontics is designed to enable the qualifying dental surgeon to diagnose, analyse and treat common orthodontic problems by preventive, interceptive and corrective orthodontic procedures.

8	**Outline syllabus**			**CO Mapping**
	Unit 1			
	A	Topic 1	Introduction, Definition, Historical background, Aims and Objectives of Orthodontics and need for orthodontics care.	**CO1**
	B	Topic 2	Growth and Development: In General a. Definition b. Growth spurts and Differential growth c. Factors influencing growth and Development d. Methods of measuring growth e. Growth theories (Genetic, Sicher's, Scott's, Moss's, Petrovics, Multifactorial) f. Genetic. and epigenetic factors in growth g. Cephalocaudal gradient in growth.	**CO4**
	C	Topic 3	Morphologic Development of Craniofacial Structures a. Methods of bone growth b. Prenatal growth of craniofacial structures c. Postnatal growth and development of: cranial base, maxilla, mandible, dental arches and occlusion.	**CO1, CO4**
	UNIT 2			
	A	Topic 1	Functional.Development of Dental Arches and Occlusioin a. Factors influencing functional development of dental arches and occlusion.	**CO1, CO4**

		b. Forces of occlusion c. Wolfe's law of transformation of bone d. Trajectories of forces	
B	Topic 2	Clinical Application of Growth and Development	**CO4**
C	Topic 3	Malocclusion - In General a. Concept of normal occlusion b. Definition of malocclusion c. Description of different types of dental, skeletal and functional malocclusion.	**CO3**
UNIT 3			
A	Topic 1	Classification of Malocclusion Principle, description, advantages and disadvantages of classification of malocclusion by Angle, Simon, Lischer and Ackerman and Proffitt, Normal and Abnormal Function of Stoma tognathic System Aetiology of Malocclusion a, Definition, importance, classification, local and gel ual aetiological factors. b. Etiology of following different types of malocclusion: 1) Midline diastema 2) Spacing 3) Crowding 4) Cross-Bite: Anterior/ Poe tenor 5) Class III Malocclusion 6) Class II Malocclusion 7) Deep Bite 8) Open bite	**CO2, CO3**
B	Topic 2	10. Diagnosis and Diagnostic Aids a. Definition, Importance and classification of diagnostic aids b. Importance of case history and clinical examination in orthodontics c. Study Models: - Importance and uses - Preparation and preservation of study models d. Importance of intraoral X-rays in orthodontics e. Panoramic radiographs: - Principles, Advantages, disadvantages and uses 1. Cephalometrics: Its advantages, disadvantages 1. Definition 2. Description and use of cephalostat 3. Description and uses of anatomical landmarks lines and angles used in cephalometric analysis	**CO2**

			4. Analysis- Steiner's. Down's, Tweed's, Ricket's-E- line g. Electromyography and its use in orthodontics. h. Wrist X-rays and its importance in orthodontics	
	C	Topic 3	General-Principles in Orthodontic Treatment Planning Of Dental And Skeletal Malocclusions Anchorage in Orthodontics - Definition, Classification, Types and Stability Of Anchorage Biomechanical Principles in Orthodontic Tooth Movement a. Different types of tooth movements b. Tissue response to orthodontic force application c. Age factor in orthodontic tooth movement	**CO2**

	UNIT 4			
	A	Topic 1	Preventive Orthodontics a. Definition b. Different procedures undertaken in preventive orthodontics and their limitations. Interceptive Orthodontics a. Definition b. Different procedures undertaken in interceptive orthodontics c. Serial extractions: Definition, indications, contra-indication, technique, advantages and disadvantages. d. Role of muscle exercises as an interceptive procedure Corrective Orthodontics a. Definition, factors to be considered during treatment planning. I. b. Model analysis: Pont's, Ashley Flowe's, Bolton, Careys, Moyer* Mixed Dentition Analysis c. Methods of gaining space in the arch: - Indications, relative merits and demerits of proximal stripping, arch expansion and extractions d. Extractions in Orthdodontics - indications and selection of teeth for extraction.	**CO1, CO2, CO3**
	B	Topic 2	Orthodontic Appliances: General a. Requisites for orthodontic appliances b. Classification, indications of Removable and Functional Appliances c. Methods of force application d. Materials used in construction of various orthodontic appliances - use of stainless. steel, technical considerations in curing of acrylic, Principles of welding and soldering, fluxes and antifluxes. e. Preliminary knowledge of acid etching and direct bonding. Ethics	**CO1, CO2, CO3**

	C	Topic 3	REMOVABLE ORTHODONTIC APPLIANCES 1) Components of removable appliances 2) Different types of clasps and their use 3) Different types of labial bows and their use 4) Different types of springs and their use 5) Expansion appliances in orthodontics: i) Principles ii) Indications for arch expansion iii) Description of expansion appliances and different types of expansion devices and their uses. iv) Rapid maxillary expansion	**CO1, CO2, CO3**

	UNIT5			
	A	Topic 1	FIXED ORTHODONTIC APPLIANCES 1. Definition, Indications & Contraindications 2. Component parts and their uses 3. Basic principles of different techniques: Edgewise, Begg straight wire.	**CO1, CO2, CO3**
	B	Topic 2	EXTRAORAL APPLIANC ES 1. Headgears 2. Chincup 3. Reverse pull headgears MYOFUNCTIONAL APPLIANCES 1. Definition and principles 2. Muscle exercises and their uses in orthodontics 3. Functional appliances: i) Activator, Oral screens, Frankel's function regulator, bionator twin blocks, lip bumper ii) Inclined planes - upper and lower 18. Orthodontic Management Of Cleft Lip And Palate 19. Principles Of Surgical Orthodontics Brief knowledge of correction of: a. Mandibular Prognathism and Retrognathism b. Maxillary Prognathism and Retrognathism c. Anterior open bite and deep bite d. Cross bite 20. Principle, Differential Diagnosis 8s Methods of Treatment of: 1. Midline diastema 2. Cross bite 3. Open bite 4. Deep bite 5. Spacing 6. Crowding 7. Class II - Division 1, Division 2	**CO1, CO2, CO3**

			8. Class III Malocclusion - True and Pseudo Class III	
	C	Topic 3	Retention and Relapse Definition, Need for retention, Causes of relapse, Methods of retention, Different types of retention devices, Duration of retention, Theories of retention.	**CO3**

Course–

2.1 MODULE A1: Syllabus

School: School of Dental Sciences		Batch: 2024-2029
Program:		BDS (Bachelor of Dental Surgery)
1	**Course Code**	BDS404
2	**Course Title**	ORAL MEDICINE & RADIOLOGY
3	**Credits**	NA
4	**Contact Hours (L-T-P)**	2-0-6
	Course Type	Compulsory (CORE)
5	**Course Objective**	**1:** To train the students to diagnose the common disorders of Orofacial region by clinical examination and with the help of such investigations as may be required and medical management of oro-facial disorders with drugs and physical agents. **2:** To train the students about the importance, role, use and techniques of radiographs/digital radiographs and other imaging modalities in diagnosis. **3:** To train the students in various investigatory procedures like biopsy, exfoliative cytology, Hematological, Microbiological and other tests and investigations necessary for diagnosis and prognosis.
6	**Course Outcomes**	**CO1:** Generate graduates that demonstrate the necessary knowledge, skills and attitude in Oral & Maxillofacial Diagnosis procedure and medical management of such disorder. **CO2** To create confident and competent dental professionals who can accomplish and execute clinical deftness in the diagnosis and management of Orofacial disorders.
7	**Course Description**	The course offers Knowledge: Possess a thorough knowledge and comprehension of diagnosis and medical management of the oro-facial diseases and systemic diseases with oral manifestations, in addition to, the infection control measures in the dental clinical environment and laboratories. Patient management: Take proper chair side history, clinical examination of patient and perform medical and dental diagnostic procedures including radiographs and formulate a proper treatment plan.

		Investigations: Carry out appropriate chair side and radiological investigations to obtain the diagnosis. Develop the skill to advise advanced radiological investigations. Patient treatment: Carry out appropriate and effective medical management of patients, once the diagnosis and treatment plan has been outlined. To motivate, educate and counsel the patient regarding the side effects of Tobacco. Communication skills: Develop communication skills- in particular to explain various options available regarding management and to obtain a true informed consent from the patient. Ask for help from colleagues or seniors when required without hesitation. Life-long Learning: Teach and/or guide, colleagues and other students. Use information technology tools and carries out research in both medicine and radiological fields with the aim of publishing his/her work and presenting the same at scientific platform on a regular basis. Ethics: Adopt ethical principles in all aspects of Oral Medicine & Radiology, special emphasis on Radiation protection measures. Apply high moral and ethical standards while carrying on human or animal

8	**Outline syllabus**			**CO Mapping**
	UNIT 1	**DIAGNOSTIC METHODS**		
	A	Topic 1	Definition and importance of Diagnosis and various types of diagnosis	CO1, CO2
	B	Topic 2	Method of clinical examinations	CO1, CO2
	C	Topic 3	Investigations	CO1, CO2
	UNIT 2	**DIAGNOSIS & DIFFERENTIAL DIAGNOSIS**		
	A	Topic 1	Teeth: Developmental abnormalities, causes of destruction of teeth and their sequelae and discoloration of teeth	CO1, CO2
	B	Topic 2	Diseases of bone and Osteodystrophies, Development disorders, Metabolic disorders.	CO1, CO2
	C	Topic 3	Temparomandibular joint Disorders, Common cysts and Tumors.	CO1, CO2

UNIT 3	**TUMORS**		
A	Topic 1	Soft tissue tumors	CO1, CO2
B	Topic 2	Hard tissue tumors	CO1, CO2
C	Topic 3	Periodontal diseases, Granulomatous disorders, Miscellaneous Disorders: Burkitt lymphoma, sturge - Weber syndrome, CREST syndrome, rendu-osler-weber disease.	CO1

UNIT 4	**ORAL MEDICINE & THERAPEUTICS**		
A	Topic 1	Infections of oral and paraoral structures, Important common mucosal lesions, Cervico-facial lymphadenopathy, Facial pain, Altered sensations: Cacogeusia, halitosis	CO1, CO2
B	Topic 2	Tongue in local and systematic disorder, Oral manifestations of metabolic disorders, endocrine disorders, nutritional deficiencies, blood disorders, Disease of salivary glands, Dermatological diseases with oral manifestations, Immunological diseases with oral manifestations	CO1, CO2
C	Topic 3	Allergy: Local allergic reactions, anaphylaxis, serum sickness , Foci of oral infection and their ill effects on general health, Management of dental problems in medically compromised persons, Precancerous lesions and conditions, Nerve and muscle diseases, Forensic odontology, Therapeutics	CO1, CO2

UNIT 4	**ORAL RADIOLOGY**		
A	Topic 1	Scope of the subject and history of origin, Physics of radiation, radiation units, Biological effects of radiation, Radiation safety and protection measures	CO1
B	Topic 2	Principles of image production, Radiographic techniques: Intra oral, cephalometric & Specialised radiographs, Factors in production of good radiographs, Radiographic normal anatomical landmarks	CO1
C	Topic 3	Faculty radiographs and artefacts in radiographs, Interpretation of radiographs in various abnormalities of teeth, bones and other orofacial tissues, Principles of radiotherapy of oro-facial malignancies and complications of radiotherapy, Contrast radiography and basic knowledge of radio-active isotopes, Radiography in Forensic Odontology	CO1

1.	**Course evaluation**	Attendance	Minimum 75% is Needed for both theory and clinical practical	
		Quizzes	Taken in every 3 months	
		Presentations	Video Presentation	
		Any Other	Project based learning, Assignments, Webinars	
		Annual examination	Theory - 100 Marks Practical – 100 Marks	
2.	**Text book/s***	1. Burket's Oral Medicine diagnosis and treatment 10th edn 2. Dental Radiography: Principles and Techniques 3rd Edn 3. Oral Radiology: Principles and Interpretation 5th edn 4. Oral and Maxillofacial Pathology 3rd edn		Greenberg, Martin S. Haring, Joen White and Pharoah Neville and Brad W
3.	**Other References**	LMS TED learning EBSCOHOST Various scientific articles from various sources		

Course Module –

2.1 Module: Syllabus

School: School of Dental Sciences		Batch: 2024-2029
Program:		BDS (Bachelor of Dental Surgery)
1	**Course Code**	BDS405
2	**Course title**	ORAL AND MAXILLOFACIAL SURGERY
3	**Credits**	NA
4	**Contact Hours (L-T-P)**	2-0-6
	Course Type	Compulsory (CORE)

5	**Course Objective**	**1:** To train the students to diagnose the common disorders of Orofacial region by clinical examination and with the help of such investigations as may be required and medical management of oro-facial disorders with drugs and physical agents. **2:** To train the students about the importance, role, use and techniques of radiographs/digital radiographs and other imaging modalities in diagnosis. **3:** To train the students in various investigatory procedures like biopsy, exfoliative cytology, Hematological, Microbiological and other tests and investigations necessary for diagnosis and prognosis.
6	**Course Outcomes**	**CO1**: Application of knowledge of related medical subjects in management of patients with oral surgical problem. **CO2:** Sufficient knowledge to diagnose manage and treat minor oral surgical procedures **CO3**: Understanding and exposure to the management of major oral surgical problems and principles involved in inpatient management
7	**Course Description**	The course offers Knowledge: Possess a thorough knowledge and comprehension of diagnosis and medical management of the oro-facial diseases and systemic diseases with oral manifestations, in addition to, the infection control measures in the dental clinical environment and laboratories. Patient management: Take proper chair side history, clinical examination of patient and perform medical and dental diagnostic procedures including radiographs and formulate a proper treatment plan. Investigations: Carry out appropriate chair side and radiological investigations to obtain the diagnosis. Develop the skill to advise advanced radiological investigations. Patient treatment: Carry out appropriate and effective medical management of patients, once the diagnosis and treatment plan has been outlined. To motivate, educate and counsel the patient regarding the side effects of Tobacco. Communication skills: Develop communication skills- in particular to explain various options available regarding management and to obtain a true informed consent from the patient. Ask for help from colleagues or seniors when required without hesitation. Life-long Learning: Teach and/or guide, colleagues and other students. Use

		information technology tools and carries out research in both medicine and radiological fields with the aim of publishing his/her work and presenting the same at scientific platform on a regular basis. Ethics: Adopt ethical principles in all aspects of Oral Medicine & Radiology, special emphasis on Radiation protection measures. Apply high moral and ethical standards while carrying on human or animal research.

8	**Outline syllabus**			**CO Mapping**
	UNIT 1	**Introduction**		
	A	Topic 1	Definition, Aims and Objectives.	**CO1, CO2**
	B	Topic 2	Scope of Oral and Maxillofacial Surgery	**CO1, CO2**
	UNIT 2	**Diagnosis in oral surgery**		
	A	Topic 1	History taking	**CO1**
	B	Topic 2	Clinical examination	**CO1, CO2**
	C	Topic 3	Investigations.	**CO1, CO2**
	UNIT 3	**Infection Control**		
	A	Topic 1	Principlesofinfectioncontrolandcross-infectioncontrolwithparticularreferencetoHIV /AIDS and Hepatitis	**CO1, CO2**
	UNIT 4	**Principles of Oral Surgery**		
	A	Topic 1	Asepsis, Important common mucosal lesions, Painless Surgery	**CO1, CO2**
	B	Topic 2	Access – Intra Oral & Extra Oral, Control of haemorrhage during surgery Normal Haemostasis, Local measures available to control bleeding, Hypotensive anaesthesia, etc	**CO1, CO2,CO3**
	C	Topic 3	Drainage & DebridementPurpose of drainage in surgical wounds, Closure of wounds, Post- operative care	**CO1, CO2,CO3**

	UNIT 5	**Exodontia**		
	A	Topic 1	General considerations Ideal Extraction. Indications for extraction of teeth Extractions in medically compromised patients	**CO1**
	B	Topic 2	Forceps or intra-alveolar or closed method. Principles, types of movement, force etc.	**CO1**
	C	Topic 3	Trans-alveolar, surgical or open method, Indications, surgical procedure. Dental elevators: uses, classification, principles in the use of elevators, commonly used elevators, Complications of Exodontia - Complications during exodontia Common to both maxilla and mandible. Post-operative complications -Prevention and management of complications.	**CO1, CO2,CO 3**
	UNIT 6	**Impacted teeth**		
	A	Topic 1	Incidence, definition, aetiology	**CO1**
	B	Topic 2	Impacted mandibular third molar. Classification, reasons for removal, Assessment - both Clinical& radiological Surgical procedures for removal. Complications during and after removal, Prevention and management.	**CO1, CO2**
	C	Topic 3	Maxillary third molar, Indications for removal, classification, Surgical procedure for removal, Impacted maxillary canine Reasons for canine impaction, Localization, indications for removal, Methods of management, labial and palatal approach, Surgical exposure, transplantation, removal etc	**CO1, CO2**
	UNIT 7	**Pre-prosthetic Surgery**		
	A	Topic 1	Definition, classification of procedures	**CO1, CO2**
	B	Topic 2	Corrective procedures: Alveoloplasty, Reduction of maxillary tuberosities, Frenectomies and removal of tori.	**CO1, CO2**
	C	Topic 3	Ridge extension or Sulcus extension procedures Indications and various surgical procedures, Ridge augmentation and reconstruction. Indications, use of bone grafts, Hydroxyapatite Implants - concept of osseo integration Knowledge of various types of implants and surgical procedure to place implants.	**CO1, CO2**
	UNIT 8	**Diseases of the maxillary sinus**		

	A	Topic 1	Surgical anatomy of the sinus. Sinusitis both acute and chronic	**CO1, CO2**
	B	Topic 2	Surgical approach of sinus - Caldwell-Luc procedure Removal of root from the sinus.	**CO1, CO2**
	C	Topic 3	Oro-antral fistula - aetiology, clinical features and various surgical methods for closure.	**CO1**
	UNIT 9	**Disorders of T.M. Joint**		
	A	Topic 1	Applied surgical anatomy of the joint.	**CO1, CO2**
	B	Topic 2	Dislocation -Types, aetiology, clinical features and management. ankylosis - Definition, aetiology, clinical features and management.	**CO1, CO2**
	C	Topic 3	Myo-facial pain dysfunction syndrome, aetiology, clinical features, Management- Non surgical and surgical, Internal derangement of the joint. Arthritis of T.M. Joint.	**CO1, CO2**
	UNIT 10	**Infections of the Oral cavity**		
	A	Topic 1	Introduction, factors responsible for infection, course of odontogenic infections, spread of odontogenic infections through various facial spaces. Dento-alveolarabscess - aetiology, clinical features and management.	**CO1, CO2**
	B	Topic 2	Osteomyelitis of the jaws - definition, aetiology, pre-disposing factors, classification, clinical features and management.	**CO1, CO2**
	C	Topic 3	Ludwigs angina - definition, aetiology, clinical features, management and complications.	**CO1, CO2**

	UNIT 11	**Benign cystic lesions of the jaws**		
	A	Topic 1	Definition, classification, pathogenesis.	**CO1, CO2**
	B	Topic 2	Diagnosis - Clinical features, radiological, aspiration biopsy, use of contrast media and histopathology.	**CO1, CO2**
	C	Topic 3	Management - Types of surgical procedures, Rationale of the techniques, indications, procedures, complications etc.	**CO1, CO2,CO3**
	UNIT 12	**Tumors of the Oral cavity**		
	A	Topic 1	Non odontogenetic benign tumours occuring in oral cavity - fibroma, papilloma, lipoma, ossifying fibroma, myeloma etc.	**CO1, CO2**
	B		Ameloblastoma - Clinical features, radiological	**CO1,**

		Topic 2	appearance and methods of management.	**CO2,CO3**
	C	Topic 3	Carcinoma of the oral cavity - Biopsy – types Outline of management of squamous Cell carcinoma: surgery, radiation and chemotherapy TNM classification, Role of dental surgeons in the prevention and early detection of oral cancer	**CO1, CO3**
	UNIT 13	**Fractures of the jaws**		
	A	Topic 1	General considerations, types of fractures, etiology, clinical features and general principles of management, mandibular fractures - Applied anatomy, classification. Diagnosis – Clinical and radiological.	**CO1, CO2,CO3**
	B	Topic 2	Management - Reduction closed and open Fixation and immobilization Methods Outline of rigid and semi-rigid internal fixation, Fractures of the condyle - etiology, classification, clinical features, principles of management.	**CO1, CO3**
	C	Topic 3	Fractures of the middle third of the face. Definition of the mid face, applied surgical anatomy, classification, clinical features and outline of management, Alveolar fractures - methods of management Fractures of the Zygomatic Complex Classification, clinical features, indications for treatment, various methods of reduction and fixation, Complications of fractures - delayed union, non-union and malunion.	**CO1, CO2,CO3**
	UNIT 14	**Salivary gland diseases**		
	A	Topic 1	Diagnosis of salivary gland diseases.	**CO2**
	B	Topic 2	Sialography, contrast media, procedure, Infections of the salivary glands Sialolithiasis - Sub mandibular duct and gland and parotid duct. Clinical features, management.	**CO2**
	C	Topic 3	Salivary fistulae, Common tumours of salivary glands like Pleomorphic adenoma including minor salivary glands.	**CO2**
	UNIT 15	**Unit O** **Jaw deformities**		
	A	Topic 1	Basic forms - Prognathism, Retrognathism and open bite. Reasons for correction.	**CO3**
	B	Topic 2	Outline of surgical methods carried out on mandible and maxilla.	**CO1**
	UNIT 16	**Unit P** **Neurological disorders**		

	A	Topic 1	Trigeminal neuralgia - definition, aetiology, clinical features and methods of management including surgical.	**CO3**
	B	Topic 2	Facial paralysis - Aetiology, clinical features, Management	**CO2**
	C	Topic 3	Nerve injuries - Classification	**CO1**
	UNIT 17	**Unit Q** **Cleft Lip and Palate**		
	A	Topic 1	Aetiology of the clefts, incidence, classification, role of dental surgeon in the management of cleft patients.	**CO1**
	B	Topic 2	Outline of the closure procedures.	**CO3**
	UNIT 18	**Unit R** **Medical Emergencies in dental practice**		
	A	Topic 1	Primary care of medical emergencies in dental practice particularly - Cardio Vascular, Respiratory, Endocrine	**CO1**
	B	Topic 2	Primary care of medical emergencies in dental practice particularly - Anaphylactic reaction, Epilepsy, Epilepsy	**CO1**
	UNIT 19	**Unit S** **Emergency drugs & Intra muscular I.V. Injections**		
	A	Topic 1	Applied anatomy, Ideal location for giving these injections	**CO1**
	B	Topic 2	Types and techniques	**CO1**
	UNIT 20	**Unit T** **Oral Implantology**		
	A	Topic 1	Introduction	**CO2**
	B	Topic 2	Types of implants, and surgical procedure to install implants	**CO2**
	UNIT 21	**Unit U** **Ethics**		
	A	Topic 1	General ethics towards work and patient	**CO1**
	B	Topic 2	Ethics towards fellow doctor	**CO1**
	UNIT 22	**Unit V** **LOCAL ANAESTHESIA**		
	A	Topic 1	Introduction, concept of L.A., classification of local anaesthetic agents, ideal requirements, mode of action, types of local anaesthesia, complications.	**CO4** **05.1**
	B	Topic 2	Various Nerve Block Techniques	**CO4** **05.1**

	UNIT 23	**Unit W** **GENERAL ANAESTHESIA**		
	A	Topic 1	Concept of general anaesthesia. Indications of general anaesthesia in dentistry.	**CO1**
	B	Topic 2	Pre-anaesthetic evaluation of the patient. Pre-anaesthetic medication, advantages, drugs used. Commonly used anaesthetic agents. Complication during and after G.A.	**CO1**
	C	Topic 3	Cardiopulmonary resuscitation, Use of oxygen and emergency drugs. Tracheostomy.	**CO1**

1.	**Course evaluation**	Attendance	Minimum 75% is Needed for both theory and clinical practical	
		Discussions	Every day in Practicals	
		Any Other	Various Surgical Procedures Demonstration on Patients	
		Annual examination	200 Marks (100 marks Theory + 100 marks Practical)	
2.	**Text book/s***	1. Text book of Oral And Maxillofacial Surgery 2. Handbook of LOCAL ANESTHESIA 3. MEDICAL EMERGENCIES in the DENTAL OFFICE		Neelima Anil Malik Stanley F. Malamed Stanley F. Malamed
3.	**Other References**	TED learning, EBSCOHOST Various scientific articles from various sources		

School: School of Dental Sciences		Batch: 2024-2029
Program:		BDS (Bachelor of Dental Surgery)
1	**Course Code**	BDS406
2	**Course Title**	CONSERVATIVE DENTISTRY & ENDODONTICS
3	**Credits**	NA
4	**Contact Hours (L-T-P)**	2-0-6
	Course Type	Compulsory (CORE)
5	**Course Objective**	**1:** Students are provided with knowledge to diagnose dental caries and skilled to treat it. **2:** To train the students about the importance, role, use and techniques of radiographs/digital radiographs and other imaging modalities in diagnosis. **3:** Be Competent to perform Class I and Class II cavities and their restoration with amalgam. **4:** Be able to restore class V and Class III cavities with glass ionomer cement. **5**: Be able to diagnose and appropriately treat pulpaly involved teeth (pulp capping procedures). **6**: Be able to perform RCT for anterior teeth. **7**: Be competent to carry out small composite restorations **8**: Understand the principles of aesthetic dental procedures **9:** Students are geared to maintain high standard of professional ethics and conduct and apply it willingly in all aspects of professional life.

6	**Course Outcomes**	**CO1:** Impart clinical skills to student which will help them in providing quality treatment and basic endodontic procedure skill. **CO2:** Practice Dentistry in a competent and ethical manner which will contribute to the oral health and general well- being of patient. **CO3:** Professional Behaviour, basic skills to carry out range of Dental Procedure in General dental Practice. **CO4:** Importance of life -long learning and updating the knowledge in the field of Restorative Dentistry & Endodontics.
7	**Course Description**	The course offers Knowledge: Possess a thorough knowledge and comprehension of diagnosis and dental management of the Caries in addition to the infection control measures in the dental clinic setting. Patient management: Take proper chair side history, clinical examination of patient and perform dental diagnostic procedures including radiographs and formulate a proper treatment plan. Patient treatment: Carry out appropriate and effective dental management of patients, once the diagnosis and treatment plan has been outlined. To motivate, educate and counsel the patient regarding the importance of dental care.

Course Module–

2.1 Module A1: Syllabus

8	**Outline syllabus**			**CO Mapping**
	UNIT 1	**INTRODUCTION TO ENDODONTICS**		
	A	Topic 1	Definition	CO1, CO2
	B	Topic 2	Importance of Endodontics	CO2
	C	Topic 3	Scope & Future of Endodontics	CO2 CO3
	UNIT 2	**RATIONALE &PRINCIPLES OF ENDODONTICS**		
	A		Case selection, indication and contraindications for	CO2, CO3

	Topic 1	root canal treatments	
B	Topic 2	Clinical diagnostic methods Case history, diagnosis and treatment plan.	CO3, CO4
C	Topic 3	Microbiology of endodontic infection, Isolation and infection control in Endodontics (Rubber dam application)	CO2, CO3
UNIT 3	**ENDODONTIC INSTRUMENTS**		
A	Topic 1	Hand instruments	CO2, CO3
B	Topic 2	Power driven instruments	CO2, CO4
C	Topic 3	Standardization, Principles of using endodontic instruments, Sterilization	CO1, CO2,

UNIT 4	**Unit D PULPAL DISEASES**		
A	Topic 1	Classification, etiology, diagnosis, management.	CO1, CO2
UNIT 5	**PERIAPICAL DISEASES**		
A	Topic 1	Classification, etiology, diagnosis, management.	CO1, CO2
UNIT 6	**VITAL PULP THERAPY:**		
A	Topic 1	Indirect and direct pulp capping	CO2, CO3
B	Topic 2	Pulpotomy - types and medicaments used	CO2, CO4
C	Topic 3	Apexogenesis and apexification and problems of open apex	CO2, CO4
UNIT 7	**Esthetics in dentistry**		
A	Topic 1	Introduction and scope	CO4
B	Topic 2	Anatomy and physiology of smile	CO1, CO2
C	Topic 3	Role of colour and translucency, Esthetic recontouring& Management of discoloured teeth	CO1, CO3,CO4

UNIT 8	**COMPOSITE RESTORATIONS**		
A	Topic 1	Indications, contraindications, advantages and disadvantages	CO1, CO3

	B	Topic 2	Stepwise procedure of tooth preparation for composite restoration.	CO1, CO4
	C	Topic 3	Clinical technique for posterior direct composite restorations, Finishing and polishing of composite restoration	CO2, CO3,CO4
	UNIT 9	**CASTS RESTORATIONS**		
	A	Topic 1	Indications, contraindications, advantage and disadvantages	CO1, CO2
	B	Topic 2	Materials used & Types of bevels in cast restoration	CO1, CO3
	C	Topic 3	Fabrication of wax patterns, Differences in tooth preparation for amalgam and cast restorations	CO1, CO2,CO3
	UNIT 10	**CASTING**		CO1, CO4
	A	Topic 1	Die materials and preparation of dies	CO1, CO2
	B	Topic 2	Alloys used for casting & Casting procedure	CO1, CO3
	C	Topic 3	Casting defects	CO1, CO2

	UNIT 11	**Temporisation or interim restoration**		
	A	Topic 1	Materials and procedure	CO2, CO3
	UNIT 12	**ROOT CARIES**		
	A	Topic 1	Etiology, clinical features and management	CO1, CO4
	UNIT 13	**NON- CARIOUS DESTRUCTION OF TOOTH STRUCTURE**		CO1, CO2
	UNIT 14	**Ceramic Restorations**		
	A	Topic 1	Indications, contraindications, advantages, disadvantages	CO2, CO3
	B	Topic 2	Recent Advances & Techniques in Brief	CO1, CO2, CO4
	UNIT 16	**DIRECT FILLING GOLD RESTORATIONS**		
	A	Topic 1	Tooth preparation and Restoration	CO2, CO3
	B	Topic 2	Indications, contraindications, advantages, disadvantages	CO2, CO4
	UNIT 17	**ANATOMY OF PULP SPACE**		CO1, CO2
	UNIT 18	**ACCESS PREPARATION**		
	A	Topic 1	Objectives& Principles	CO1, CO3
	B	Topic 2	Instruments & Steps	CO1, CO4
	UNIT 19	**DISINFECTION OF ROOT CANAL SPACE**		
	A	Topic 1	Irrigants: Functions & Types	CO2, CO3
	B	Topic 2	Intracanal Medicaments: Function & Types	CO2, CO4
	UNIT 20	**OBTURATION OF THE ROOT CANAL SYSTEM**		
	A	Topic 1	Materials- Ideal root canal filling material, classification of materials	CO1, CO2
	B	Topic 2	Classification and procedure	CO2, CO3
	UNIT 21	**POST ENDODONTIC RESTORATION**		
	A	Topic 1	Materials used	CO1, CO4
	B	Topic 2	Procedure	CO2, CO3
	UNIT 22	**TRAUMATIZED TEETH**		
	A	Topic 1	Classification of fractured teeth	CO2, CO4
	B	Topic 2	Management of fractured tooth	CO2, CO3
	UNIT 23	**ENDODONTIC SURGERIES**		

	A	Topic 1	Indication &contraindications	CO2, CO4
	B	Topic 2	Surgical instruments and techniques	CO2, CO4
	UNIT 24	**RETREATMENT IN ENDODONTICS**		CO2

1.	**Course evaluation**	Attendance	Minimum 75% is Needed for both theory and clinical practical	
		Quizzes	Taken in every 3 months	
		Presentations	Video Presentation	
		Any Other	Project based learning, Assignments.	
		Annual examination	Theory - 100 Marks Practical – 100 Marks	
2.	**Text book/s***	The Art & Science of Operative Dentistry Principle & Practice of Operative Dentistry Grossman's Endodontic Practice		Sturdivant, Mosby U.S.A Charbeneu, Varghese Publishing, Mumbai B. Suresh Chandra & V. Gopi Krishna, Wolters Kluwer
3.	**Other References**	LMS TED learning EBSCOHOST Various scientific articles from various sources		

Course Module–

2.1 Module A1: Syllabus

School: School of Dental Sciences		Batch: 2024-29
Program:		BDS (Bachelor of Dental Surgery)
1	**Course Code**	BDS407
2	**Course Title**	PROSTHODONTICS, CROWN AND BRIDGE
3	**Credits**	NA
4	**Contact Hours (L-T-P)**	2-0-6
	Course Type	Compulsory (CORE)

5	**Course Objective**	1. Training programme for graduates in prosthetic dentistry including Crown & Bridge & Implantology is structured to achieve knowledge and skill in theoretical and clinical laboratory, attitude, communicative skills and ability to research with understanding of social, cultural, educational & environmental background of the society. 2. The undergraduate training programme provides lectures, seminars, clinical experience and clinical teaching in the period of five year dental curriculum, students are exposed to a wide range of patients with prosthetic problem and all students get extensive pre-clinical and clinical experience in the department.
6	**Course Outcomes**	**CO1** Dental graduate with knowledge on prosthetics needs of patients, fabrication of all Prosthodontic modes of treatment. **CO2** Dental graduate who is able to diagnose motivate and treat patients who are completely and partially edentulous (including geriatric patients) with complete & partial dentures **CO3** Dental graduate skilled enough to identify cases requiring prosthodontics specialist treatment needs and refer them for further follow up.
7	**Course Description**	It is the dental speciality pertaining to the diagnosis, treatment planning, rehabilitation and maintenance of the oral function, comfort, appearance & health of patients with clinical conditions associated with missing or deficient teeth & or maxillofacial tissues by using biocompatible tissues.

Outline syllabus			CO Mapping
UNIT 1	**COMPLETE DENTURES**		
A	Topic 1	Applied Anatomy and Physiology- Introduction, Biomechanics of the edentulous state, Residual Ridge Resorption, Communicating with the patient- Understanding the patients, mental attitude, Instructing the patient , Diagnosis and Treatment Planning for patients- (i) with some teeth remaining, (ii) with no teeth remaining. (Systemic status, Local Factor, The geriatric patient, Diagnostic procedures), Articulators- Discussion, Improving the patients denture foundation and ridge relation- an overview. a) Pre-Operative Examination b) Initial hard & soft Tissue procedure c) Secondary hard & soft tissue procedure d) Implant procedure e) Congenital deformities Postoperative procedure , Principles of Retention, Support and Stability, Impressions-detail a) Muscles of facial expression Biological Considerations for maxillary and mandibular impression incuding anatomy landmark and their interpretation, Principles of Retention, Support and Stability Impressions-detail b) Muscles of facial expression c) Biological Considerations for maxillary and mandibular impression incuding anatomy landmark and their interpretation. d) Impression Objectives e) Impression materials f) Impression techniques g) Maxillary & Mandibular Impression procedures i) Preliminary Impressions Final Impressions Record Bases and Occlusion Rims a) Materials & Techniques	**CO1,CO2, CO3**

		b) Useful Guidelines and Ideal Parameters Recording and transferring bases and occlusal rims		
B	Topic 2	Tooth Selection and Arrangement a) Anterior teeth b) Posterior teeth Esthetic & Functional harmony Relating Inclination of teeth to concept of occlusion a) Neutrocentric Concept Balanced Occlusal Concept Trial Dentures	**CO1,CO2**	
C	Topic 3	Laboratory Procedures a) Wax Contouring b) Investing of Dentures c) Preparing of mold d) Preparing & Packing acrylic resin e) Processing of Dentures f) Recovery of Dentures g) Lab Remount procedures h) Recovering of Complete Denture i) Finishing and polishing of Complete Denture Plaster Cast for Clinical Denture Remount Procedure Denture Insertion a) Insertion procedures b) Clinical errors c) Correction Occlusal disharmony Selective Grinding Procedures, Treating Problems with associated denture use, Treating Abused Tissues, Relining and rebasing of dentures, Immediate Complete dentures construction procedure, The Single Complete Denture, Overdentures, Dental Implants in Complete Denture	**CO1,CO2**	
UNIT 2	**REMOVABLE PARTIAL DENTURES**			
A	Topic 1	Diagnosis and Treatment planning of Removable Partial Denture Cases, Major Connectors, Minor Connectors Rest and Rest seats	**CO1**	

		Components of Removable Partial Denture A) Direct retainers B) Indirect Retainers Tooth Replacement Principles of Removable Partial Denture Design		
B	Topic 2	Survey and Design a) Surveyors b) Surveying c) Designing Mouth preparation and Master Cast, Impression materials and procedures for RPD, Preliminary Jaw relation and esthetic try-in form some anterior replacement teeth, Laboratory procedures for framework construction	**CO1, CO2**	
C	Unit B Topic 12	Fitting the framework, Tri-in of the partial denture, Completion of the partial denture, Inserting the RPD, Postinsertion observations, Temporary acrylic Partial Dentures, Immediate RPD, RPD opposing Single Complete Denture, Maintenance phase	**CO1, CO2**	
UNIT 3	**Unit 3**	**FIXED PARTIAL DENTURES**		
A	Topic 1	Introduction, Fundamentals of Occlusion, Articulators, Treatment planning for single tooth restorations, Fixed Partial denture Configurations	**CO1**	
B	Topic 2	Principles of tooth preparation, Preparations for full veneer crowns, Preparations for partial veneer crowns, Provisional Restorations, Fluid Control & Soft Tissue Management	**CO1**	
C	Topic 3	Impressions, Working Casts and Dies, Wax Patterns, Pontics and Edentulous Ridges, Esthetic Considerations, Finishing and Cementation, Topics to be covered in brief- a) Solder joints and other connectors b) All-Ceramic Restorations	**CO1**	

		c) Metal-Ceramic Restorations d) Preparations of Intracoronal Restorations e) Preparations for extensively damaged teeth f) Preparations for periodontally weakened teeth g) The functionally generated path technique h) Investing and Casting Resin-Bonded Fixed Partial Dentures		

1.	**Course evaluation**	Attendance	Minimum 75% is Needed for both theory and clinical practical	
		Quizzes	Taken in every 3 months	
		Presentations	Video Presentation	
		Any Other	Project based learning, flip learning, Assignments	
		Annual Examination	Theory-100 Marks Practical-100Marks	
2.	**Text book/s***	11. Syllabus of Complete denture 12. Bouchers "Prosthodontic Treatment for Edentulous Patients 13. Essentials of Complete Prosthodontics 14. Mc. Craken's RPD		Charles M. Heartwell Jr, ArthurO.Rahn Boucher Sheldon winkler
3.	**Other References**	TED learning EBSCOHOST Various scientific articles from various sources		

Course Modules –
2.1 Module A1: Syllabus

School: School of Dental Sciences		Batch: 2024-2029
Program:		BDS (Bachelor of Dental Surgery)
1	**Course Code**	BDS408
2	**Course Title**	PEDIATRIC & PREVENTIVE DENTISTRY
3	**Credits**	NA
4	**Contact Hours (L-T-P)**	2-0-6
	Course Type	Compulsory (CORE)
5	**Course Objective**	1. Complete and comprehensive oral assessment of a child patient. 2. Organise a treatment plan that will fulfill a childs behavior,preventive , restorative and interseptive orthodontic needs. 3. Assess a pediatric patient, councel the parent/guardian and use appropriate behavior management effective communication strategies to make dental experience positive for children 4. Perform and provide both preventive and therapeutic dental treatment for infants, children and adolescents including those with special health care needs and demonstrate professionalism and ethical practice in patient care clinics.
6	**Course Outcomes**	CO1: Adequate knowledge of the development, structure and function of the teeth, mouth and jaws and associated tissues both in health and disease and their relationship and effect on general -state of health and also the bearing on physical and social well-being of the child patient. CO2: Adequate knowledge of biological function and behavior of child in health and sickness as well as the influence of the natural and social environment on the state of health so far as it affects dentistry. CO3: Able to diagnose and manage various common dental problems encountered in pediatric dental practice, keeping in mind the expectations and the right of the society to receive the best possible treatment available wherever possible. CO4: Able to communicate effectively with patient, parent or guardian.

7	**Course Description**	In Paediatric dentistry, the students should concentrate on clinical management, efficacy of preventive measures, treatment needs particularly for children with disabilities. In oral medicine and oral diagnosis, the student should receive instruction in various lesions, occurring in the oral cavity with particular reference to oral cancer.

8	**Outline syllabus**			**CO Mapping**
	UNIT 1	**Unit 1**		
	A	Topic 1	INTRODUCTION TO PEDODONTICS AND PREVENTIVE DENTISTRY, GROWTH & DEVELOPMENT, DEVELOPMENT OF OCCLUSION, DENTAL ANATOMY AND HISTOLOGY	**CO1**
	B	Topic 2	DENTAL MATERIALS USED IN PEDIATRIC DENTISTRY	**CO1**
	C	Topic 3	DENTAL RADIOLOGY RELATED TO PEDODONTICS, ORAL SURGICAL PROCEDURES IN CHILDREN.	**CO , CO3**
	UNIT 2			
	A	Topic 1	DENTAL CARIES	**CO1, CO3**
	B	Topic 2	GINGIVAL & PERIODONTAL DISEASES IN CHILDREN	**CO3**
	C	Topic 3	PEDIATRIC OPERATIVE DENTISTRY	**CO3**
	UNIT 3			
	A	Topic 1	CHILD PSYCHOLOGY	**CO3, CO4**
	B	Topic 2	DENTAL EMERGENCIES IN CHILDREN & THEIR	**CO3**

			MANAGEMENT	
	C	Topic 3	BEHAVIOUR MANAGEMENT	**CO2**

UNIT 4	**ORAL MEDICINE & THERAPEUTICS**		
A	Topic 1	PEDIATRIC ENDODONTICS	**CO1,CO2,CO3**
B	Topic 2	TRAUMATIC INJURIES IN CHILDREN	**CO1,CO2,CO3**
C	Topic 3	PREVENTIVE AND INTERCEPTIVE ORTHODONTICS	**CO1,CO2,CO3**

UNIT 5			
A	Topic 1	DENTAL CARE OF CHILDREN WITH SPECIAL NEEDS	**CO1,CO3**
B	Topic 2	ORAL HABITS IN CHILDREN	**CO1,CO3**
C	Topic 3	CONGENITAL ABNORMALITIES IN CHILDREN	**CO1,CO3**

1.	**Course evaluation**	Attendance	Minimum 75% is Needed for both theory and clinical practical
		Quizzes	Taken in every 3 months
		Presentations	Video Presentation
		Any Other	Project based learning, Assignments
		Annual Examination	Theory-100 marks Practical-100 marks

2. Text book/s*

SR.	Author	Title
1	Pinkham, JR	Pediatric Dentistry infancy through adolescence
2	Mc Donald, RE	Dentistry for the child and adolescent
3	Ghai, OP	Ghai essential paediatrics
4	Goran Koch	Pedodontics Clinical Approach
5	Welbury	Pediatric Dentistry
6	Cameron, Angus	Handbook of pediatric dentistry
7	Stephen Wei	Pediatric Dentistry Total

				Patient Care		
3.	**Other References**	TED learning Various scientific articles from various sources				

Mapping of Course Outcomes with PO's and PSO's

COS	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO 1	PSO2
CO101.1	-	2	3	-	1	-	-	1	1	-	1
CO101.2	1	1	3	-	-	-	-	2	2	1	-
CO101.3	3	2	2	3	2	2	2	3	2	3	3
CO102.1	1	1	1	-	1	-	2	-	1	2	-
CO102.2	3	1	2	1	1	-	2	1	1	2	-
CO102.3	1	-	3	1	2	1	2	2	2	3	2
CO103.1	3	2	2	2	1	-	-	2	1	2	1
CO103.2	3	1	3	1	-	-	2	1	2	3	1
CO103.3	3	1	3	1	-	-	1	1	1	3	3
CO201.1	2	1	2	-	-	-	1	2	1	2	1
CO201.2	2	1	2	1	-	1	1	1	1	2	1
CO201.3	3	2	1	2	1	2	2	3	2	3	1
CO201.4	3	2	3	1	-	2	1	2	1	1	1
CO202.1	3	3	1	2	3	2	2	3	2	3	3
CO202.2	3	3	3	2	1	1	1	1	1	2	3
CO202.3	3	3	1	1	3	2	2	1	1	2	1
CO203.1	1	1	1	1	1	1	-	2	2	3	3

CO203.2	1	1	1	-	-	-	-	2	2	1	3

CO251.1	3	2	1	1	1	2	1	2	2	3	2
CO252.1	3	3	-	-	2	2	2	3	3	-	3
CO252.2	3	3	-	2	2	2	-	3	2	-	3
CO301.1	3	3	-	2	3	3	2	3	1	1	3
CO301.2	3	3	2	1	-	1	1	2	1	3	1
CO301.3	3	3	-	2	2	1	2	2	1	1	3
CO302.1	3	3	1	1	-	2	1	1	2	2	2
CO302.2	2	2	3	1	-	1	2	-	1	2	2

CO303.1	3	2	3	-	-	1	1	2	1	3	3
CO303.2	-	-	2	-	-	-	-	-	-	1	-
CO303.3	2	2	1	1	-	-	1	1	1	3	1
CO401.1	3	3	1	3	1	-	3	3	1	1	1
CO401.2	2	1	2	2	-	1	1	2	2	1	1
CO402.1	2	2	2	2	2	2	2	2	2	3	3
CO402.2	1	1	1	-	-	3	3	3	2	3	3
CO402.3	3	3	2	1	2	1	2	1	2	2	2
CO403.1	3	3	3	1	1	1	1	2	2	3	3
CO404.1	3	2	1	-	1	1	-	-	1	3	3

CO404.2	3	3	1	-	1	2	1	2	-	2	2
CO405.1	3	2	1	-	2	-	1	1	1	2	1
CO405.2	3	2	2	-	-	2	1	2	1	3	3
CO405.3	3	3	1	2	-	-	2	2	2	1	1
CO406.1	3	3	2	1	-	-	-	1	-	2	3
CO406.2	3	3	3	3	3	3	3	3	2	3	3
CO406.3	2	1	-	-	1	3	3	1	2	1	1
CO406.4	2	2	-	-	-	1	1	1	3	-	-
CO407.1	3	3	2	1	1	2	2	-	2	3	2
CO407.2	3	3	1	1	1	-	-	1	1	2	3
CO407.3	2	2	-	1	1	-	1	2	-	1	1
CO408.1	3	2	-	-	2	1	1	2	1	3	2
CO408.2	3	3	-	1	2	2	2	3	2	2	3

1-Slight (Low)

2-Moderate (Medium)

3-Substantial (High)