Program Structure Template

School of Dental Sciences

BDS

(Bachelor of Dental Surgery)

SDS0101

(2019-24)

1. Standard Structure of the Program 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 Program Educational Objectives (PEO)

1.3.1 Writing Program Educational Objectives (PEO)

Program educational objectives are broad statements that describe the career and professional accomplishments that the program is preparing graduates to achieve.

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.

1.3.3 Program 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

Program Structure Template
School of Dental Sciences
Bachelor of Dental Surgery (BDS)
Batch: 2019-2024
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	100	-	-	CC
2.	**BDS102**	**BDS102**	Bio Chemistry	120	-	-	CC
3.	**BDS102**	**BDS102**	General Human Physiology	120	-	-	CC
4.	**BDS103**	**BDS103**	Dental Anatomy; Embryology and Histology	105	-	-	CC
Practical/Viva-Voce/Jury							
5.	**BDS101**	**BDS101**	General Human Anatomy including head and neck	-	-	175	CC
6.	**BDS102**	**BDS102**	Bio Chemistry	-	-	60	CC
7.	**BDS102**	**BDS102**	General Human Physiology	-	-	60	CC
8.	**BDS103**	**BDS103**	Dental Anatomy; Embryology and Histology	-	-	250	
TOTAL CREDITS							**NA**

Program Structure Template
School of Dental Sciences
Bachelor of Dental Surgery (BDS)
Batch: 2019-2024

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	120	-	105	CC
2.	**BDS201**	**BDS201**	Microbiology	120	-	105	CC
3.	**BDS202**	**BDS202**	General & Dental Pharmacology	70	-	20	CC
4.	**BDS203**	**BDS203**	Dental Materials	80	-	240	CC
Practical/Viva-Voce/Jury							
5.	**BDS251**	**BDS251**	Pre-Clinical Prosthodontics an	25	-	300	CC
6.	**BDS252**	**BDS252**	Pre-Clinical Conservative Dent	25	-	200	CC
TOTAL CREDITS							**NA**

[1] CC: Core Course, AECC: Ability Enhancement Compulsory Courses, SEC: Skill Enhancement Courses, DSE: Discipline Specific Courses

Program Structure Template
School of Dental Sciences
Bachelor of Dental Surgery (BDS)
Batch: 2019-2024
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	60	-	-	CC
2.	**BDS302**	**BDS302**	General Surgery	60	-	-	CC
3.	**BDS303**	**BDS303**	Oral Pathology and Microbiology	145	-	-	CC
Practical/Viva-Voce/Jury							
4.	**BDS301**	**BDS301**	General Medicine	-	-	90	CC
5.	**BDS302**	**BDS302**	General Surgery	-	-	90	CC
6.	**BDS303**	**BDS303**	Oral Pathology and Microbiology	-	-	80	CC
TOTAL CREDITS							**NA**

[2] CC: Core Course, AECC: Ability Enhancement Compulsory Courses, SEC: Skill Enhancement Courses, DSE: Discipline Specific Courses

Program Structure Template
School of Dental Sciences
Bachelor of Dental Surgery (BDS)
Batch: 2019-2024
Year-4

S.No.	Paper ID	Subject Code	Subjects	Teaching Load			Type of Course[3]- 1.CC, 2. AECC, 3.SEC, 4.DSE
				L	T	P	
Theory Subjects							
1.	**BDS401**	**BDS401**	Public Health Dentistry	60	-	-	CC
2.	**BDS402**	**BDS402**	Periodontology	80	-	-	CC
3.	**BDS403**	**BDS403**	Orthodontics & Dentofacial Ort	50	-	-	CC
4.	**BDS404**	**BDS404**	Oral Medicine & Radiology	65	-	-	CC
5.	**BDS405**	**BDS405**	Oral & Maxillofacial Surgery	70	-	-	CC
6.	**BDS406**	**BDS406**	Conservative Dentistry & Endod	110	-	-	CC
7.	**BDS407**	**BDS407**	Prosthodontics and Crown & Bri	110	-	-	CC
8.	**BDS408**	**BDS408**	Paediatric and Preventive Dent	65	-	-	CC
Practical/Viva-Voce/Jury							
9.	**BDS401**	**BDS401**	Public Health Dentistry	-	-	290	CC
10.	**BDS402**	**BDS402**	Periodontology	-	-	200	CC
11.	**BDS403**	**BDS403**	Orthodontics & Dentofacial Ort	-	-	200	CC
12.	**BDS404**	**BDS404**	Oral Medicine & Radiology	-	-	200	CC
13.	**BDS405**	**BDS405**	Oral & Maxillofacial Surgery	-	-	360	CC
14.	**BDS406**	**BDS406**	Conservative Dentistry & Endod	-	-	460	CC
15.	**BDS407**	**BDS407**	Prosthodontics and Crown & Bri	-	-	460	CC
16.	**BDS408**	**BDS408**	Paediatric and Preventive Dent	-	-	200	CC
TOTAL CREDITS							**NA**

[3] CC: Core Course, AECC: Ability Enhancement Compulsory Courses, SEC: Skill Enhancement Courses, DSE: Discipline Specific Courses

Course Templates – Year 1

2.1 Template A1: Syllabus

School: School of Dental Sciences		Batch: 2019-2024
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)**	100-0-175
	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**	**CO101.1:** 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 **CO101.2:** Dental student possessing skills to locate various structures of head and neck of the body, identify various tissues under microscope **CO101.3:** 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**		
	BDS101.A	**Unit A** **INTRODUCTION**	
	BDS101.A1	Unit A Topic 1	Anatomical terms. Skin, superficial fascia & deep fascia Cardiovascular system, portal system collateral circulation and arteries.
	BDS101.A2	Unit A Topic 2	Lymphatic system, regional lymph nodes. Osteology - Including ossification & growth of bones. Myology – Including types of muscle tissue & innervations.
	BDS101.A3	Unit A Topic 3	Syndesmology – Including classification of Joints. Nervous system
	BDS101.B	**Unit B** **HEAD & NECK**	
	BDS101.B1	Unit B Topic 1	Head and neck
	BDS101.B2	Unit B Topic 2	Thorax
	BDS101.B3	Unit B Topic 3	Abdomen
	BDS101.B4	Unit B Topic 4	Clinical procedures
	BDS101 C	**Unit C** **EMBRYOLOGY**	
	BDS101.C1	Unit C Topic 1	Oogenesis, Spermatogenesis, Fertilisation, Placenta, Primitive streak, Neural crest,
	BDS101.C2	Unit C Topic 2	Bilaminar and trilaminar embryonic disc, Intra embryonic mesoderm
	BDS101.C3	Unit C Topic 3	Formation and face, notochord formation & fate, Pharyngeal arches, pouches & clefts
	BDS101.C4	Unit C Topic 4	Development of face, tongue, palate, thyroid gland, pituitary gland, salivary glands, and anomalies in their development
	BDS101.C5	Unit C Topic 5	Tooth development in brief.
	BDS101 D	**Unit D** **HISTOLOGY**	
	BDS101 D1	Unit D Topic 1	The Cell
	BDS101 D2	Unit D Topic 2	Basic tissues - Epithelium, Connective tissue including cartilage and bone, Muscle Tissue, Nervous tissue: Peripheral nerve, optic nerve, sensory ganglion, motor ganglion, Skin
	BDS101 D3	Unit D Topic 3	Classification of Glands Salivary glands (serous, mucous and mixed gland)

	BDS101 D4	Unit D Topic 4	Blood vessels, Lymphoid tissue
	BDS101 D5	Unit D Topic 5	Tooth, lip, tongue, hard palate, oesophagus, stomach, duodenum ,ileum, colon, vermiform appendix Liver, Pancreas, Lung, Trachea ,Epiglottis
	BDS101 D6	Unit D Topic 6	Thyroid gland, para thyroid gland, supra renal gland and pituitary gland, Kidney, Ureter, Urinary bladder, Ovary and testis.

	BDS101 E	**Unit E** **MEDICAL GENETICS**	
	BDS101.E1	Unit E Topic 1	Mitosis, meiosis
	BDS101 E2	Unit E Topic 2	Chromosomes, gene structure
	BDS101.E3	Unit E Topic 3	Mendelism, modes of inheritance

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 Templates –

2.1 Template A1: Syllabus

School: School of Dental Sciences		Batch: 2019-2024
Program:		BDS (Bachelor of Dental Surgery)
1	**Course Code**	BDS 102
2	**Course Title**	Bio Chemistry; General Human Physiology
3	**Credits**	NA
4	**Contact Hours (L-T-P)**	120-0-60
	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**	**CO102.1:** 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. **CO102.2:** Dental student with basic skill to conduct and interpret experimental and investigative data **CO102.3:** 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**		
	BDS102.A	**Unit A** **CHEMISTRY OF BIOORGANIC MOLECULES**	

	BDS102.A1	Unit A Topic 1	Carbohydrates
	BDS102.A2	Unit A Topic 2	proteins
	BDS102.A3	Unit A Topic 3	Lipids
	BDS102.A4	Unit A Topic 4	Nucleic Acids
	BDS102.B	**Unit B** **MACRONUTERIENTS AND DIGESTION, MICRONUTRIENTS**	
	BDS102.B1	Unit B Topic 1	Energy needs: Basal metabolic rate
	BDS102 B2	Unit B Topic 2	Enzymatic hydrolysis of dietary carbohydrates
	BDS102 B3	Unit B Topic 3	Vitamins
	BDS102 B4	Unit B Topic 4	Minerals
	BDS102 C	**Unit C** **ENERGY METABOLISM**	
	BDS102 C1	Unit C Topic 1	Overview: Outlines of glycolysis, pyruvate oxidation and citric acid cycle.
	BDS102 C2	Unit C Topic 2	**CO102.1**
	BDS102 C3	Unit C Topic 3	Importance of pentose phosphate pathway. Formation of glucuronic acid. Outlines of cholesterol synthesis and breakdown.
	BDS102 C4	Unit C Topic 4	BIOCHEMICAL GENETICS AND PROTEIN SYNTHESIS
	BDS102 C5	Unit C Topic 5	ENZYME AND METABOLIC REGULATION
	BDS102 D	**Unit D** **STRUCTURAL COMPONENTS AND BLOOD PROTEINS**	
	BDS102 D1	Unit D Topic 1	Connective Tissue
	BDS102 D2	Unit D Topic 2	Haemoglobin
	BDS102 E	**Unit E** **MEDICAL BIOCHEMISTRY**	
	BDS102 E1	Unit E Topic 1	Regulation of blood glucose. Diabetes mellitus and related disorders
	BDS102 E2	Unit E Topic 2	Liver function tests

	BDS102.E3	Unit E Topic 3	Hyperthyroidism and Hypothyroidism: Biochemical evaluation.
	BDS102 E4	Unit E Topic 4	Inborn errors of amino acid metabolism and muscular dystrophy
	BDS102 F	**Unit F** **GENERAL PHYSIOLOGY**	
	BDS102 F1	Unit F Topic 1	Composition and functions of Blood
	BDS102 F2	Unit F Topic21	Muscles and Nerve
	BDS102 F3	Unit F Topic 3	Digestive system
	BDS102 F4	Unit F Topic 4	Excretory system
	BDS102 F5	Unit F Topic 5	Body temperature and functions of skin
	BDS102 F6	Unit F Topic 6	Endocrinology
	BDS102 F7	Unit F Topic 7	Reproduction
	BDS102 F8	Unit F Topic 8	Cardiovascular system
	BDS102 F9	Unit F Topic 9	Respiratory system
	BDS102 F10	Unit F Topic 10	Central nervous system
	BDS102 G	**PRACTICAL PHYSIOLOGY**	
	BDS102 G1	Unit G Topic 1	Physiologic procedures
	BDS102 G2	Unit G Topic 1	Demonstrations
	BDS102 G3	Unit G Topic 1	Electrocardiography
	BDS102 G4	Unit G Topic 1	Clinical examinations of Organ systems

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 Template A1: Syllabus

School: School of Dental Sciences		**Batch:2019-24**
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)	105-0-250
	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	CO103.1: 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. CO103.2: The student should understand the histological basis of various dental treatment procedures. CO103.3: The students must know the basic knowledge of physiologic ageing process in the dental tissues. CO103.4: 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	

		Unit A	**Tooth Morphology**
	BDS-103. A.1	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.
	BDS-103. A.2	Topic 2	Morphology of deciduous & permanent teeth
	BDS-103. A.3	Topic 3	Occlusion
		Unit B	**Oral Embryology**
	BDS-103. B.1	Topic 1	Brief Review of Development of face, jaws, lip, palate and tongue with applied aspects.
	BDS-103. B.2	Topic 2	Development of teeth with applied aspects.
	BDS-103. B.3	Topic 3	Eruption of deciduous and permanent teeth. Applied aspect of eruption and Shedding of teeth and its complications
		Unit C	**Oral Histology of hard tissues**
	BDS-103. C.1	Topic 1	Detailed microscopic study of enamel
	BDS-103. C.2	Topic 2	Dentin, cementum
	BDS-103. C.3	Topic 3	Alveolar bone, Temporomandibular joint
		Unit D	**Oral histology of soft tissues**
	BDS-103. D.1	Topic 1	Pulp tissue Periodontal Ligament,
	BDS-103. D.2	Topic 2	Oral Mucosa, Salivary glands, Maxillary sinus
	BDS-103. D.3	Topic 3	Processing of hard and soft tissues for microscopic studies
		Unit E	**Oral Physiology**
	BDS-103. E.1	Topic 1	Saliva, Mastication, Deglutition
	BDS-103. E.2	Topic 2	Calcium, Phosphorus and Fluoride Metabolism
	BDS-103. E.3	Topic 3	Theories of mineralization, Physiology of taste and speech
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 Templates –

2.1 Template A1: Syllabus for Theory Subjects

School: School of Dental Sciences		Batch: 2019-2024
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)**	120-0-105
	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 analyze 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**	CO201.1 Dental student with knowledge on pathological changes at macroscopic and microscopic levels, capabilities and limitations of morphological pathology in its contribution to dentistry. CO201.2 Dental student with an ability to integrate knowledge from the basic sciences to clinical application in dentistry. CO201.3 Dental student with sound understanding of various infectious diseases and lesions in the oral cavity, various methods of Sterilisation and disinfection. CO201.4 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**		
	BDS-201 A	**Unit A**	
	BDS-201 A1	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.
	BDS-201 A2	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
	BDS-201 A3	Topic 3	Inflammation - Definition, causes types, and features: Acute inflammation, chronic inflammation. Healing - Regeneration - Repair Bacterial Genetics and Drug Resistance in bacteria.
	BDS-201 B	**Unit B**	
	BDS-201 B1	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 autoimmune disorders of oral cavity and related structures. - Immunology of Transplantation and Malignancy - Immunehaematology
	BDS-201 B2	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.

			-
	BDS-201 B3	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. ● Herpes Virus ● Hepatitis B Virus - brief about other types ● Human Immunodeficiency Virus (HIV) ● Mumps Virus ● Brief - Measles and Rubella Virus ● Bacteriophage - structure and significance
	BDS-201 C	**Unit C**	
	BDS-201 C1	Topic 1	Nutritional Disorders: Common Vitamin Deficiencies Mycology: - Brief Introduction
	BDS-201 C2	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 Candidosis – in detail
	BDS-201 C2	Topic 3	Adaptive disorders of growth - Atrophy & Hypertrophy, Hyperplasia, Metaplasia and Dysplasia Briefly on oral lesions of systemic mycoses.

	BDS-201 D	**Unit D**	
	BDS-201 D1	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 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
	BDS-201 D2	Topic 2	Anaemias: Iron Deficiency anaemia, Megaloblastic anaemia Leukemia: acute and chronic leukemia, diagnosis & clinical features
	BDS-201 D3	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

	BDS-201 E	**Unit E**	
	BDS-201 E1	Topic 1	Common diseases of Bones - Osteomyelitis, Metabolic bone diseases, Bone Tumours, Osteosarcoma, Osteocalstoma, Giant cell Tumour, Ewing's sarcoma, Fibrous dysplasia, Aneurysmal bone cyst
	BDS-201 E2	Topic 2	Diseases of Cardiovascular system - Cardiac failure - Congenital heart disease - ASD, VSD, PDA - Fallot's Tetrology - Infective Endocarditis - Atherosclerosis - Ischaemic heart disease
	BDS-201 E3	Topic 3	Haemorrhagic disorders (coagulation cascade, coagulation disorders) Platelet function, platelet disorders

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 Edito
		3	Lee, Bithell, Foerster, Athens, Lukens	Wintrobe's clinical Haematology
		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 Microbiology
		9	Moselio Schaechter, etal.	Mechanisms of Microbial diseases
		10	Tizard	Immunology an Introduction
		11	Evan Roitt et al.	Immunology 3rd edition
3.	**Other References**			

Course Templates – Year 2

2.1 Template A1: Syllabus

School: School of Dental Sciences		Batch: 2019-2024
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)**	070-0-020
	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**		
	BDS 202 A	**Unit A** GENERAL PHARMACOLOGY	
	BDS 202 A1	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.
	BDS 202 A2	Unit A Topic 2	CNS drugs; General anaesthetics, hypnotics, analgesics psychotropic drugs, anti – epileptics, muscle relaxants, local anaesthetics, Implications of these drugs in clinical dentistry.

	BDS 202 A3	Unit A Topic 3	Autonomic drugs; sympathomimetics, antiadrenergic drugsparasympothomimetics and parasympatholytics, Implications of Autonomic drugs in clinical dentistry
	BDS 202 A4	Unit A Topic 4	Cardiovascular drugs; Cardiac stimulants; antihypertensive drugs, vasopressor agents, treatment of shock, Antianginal agents and diuretics, Implications of these drugs in clinical dentistry.
	BDS 202 A5	Unit A Topic 5	Autocoids: Histamine, antihistamines, prostaglandins, leukotriens and bronchodilators, Implications of Autocoids in clinical dentistry.
	BDS 202 A6	Unit A Topic 6	G.I.T. Drugs, Purgatives, anti-diarrhoeal, antacids, anti-emetics, Implications of these drugs in clinical dentistry.
	BDS 202 A7	Unit A Topic 7	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.
	BDS 202 A8	Unit A Topic 8	Chemotherapy: Antimicrobial agents (against bacteria, anaerobic infections, 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.
	BDS 202 A9	Unit A Topic 9	Chemotherapy: Antimicrobial agents (against bacteria, anaerobic infections, 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.
	BDS 202 A10	Unit A Topic 10	Vitamins: Water soluble vitamins, Vit. D, Vit.K. and Vit. E, Implications of Vitamins in clinical dentistry.
	BDS 202 A11	Unit A Topic 11	Pharmacotherapy of emergencies in dental office and emergency drugs tray Implications of Pharmacotherapy in clinical dentistry.
	BDS 202 A12	Unit A Topic 12	Chealating agents – BAL, EDTA and desferrioxamine,

BDS 202 B	**Unit B** DENTAL PHARMACOLOGY	
BDS 202 B1	Unit B Topic 1	Anti - septics, astrigents, obtundents, mummifying agents, bleaching agents, styptics, disclosing agents, dentifrices, mouth washes, caries and fluorides.
BDS 202 B2	Unit B Topic 2	Pharmacotherapy of common Oral conditions in dentistry, Practical's & Demonstrations

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 Templates –

2.1 Template A1: Syllabus for Theory Subjects (SAMPLE)

School: School of Dental Sciences		Batch: 2019-2024
Program:		BDS (Bachelor of Dental Surgery)
Branch:		Dental
1	**Course Code**	BDS-203
2	**Course Title**	DENTAL MATERIALS
3	**Credits**	NA
4	**Contact Hours (L-T-P)**	80-0-240
	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**	CO203.1- Dental student will have knowledge of physical/chemical/biological & mechanical properties of all materials in dentistry. CO203.2- 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**		
	BDS-203.A	**Unit A** **Structure of matter and principles of adhesion**	
	BDS-203.A1	Unit A Topic 1	Change of state
	BDS-203.A2	Unit A Topic 2	Interatomic bond distance and bonding energy
	BDS.203.A3	Unit A Topic 3	Crystalline and non crystalline structures
	BDS-203.B	**Unit B** **Important physical properties applicable to dental materials**	
	BDS-203.B1	Unit B Topic 1	Physical properties –law of mechanics, acoustics, optics, thermodynamics, electricity, magnetism, radiation
	BDS-203. B2	Unit B Topic 2	Hue, value, chroma and translucency- law of optics, dealing with phenomenon of light, vision and sight.
	BDS-203. B3	Unit B Topic 3	Thermal conductivity, COTE
	BDS-203.B4	Unit B Topic 4	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
	BDS-203 C	**Unit C** **Biological considerations in use of dental materials**	
	BDS-203.C1	Unit C 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
	BDS-203.C2	Unit C Topic 2	Hazards associated with materials, pH affecting pulp, polymers causing chemical irritation, mercury toxicity
	BDS-203.C3	Unit C Topic 3	Microleakage, thermal changes, galvanism, toxic effect of materials, biological evaluation for systemic toxicity
	BDS-203 D	**Unit D** **GYPSUM AND GYPSUM PRODUC**	
	BDS-203 D1	Unit D 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.
	BDS-203 D2	Unit D Topic 2	**C**hemistry of setting, setting reaction, theories of setting, gauging water.
	BDS-203 D3	Unit D Topic 3	Setting time, working time, measurement of setting time and factors controlling setting time.
	BDS-203 D4	Unit D Topic 4	Strength, factors affecting strength: wet strength, dry strength, tensile strength.
	BDS-203 D5	Unit D Topic 5	Slurry: Need & Use.

	BDS-203 D6	Unit D Topic 6	Care of Cast
	BDS-203 D7	Unit D Topic 7	ADA Classification of Gypsum Products.
	BDS-203 D8	Unit D Topic 8	Manipulation including recent methods and advanced methods.
	BDS-203 D9	Unit D Topic 9	Disinfection: Infection Control, liquid, sprays, radiation methods, use of disinfectants, storage of materials.
	BDS-203 E	**Unit E IMPRESSION MATERIALS USED IN DENTISTRY**	
	BDS-203 E1	Unit E Topic 1	Impression Plaster, Impression compound, Zinc Oxide Eugenol Paste, Bite Registration Paste, Non- Eugenol Paste, Hydrocolloids (Reversible and Irreversible)
	BDS-203E2	Unit E Topic 2	Elastomeric impression materials, polysulphide, condensation silicones, addition silicones, polyether
	BDS-203.E3	Unit E Topic 3	Visible light cure polyurethane dimethacrylate
	BDS-203.E4	Unit E Topic 4	Historical background, definition, purpose, ideal properties, application, composition, setting chemistry, recent advances
	BDS-203.E5	Unit E Topic 5	Study of properties: working time, setting time, flow, accuracy, strength, flexibility, tear strength, dimensional stability, biological properties, shelf life , infection control,
	BDS 203 F	**Unit F Synthetic Resins**	
		Unit F Topic 1	Acrylic resins
		Unit F Topic 2	Restorative resins
	BDS 203 G	**Unit G Metal and Alloys**	
		Unit G Topic 1	Amalgam
		Unit G Topic 2	Direct filling Gold
		Unit G Topic 3	Dental Casting Alloys
	BDS 203 H	**Unit H Dental Waxes Including Inlay Casting Wax**	
		Unit H Topic 1	Introduction, classification, properties, Dental waxes, manipulation, applications
	BDS 203 I	**Unit I Dental Casting Investments**	
		Unit I Topic 1	Definition, classification, Technical considerations, Defects in casting
	BDS 203 J	**Unit J Soldering, Brazing and Welding**	
		Unit J Topic 1	Definitions, requirements, applications, properties
	BDS 203 K	**Unit K Wrought Base Metal Alloys**	
		Unit K Topic 1	Applications, properties

	BDS 203 L	**Unit L Dental Cements**	
		Unit L Topic 1	Definition, requirements, properties
	BDS 203 M	**Unit M Dental Ceramics**	
		Unit M Topic 1	Definitions, Applications, Properties, Composition
	BDS 203 N	**Unit N Abrasion and Polishing Agents**	
		Unit N Topic 1	Definition, types,
		Unit N Topic 2	Abrasive action, Technical considerations
	BDS 203 O	**Unit O Die and Counter Die materials including Electroforming and Electropolishing**	
		Unit O Topic 1	Types of gypsum products, electroforming, Epoxy resins, Amalgam
	BDS 203 P	**Unit P Dental implants**	
		Unit O Topic 1	Evolution, Types, materials
	BDS 203 Q	**Unit Q Mechanics of Cutting**	
		Unit Q Topic 1	Burs, points

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 Template A1: Syllabus

School: School of Dental Sciences		Batch: 2019-2024
Program:		BDS (Bachelor of Dental Surgery)
Branch:		Dental
1	**Course Code**	BDS-251
2	**Course Title**	PRE-CLINICAL PROSTHODONTICS
3	**Credits**	NA
4	**Contact Hours (L-T-P)**	25-0-300
	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**	**CO251.1** 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**		
	BDS-251.A	**Unit A** **TEETH ARRANGEMENT SCHEDULE**	
	BDS-251.A1	Unit A Topic 1	Fabrication of Record Base
	BDS-251.A2	Unit A Topic 2	Fabrication of Occlusal Rims
	BDS.251.A3	Unit A Topic 3	Articulation
	BDS-251.A4	Unit A Topic 4	Anterior Teeth Arrangement
	BDS-251.A5	Unit A Topic 5	Posterior Teeth Arrangement

	BDS.251. A6	Unit A Topic 6	Fabrication of Occlusal Rims
	BDS-251.A7	Unit A Topic 7	1st Teeth Arrangement
	BDS-251.A8	Unit A Topic 8	2ndTeeth Arrangement
	BDS.251. A9	Unit A Topic 9	3rdTeeth Arrangement
	BDS-251.A10	Unit A Topic 10	4thTeeth Arrangement
	BDS-251.A11	Unit A Topic 11	5thTeeth Arrangement
	BDS.251. A12	Unit A Topic 12	6thteeth Arrangement
	BDS-251.A13	Unit A Topic 13	8thteeth Arrangement
	BDS-251.A14	Unit A Topic 14	9th Teeth Arrangement
	BDS.251. A15	Unit A Topic 15	10thteeth Arrangement
	BDS-251.A16	Unit A Topic16	11th Teeth Arrangement

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		

Course Templates –

2.1 Template A1: Syllabus

School: School of Dental Sciences		Batch: 2019-2024
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)**	025-0-200
	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**	CO252.1: Students will have sound knowledge on hand and rotary cutting instruments CO252.2 Students have basic skills to prepare cavity designs to receive various restorative materials on typhodont.
7	**Course Description**	The Pre-Clinical Conservative training program 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 program and are confident and competent to accomplish and execute the knowledge and skills for managing the patient in clinics.

8	**Outline syllabus**		
	BDS252.A	**Unit A** **Introduction to Conservative Dentistry**	
	BDS252.A1	Unit A Topic 1	Nomenclature
	BDS252.A2	Unit A Topic 2	Fundamental
	BDS252A3	Unit A Topic 3	Contacts & Contour
	BDS252.B	**Unit B** **Caries and Its Management**	
	BDS252.B1	Unit B Topic 1	Dental Caries
	BDS252 B2	Unit B Topic 2	Management of Deep caries
	BDS252 B3	Unit B Topic 3	Pulp Protection
	BDS252C	**Unit C** **Fundamentals of Amalgam Restoration**	
	BDS252 C1	Unit C Topic 1	Tooth Preparation for amalgam
	BDS252 C2	Unit C Topic 2	Dental cements
	BDS252 C3	Unit C Topic 3	Failures of amalgam restoration
	BDS252 D	**Unit D** **Isolation Concepts and Barrier Techniques**	
	BDS252 D1	Unit D Topic 1	Concepts of Isolation
	BDS252 D2	Unit D Topic 2	Barrier Techniques
	BDS252 D3	Unit D Topic 3	Basic concept of Sterilization
	BDS252 E		
	BDS252 E1	Unit E Topic 1	Concepts of RCT in Single rooted tooth
	BDS252 E2	Unit E Topic 2	Introduction to Cl I Composites restoration
	BDS252 E3	Unit E Topic 3	Finishing & Polishing

1.	**Course evaluation**	Attendance
		Quizzes
		Presentations
		Any Other
		Annual Examination
2.	**Text book/s***	1. Pre-Clinical Conservative Dentistry 2. Text Book of Conservative Dentistry
3.	**Other References**	LMS TED learning EBSCOHOST Various scientific articles from various sources

Course Templates – III year

2.1 Template A1: Syllabus

School:		**School of Dental Sciences**
Program:		BDS (Bachelor of Dental Surgery)
Batch		2019-24
1	**Course Code**	BDS301
2	**Course Title**	GENERAL MEDICINE
3	**Credits**	NA
4	**Contact Hours (L-T-P)**	60 - 0 - 90
	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**	**CO301.1**Dental student with sound knowledge on oral manifestations of systemic diseases, medical emergencies in dental practice. special precautions/ contraindication of aesthesia **CO301.2**Dental students with ability to diagnose and manage various common medical problems encountered in general, dental practice and dental emergencies. **CO301.3**Dental student with basic skill to prevent and manage complications encountered while carrying out various dental surgical and other procedures

	BDS301.A	**Unit A** **Introduction to general medicine**	
	BDS301.A1	Unit A Topic 1	Aims of medicine, definition of Signs & Symptoms.
	BDS301.A2	Unit A Topic 2	Diagnosis and its types. Treatment
	BDS301.B	**Unit B** **Infections**	
	BDS301.B1	Unit B Topic 1	Enteric fever, AIDS, Herpes Simplex, Herpes Zoster,
	BDS301 B2	Unit B Topic 2	Syphilis, Diphtheria, Infectious mononucleosis

	BDS301 B3	Unit B Topic 3	Mumps, Measles, Rubella, Malaria.
	BDS301 C	**Unit C Systemic Medicine**	
	BDS301 C1	Unit C Topic 1	GIT- Stomatitis, gingival hyperplasia, dysphagia, acid peptic disease, jaundice, acute and chronic hepatitis, cirrhosis of liver ascites.
	BDS301 C2	Unit C Topic 2	CVS- Acute rheumatic fever rheumatic valvular heart disease, hypertension, ischemic heart disease, infective endocarditis, common arrhythmias, congenital heart disease, congestive cardiac failure.
	BDS301 C3	Unit C Topic 3	Respiratory System- Pneumonia, COPD, Pulmonary TB, Bronehial Asthma

	BDS301 C4	Unit C Topic 4	Renal System- Acute nephritis Nephrotic syndrome
	BDS301 C5	Unit C Topic 5	CNS- Facial palsy, facial pain including trigeminal neuralgia, epilepsy, headache including migraine.
	BDS301 D	**Unit D Hematology**	
	BDS301 D1	Unit D Topic 1	Anemias, Bleeding & Clotting disorders,
	BDS301 D2	Unit D Topic 2	leukemias, lymphomas, agranulocytosis, splenomegaly,
	BDS301 D3	Unit D Topic 3	Oral manifestations of hematologic disorders, generalized Lymphadenopathy.

	BDS301 E	**Unit E Nutrition**	
	BDS301 E1	Unit E Topic 1	Macro and Micro Nutrients
	BDS301 E2	Unit E Topic 2	Deficiency disorders
	BDS301 F	**Unit F Endocrines**	
	BDS301 F1	Unit F Topic 1	Diabetes Mellitus Acromegaly, Hypothyroidism,
	BDS301 F2	Unit F Topic 2	Thyrotoxicosis, Calcium metabolism and Parathyroids.
	BDS301 G	**Unit G Critical Care**	
	BDS301 G1	Unit G Topic 1	Syncope, cardiac arrest, CPR, shock

1.	**Course evaluation**	Attendance
		Quizzes
		Presentations
		Any Other
		Annual Examination
2.	**Text book/s***	1. Text Book of Medicine 2. Textbook of Medicine
3.	**Other References**	LMS TED learning EBSCOHOST Various scientific articles from various sources

2.1 Template A1: Syllabus

School:		**School of Dental Sciences**
Program:		BDS (Bachelor of Dental Surgery)
Batch		2019-24
1	**Course Code**	BDS302
2	**Course Title**	GENERAL SURGERY
3	**Credits**	NA
4	**Contact Hours (L-T-P)**	60 - 0 - 90
	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**	**CO302.1**Dental student with sound surgical knowledge on anomalies, lesions and diseases of the teeth, mouth and jaws **CO302.2**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**		
	BDS302.A	**Unit A** **Introduction to general surgery**	
	BDS302.A1	Unit A Topic 1	History of Surgery
	BDS302.A2	Unit A Topic 2	General Principles of Surgery
	BDS302.B	**Unit B** **Wounds**	
	BDS302.B1	Unit B Topic 1	Classification Wound Healing
	BDS-302. **B2**	Unit B Topic 2	Repair of Wounds Treatment of Wounds Complications of Wounds.
	BDS302.B3	Unit B Topic 3	Medico-Legal Aspects of Accidental Wounds
	BDS-302. C	**Unit C** **Inflammation & Infection**	
	BDS302.C1	Unit C Topic 1	Inflammation of Soft and Hard Tissues. Causes of Inflammation.
	BDS302.C2	Unit C Topic 2	Varieties, Treatment and Sequelae
	BDS302.C3	Unit C Topic 3	Acute and Chronic Abscess Skin Infections, Cellulitis, Carbuncle, and Erysepelas.
	BDS302.C4	Unit C Topic 4	Specific Infections Such As Tetanus, Gangrene, Syphilis, Gonorrhoea, Tuberculosis, Actinomycosis, Vincents Angina, Cancrum Oris.
	BDS302.C5	Unit C Topic 5	Pyaemia, Toxaemia and Septicaemia
	BDS302.D	**Unit D** **Viral Infections**	
	BDS302.D1	Unit D Topic 1	HIV and Hepatitis B with special reference to their prevention and precautions to be taken in treating patients in a carrier state.

	BDS302. E	**Unit E** **Shock and Haemorrhage**	
	BDS302.E1	Unit E Topic 1	Classification, causes, clinical features and management of various types of shock.
	BDS302.E2	Unit E Topic 2	Syncope, Circulatory collapse. Haemorrhage – different types, causes, clinical features and management
	BDS302.E3	Unit E 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.
	BDS302.E4	Unit E Topic 4	Hemophilia's, their transmission, clinical features and management especially in relation to minor dental procedures.
	BDS302.F	**Unit F** **Tumours, Ulcers, Cysts, Sinus and Fistulae**	
	BDS302. F1	Unit F Topic 1	Classification, clinical examination and treatment principles in various types of benign and malignant tumours.
	BDS302.F2	Unit F Topic 2	Classification, clinical examination and treatment principles in various types of ulcers, cysts, sinus and fistulae.
	BDS302. G	**Unit G** **Diseases of Lymphatic System**	
	BDS302.G1	Unit G Topic 1	Head and Neck Region, Tubercular Infection, Lymphomas, Leukaemia's, Metastatic Lymph Node Diseases.
	BDS302. H	**Unit H** **Diseases of The Oral Cavity, Larynx, Nasopharynx**	
	BDS302.H1	Unit H Topic 1	Infective and malignant diseases of the oral cavity and oropharynx and salivary glands,
	BDS302.H2	Unit H Topic 2	Preventive aspects of premalignant and malignant diseases of the oral cavity.
	BDS302.H3	Unit H Topic 3	Infections and tumours affecting these sites. Indications, procedure and complications of tracheostomy
	BDS302.I	**Unit I** **Nervous System**	
	BDS302. I1	Unit I Topic 1	Peripheral nerve injuries and related surgical procedures.
	BDS302.I2	Unit I Topic 2	Facial and Trigeminal Nerve.
	BDS302.J	**Unit J** **Fractures**	
	BDS-302. J1	Unit J Topic 1	Principles and Clinical Presentation
	BDS302. J2	Unit J Topic 2	Treatment and Healing

	BDS302. K	**Unit K** **Principles of Surgery**	
	BDS302.K1	Unit K Topic 1	Principles, Asepsis, Antiseptics, Sterilisation,
	BDS302.K2	Unit K Topic 2	Principles of anaesthesia and principles of tissue replacement. Knowledge of sutures, drains,
	BDS302.K3	Unit K Topic 3	Diathermy, cryosurgery and use of Laser in surgery.
	BDS302.L	**Unit L** **Anomalies of Face and Jaw**	
	BDS302. L1	Unit L Topic 1	Surgical anatomy and development of face. Cleft lip and cleft palate—principles of management.
	BDS302.L2	Unit L Topic 2	Differential diagnosis and management of different types of swellings of the jaw.
	BDS302.M	**Unit M** **Biopsy**	
	BDS302. M1	**Unit M** **Topic 1**	Different types of biopsies routinely used in surgical practice.
	BDS302. N2	**Unit N** **Thyroid and Parathyroid**	
	BDS302. N1	**Unit N** **Topic 1**	Surgical anatomy, pathogenesis, clinical features and management of dysfunction of thyroid and parathyroid glands.

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***	3. Short practice of surgery	Bailey & Love
3.	**Other References**	LMS TED learning EBSCOHOST Various scientific articles from various sources	

2.1 Template A1: Syllabus

School: School of Dental Sciences			**Batch:2019-24**
Program:			BDS (Bachelor of Dental Surgery)
1		Course Code	BDS303
2		Course Title	**Oral Pathology & Oral Microbiology**
3		Credits	NA
4		Contact Hours (L-T-P)	145-0-80
		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	**CO303.1:** At the end of the oral pathology course, student should be able to comprehend different types of pathologies in the oral cavity. **CO303.2**: The student should understand manifestations of common diseases, their diagnosis & pathogenesis. **CO303.3**: Student should also be able to understand oral manifestations of systemic diseases. **CO303.4**: Student should know basic aspects of Forensic Odontology. **CO303.5**: 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	
		Unit A	**Developmental disturbances of oral cavity & Forensic Odontology**
	BDS-303.A.1	Topic 1	Developmental disturbances of oral & paraoral structures and forensic odontology
	BDS-303. A.2	Topic2	Benign & malignant tumors of the oral cavity & salivary glands
	BDS-303. A.3	Topic3	Cysts & tumors of odontogenic origin
		Unit B	**Diseases of microbial origin**
	BDS-303.	Topic1	Bacterial, viral & mycotic infections of the oral cavity

	B.1		
	BDS-303. B.2	Topic2	Diseases of periodontium & dental caries
	BDS-303. B.3	Topic3	Diseases of pulp & periapical tissues & spread of oral infections
		Unit C	**Injuries & repair**
	BDS-303. C.1	Topic1	Physical & chemical injuries of the oral cavity
	BDS-303. C.2	Topic2	Regressive alterations of teeth
	BDS-303. C.3	Topic3	Healing of oral wounds
		Unit D	**Disturbances of metabolism & immunologic diseases**
	BDS-303. D.1	Topic1	Oral aspects of metabolic diseases
	BDS-303. D.2	Topic2	Allergic & immunologic diseases of the oral cavity
	BDS-303. D.3	Topic3	Diseases of blood & blood forming organs
		Unit E	**Diseases of specific systems**
	BDS-303. E.1	Topic1	Diseases of bone & joints
	BDS-303. E.2	Topic2	Diseases of skin
	BDS-303. E.3	Topic3	Diseases of nerves & muscles
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
			Practical
2		Text book/s*	Shafer's, Neville, Regezi, Cawson, Soames & Southam, Eversole
3		Other References	LMS TED learning EBSCOHOST Scientific articles Webinars

Course Templates – IV year

2.1 Template A1: Syllabus

School:		**School of Dental Sciences**
Program:		BDS (Bachelor of Dental Surgery)
Batch		2019-24
1	**Course Code**	BDS401
2	**Course Title**	Public Health Dentistry
3	**Credits**	NA
4	**Contact Hours (L-T-P)**	60 - 0 - 290
	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**	**CO401.1** Student would be able to understand the community aspects of oral health care delivery. **CO401.2** 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**		
	BDS401.A	**Unit A** **Introduction to Dentistry**	
	BDS401.A1	Unit A Topic 1	Introduction to Dentistry: Definition of Dentistry, Scope, aims and objectives of Dentistry.
	BDS401.A2	Unit A Topic 2	History of dentistry
	BDS401.B	**Unit B** **Public Health**	
	BDS401.B1	Unit B Topic 1	Health & Disease
	BDS401 B2	Unit B Topic 2	Public Health
	BDS401 B3	Unit B Topic 3	Epidemiology
	BDS401 B4	Unit B Topic 4	Environmental Health
	BDS401 B5	Unit B Topic 5	Health Education
	BDS401 B6	Unit B Topic 6	Health Care Delivery System
	BDS401 C	**Unit C** **Dental Public Health**	
	BDS401 C1	Unit C Topic 1	Epidemiology of dental diseases
	BDS401 C2	Unit C Topic 2	Nutrition in dental diseases
	BDS401 C3	Unit C Topic 3	Survey
	BDS401 C4	Unit C Topic 4	Payments in Dentistry

	BDS401 C5	Unit C Topic 5	Preventive Dentistry
	BDS401 D	**Unit D** **Research Methodology and Dental Statistics**	
	BDS401 D1	Unit D Topic 1	Sampling
	BDS401 D2	Unit D Topic 2	Biostatistics
	BDS401 D3	Unit D Topic 3	Research Methodology

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***	4. Essentials of public health dentistry 5. Text Book of Preventive and Social Medicine 6. Textbook of public health dentistry 7. 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 Templates –

2.1 Template A1: Syllabus

School:		**School of Dental Sciences**
Program:		BDS (Bachelor of Dental Surgery)
Batch:		2019-2024
1	**Course Code**	BDS 402
2	**Course Title**	Periodontology
3	**Credits**	NA
4	**Contact Hours (L-T-P)**	80 -200
	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**	**CO402.1:** Able to diagnose patients' periodontal problems, plan appropriate periodontal treatment and make appropriate decision regarding referral to a specialist wherever required **CO402.2:** Competent to educate and motivate the patient, give proper instructions to the patients and do periodic recall and evaluation. **CO402.3:** 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**		
	BDS 402	**Unit A**	**Biologic Basis of Periodontology**
		Topic 1	Normal Periodontium
		Topic 2	Classification and Epidemiology of Periodontal Diseases
		Topic 3	Evidence based Decision Making
		Unit B	**Etiopathogenesis of Periodontal Diseases**
		Topic 1	Etiology of Periodontal Diseases

		Topic 2	Periodontal pathology
		Topic 3	Relationship between Periodontal Diseases and Systemic Health
		Unit C	**Treatment of Periodontal Diseases**
		Topic 1	Diagnosis, Prognosis and Treatment Plan
		Topic 2	Non-Surgical and Surgical Treatment
		Topic 3	Periodontal Maintenance
		Unit D	**Multidisciplinary Periodontics**
		Topic 1	Endodontic – Periodontics Interrelationship
		Topic 2	Periodontal – Restorative Interrelationship
		Topic 3	Periodontal – Orthodontic Interrelationship
		Unit E	**Oral Implantology**
		Topic 1	Biologic aspects or Dental Implants
		Topic 2	Clinical Aspects of Dental Implants
		Topic 3	Implant Complications and Supportive Implant Care

1.	**Course Evaluation**	Attendance	Minimum 75%			
		Annual Examination	**Theory 100 Marks**	Written Exam 70 Marks	Viva Voce 20 Marks	Internal assessment 10 Marks
			Practical 100 Marks	Clinical case 60 Marks	Viva Voce 30 Marks	Internal 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 Templates –

1.1 Template A1: Syllabus for Theory Subjects

School: School of Dental Sciences		Batch: 2019-2024
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)**	50-0-200
	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**	CO 403.1 Be able to diagnose and treat common orthodontic problems. CO 403.2 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 CO 403.3 Be able to identify all types dental malocclusion and perform necessary counselling. CO 403.4 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**		
	BDS-403 A	**Unit A**	
	BDS-403 A1	Topic 1	Introduction, Definition, Historical background, Aims and Objectives of Orthodontics and need for orthodontics care.
	BDS-403 A2	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.
	BDS-403 A3	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.
	BDS-403 B	**Unit B**	
	BDS-403 B1	Topic 1	Functional.Development of Dental Arches and Occlusioin a. Factors influencing functional development of dental arches and occlusion. b. Forces of occlusion c. Wolfe's law of transformation of bone d. Trajectories of forces
	BDS-403 B2	Topic 2	Clinical Application of Growth and Development
	BDS-403 B3	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.
	BDS-403 C	**Unit C**	
	BDS-403 C1	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
	BDS-403 C2	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 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
	BDS-403 C2	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

	BDS-403 D	**Unit D**	
	BDS-403 D1	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 Orthodontics - indications and selection of teeth for extraction.
	BDS-403 D2		Orthodontic Appliances: General

		Topic 2	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
	BDS-403 D3	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

	BDS-403 E		
	BDS-403 E1	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.
	BDS-403 E2	Topic 2	EXTRAORAL APPLIANCES 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 8. Class III Malocclusion - True and Pseudo Class III
	BDS-403 E3	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.

Course Templates –

2.1 Template A1: Syllabus

School: School of Dental Sciences		Batch: 2019-2024
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)**	65-0-200
	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**	**CO404.1:** Generate graduates that demonstrate the necessary knowledge, skills and attitude in Oral & Maxillofacial Diagnosis procedure and medical management of such disorder. **CO404.2** 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**		
	BDS404.A	**Unit A** **DIAGNOSTIC METHODS**	
	BDS404.A1	Unit A Topic 1	Definition and importance of Diagnosis and various types of diagnosis
	BDS404.A2	Unit A Topic 2	Method of clinical examinations
	BDS404.A3	Unit A Topic 3	Investigations
	BDS404.B	**Unit B** **DIAGNOSIS & DIFFERENTIAL DIAGNOSIS**	
	BDS404.B1	Unit B Topic 1	Teeth: Developmental abnormalities, causes of destruction of teeth and their sequelae and discoloration of teeth
	BDS404 B2	Unit B Topic 2	Diseases of bone and Osteodystrophies, Development disorders, Metabolic disorders.
	BDS404 B3	Unit B Topic 3	Temparomandibular joint Disorders.
	BDS404 B4	Unit B Topic 4	Common cysts and Tumors.
	BDS404 C	**Unit C** **TUMORS**	
	BDS404 C1	Unit C Topic 1	Soft tissue tumors
	BDS404 C2	Unit C Topic 2	Hard tissue tumors
	BDS404 C3	Unit C Topic 3	Periodontal diseases

	BDS404 C4	Unit C Topic 4	Granulomatous disorders
	BDS404 C5	Unit C Topic 5	Miscellaneous Disorders: Burkitt lymphoma, sturge - Weber syndrome, CREST syndrome, rendu-osler-weber disease.
	BDS404 D	**Unit D** **ORAL MEDICINE & THERAPEUTICS**	
	BDS404 D1	Unit D Topic 1	Infections of oral and paraoral structures
	BDS404 D2	Unit D Topic 2	Important common mucosal lesions
	BDS404 D3	Unit D Topic 3	Cervico-facial lymphadenopathy.
	BDS404 D4	Unit D Topic 4	Facial pain
	BDS404 D5	Unit D Topic 5	Altered sensations: Cacogeusia, halitosis
	BDS404 D6	Unit D Topic 6	Tongue in local and systematic disorder
	BDS404 D7	Unit D Topic 7	Oral manifestations of metabolic disorders, endocrine disorders, nutritional deficiencies, blood disorders
	BDS404 D8	Unit D Topic 8	Disease of salivary glands
	BDS404 D9	Unit D Topic 9	Dermatological diseases with oral manifestations
	BDS404 D10	Unit D Topic 10	Immunological diseases with oral manifestations
	BDS404 D11	Unit D Topic 11	Allergy: Local allergic reactions, anaphylaxis, serum sickness
	BDS404 D12	Unit D Topic 12	Foci of oral infection and their ill effects on general health

	BDS404 D13	Unit D Topic 13	Management of dental problems in medically compromised persons
	BDS404 D14	Unit D Topic 14	Precancerous lesions and conditions
	BDS404 D15	Unit D Topic 15	Nerve and muscle diseases
	BDS404 D16	Unit D Topic 16	Forensic odontology
	BDS404 D17	Unit D Topic 17	Therapeutics
	BDS404 E		
	BDS404 E1	Unit E Topic 1	Scope of the subject and history of origin
	BDS404 E2	Unit E Topic 2	Physics of radiation, radiation units
	BDS404.E3	Unit E Topic 3	Biological effects of radiation.
	BDS404 E4	Unit E Topic 4	Radiation safety and protection measures.
	BDS404 E5	Unit E Topic 5	Principles of image production.
	BDS404 E6	Unit E Topic 6	Radiographic techniques: Intra oral, cephalometric & Specialised radiographs.
	BDS404 E7	Unit E Topic 7	Factors in production of good radiographs
	BDS404 E8	Unit E Topic 8	Radiographic normal anatomical landmarks

	BDS404 E9	Unit E Topic 9	Faculty radiographs and artefacts in radiographs
	BDS404 E10	Unit E Topic 10	Interpretation of radiographs in various abnormalities of teeth, bones and other orofacial tissues
	BDS404 E11	Unit E Topic 11	Principles of radiotherapy of oro-facial malignancies and complications of radiotherapy
	BDS404 E12	Unit E Topic 12	Contrast radiography and basic knowledge of radio-active isotopes
	BDS404 E13	Unit E Topic 13	Radiography in Forensic Odontology

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 Templates –

2.1 Template A1: Syllabus

School: School of Dental Sciences		Batch: 2019-2024
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)**	70-0-360
	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**	**CO405.1**: Application of knowledge of related medical subjects in management of patients with oral surgical problem. **CO405.2:** Sufficient knowledge to diagnose manage and treat minor oral surgical procedures **CO405.3**: 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**		
	BDS405.A	**Unit A** **Introduction**	
	BDS405.A1	Unit A Topic 1	Definition, Aims and Objectives.
	BDS405.A2	Unit A Topic 2	Scope of Oral and Maxillofacial Surgery
	BDS405.B	**Unit B** **Diagnosis in oral surgery**	
	BDS405.B1	Unit B Topic 1	History taking
	BDS405. B2	Unit B Topic 2	Clinical examination
	BDS405. B3	Unit B Topic 3	Investigations.
	BDS405. C	**Unit C** **Infection Control**	
	BDS405.C1	Unit C Topic 1	Principlesofinfectioncontrolandcross-infectioncontrolwithparticularreferencetoHIV/AIDSand Hepatitis

	BDS405. D	**Unit D** **Principles of Oral Surgery**	
	BDS405. D1	Unit D Topic 1	Asepsis

	BDS405. D2	Unit D Topic 2	Important common mucosal lesions
	BDS405. D3	Unit D Topic 3	Painless Surgery
	BDS405. D4	Unit D Topic 4	Access – Intra Oral & Extra Oral
	BDS405. D5	Unit D Topic 5	Control of haemorrhage during surgery Normal Haemostasis, Local measures available to control bleeding, Hypotensive anaesthesia, etc
	BDS405. D6	Unit D Topic 6	Drainage & DebridementPurpose of drainage in surgical wounds
	BDS405. D7	Unit D Topic 7	Closure of wounds
	BDS405. D8	Unit D Topic 8	Post- operative care

	BDS405. E		
	BDS405. E1	Unit E Topic 1	General considerations Ideal Extraction. Indications for extraction of teeth Extractions in medically compromised patients
	BDS405. E2	Unit E Topic 2	Forceps or intra-alveolar or closed method. Principles, types of movement, force etc.
	BDS405.E3	Unit E Topic 3	Trans-alveolar, surgical or open method, Indications, surgical procedure. Dental elevators: uses, classification, principles in the use of elevators, commonly used elevators
	BDS405. E4	Unit E Topic 4	Complications of Exodontia - Complications during exodontia Common to both maxilla and mandible. Post-operative complications -Prevention and management of complications.
BDS405. F			
BDS405. F1		Unit F Topic 1	Incidence, definition, aetiology
BDS405. F2		Unit F 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.
BDS405. F3		Unit F Topic 3	Maxillary third molar, Indications for removal, classification, Surgical procedure for removal.
BDS405. F4		Unit F Topic 4	Impacted maxillary canine Reasons for canine impaction, Localization, indications for removal, Methods of management, labial and palatal approach, Surgical exposure, transplantation, removal etc
	BDS405. G		

	BDS405.G1	Unit G Topic 1	Definition, classification of procedures
	BDS405.G2	Unit G Topic 2	Corrective procedures: Alveoloplasty, Reduction of maxillary tuberosities, Frenectomies and removal of tori.
	BDS405.G3	Unit G Topic 3	Ridge extension or Sulcus extension procedures Indications and various surgical procedures
	BDS405.G4	Unit G Topic 4	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.
	BDS405. H		
	BDS405.H1	Unit H Topic 1	Surgical anatomy of the sinus. Sinusitis both acute and chronic
	BDS405.H2	Unit H Topic 2	Surgical approach of sinus - Caldwell-Luc procedure Removal of root from the sinus.
	BDS405.H3	Unit H Topic 3	Oro-antral fistula - aetiology, clinical features and various surgical methods for closure.
	BDS405. I		
	BDS405.I1	Unit I Topic 1	Applied surgical anatomy of the joint.
	BDS405.I2	Unit I Topic 2	Dislocation -Types, aetiology, clinical features and management. ankylosis - Definition, aetiology, clinical features and management.
	BDS405.I3	Unit I Topic 3	Myo-facial pain dysfunction syndrome, aetiology, clinical features, Management- Non surgical and surgical.
	BDS405.I4	Unit I Topic 4	Internal derangement of the joint. Arthritis of T.M. Joint.
	BDS405. J		
	BDS405.J1	Unit J 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.
	BDS405.J2	Unit J Topic 2	Osteomyelitis of the jaws - definition, aetiology, pre-disposing factors, classification, clinical features and management.
	BDS405.J3	Unit J Topic 3	Ludwigs angina - definition, aetiology, clinical features, management and complications.
	BDS405. K		
	BDS405.K1	Unit K Topic 1	Definition, classification, pathogenesis.
	BDS405.K2	Unit K Topic 2	Diagnosis - Clinical features, radiological, aspiration biopsy, use of contrast media and histopathology.
	BDS405.K3	Unit K Topic 3	Management - Types of surgical procedures, Rationale of the techniques, indications, procedures, complications etc.
	BDS405. L		
	BDS405.L1	Unit L Topic 1	Non odontogenetic benign tumours occuring in oral cavity - fibroma, papilloma, lipoma, ossifying fibroma, myeloma etc.
	BDS405.L2	Unit L Topic 2	Ameloblastoma - Clinical features, radiological appearance and methods of management.
	BDS405.L3	Unit L Topic 3	Carcinoma of the oral cavity - Biopsy – types Outline of management of squamous

			Cell carcinoma: surgery, radiation and chemotherapy TNM classification.
	BDS405.L4	Unit L Topic 4	Role of dental surgeons in the prevention and early detection of oral cancer.
	BDS405. M		
	BDS405.M1	Unit M Topic 1	General considerations, types of fractures, etiology, clinical features and general principles of management.
	BDS405.M2	Unit M Topic 2	mandibular fractures - Applied anatomy, classification. Diagnosis – Clinical and radiological.
	BDS405.M3	Unit M Topic 3	Management - Reduction closed and open Fixation and immobilization Methods Outline of rigid and semi-rigid internal fixation.
	BDS405.M4	Unit M Topic 4	Fractures of the condyle - etiology, classification, clinical features, principles of management.
	BDS405.M5	Unit M Topic 5	Fractures of the middle third of the face. Definition of the mid face, applied surgical anatomy, classification, clinical features and outline of management.
	BDS405.M6	Unit M Topic 6	Alveolar fractures - methods of management Fractures of the Zygomatic Complex Classification, clinical features, indications for treatment, various methods of reduction and fixation.
	BDS405.M7	Unit M Topic 7	Complications of fractures - delayed union, non-union and malunion.
	BDS405. N		
	BDS405.N1	Unit N Topic 1	Diagnosis of salivary gland diseases.
	BDS405.N2	Unit N Topic 2	Sialography, contrast media, procedure.
	BDS405.N3	Unit N Topic 3	Infections of the salivary glands Sialolithiasis - Sub mandibular duct and gland and parotid duct. Clinical features, management.
	BDS405.N4	Unit N Topic 4	Salivary fistulae
	BDS405.N5	Unit N Topic 5	Common tumours of salivary glands like Pleomorphic adenoma including minor salivary glands.
	BDS405. O		
	BDS405.O1	Unit O Topic 1	Basic forms - Prognathism, Retrognathism and open bite. Reasons for correction.
	BDS405.O2	Unit O Topic 2	Outline of surgical methods carried out on mandible and maxilla.
	BDS405. P		
	BDS405.P1	Unit P Topic 1	Trigeminal neuralgia - definition, aetiology, clinical features and methods of management including surgical.
	BDS405.P2	Unit P Topic 2	Facial paralysis - Aetiology, clinical features, Management
	BDS405.P3	Unit P Topic 3	Nerve injuries - Classification
	BDS405. Q		
	BDS405.Q1	Unit Q Topic 1	Aetiology of the clefts, incidence, classification, role of dental surgeon in the management of cleft patients.

	BDS405.Q2	Unit Q Topic 2	Outline of the closure procedures.
	BDS405. R		
	BDS405.R1	Unit R Topic 1	Primary care of medical emergencies in dental practice particularly - Cardio Vascular, Respiratory, Endocrine
	BDS405. R2	Unit R Topic 2	Primary care of medical emergencies in dental practice particularly - Anaphylactic reaction, Epilepsy, Epilepsy
	BDS405. S		
	BDS405.S1	Unit S Topic 1	Applied anatomy, Ideal location for giving these injections
	BDS405.S2	Unit S Topic 2	Types and techniques
	BDS405. T	**Unit T Oral Implantology**	
	BDS405. T1	Unit T Topic1	Introduction
	BDS405. T2	Unit T Topic 2	Types of implants, and surgical procedure to install implants
	BDS405. U	**Unit U Ethics**	
	BDS405. U1	Unit U Topic 1	General ethics towards work and patient
	BDS405. U2	Unit U Topic 2	Ethics towards fellow doctor
	BDS405. V		
	BDS405.V1	Unit V Topic 1	Introduction, concept of L.A., classification of local anaesthetic agents, ideal requirements, mode of action, types of local anaesthesia, complications.
	BDS405.V2	Unit V Topic 2	Various Nerve Block Techniques
	BDS405. W	Unit W Topic 1	Concept of general anaesthesia. Indications of general anaesthesia in dentistry.
	BDS405.W1	Unit W Topic 2	Pre-anaesthetic evaluation of the patient. Pre-anaesthetic medication, advantages, drugs used. Commonly used anaesthetic agents. Complication during and after G.A.
	BDS405.W2	Unit W Topic 3	Cardiopulmonary resuscitation, Use of oxygen and emergency drugs. Tracheostomy.
	BDS405.W3	Unit W Topic 1	Concept of general anaesthesia. Indications of general anaesthesia in dentistry.

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		

Course Templates –

2.1 Template A1: Syllabus

School: School of Dental Sciences		Batch: 2019-2024
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)**	110-0-460
	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**	**CO406.1:** Impart clinical skills to student which will help them in providing quality treatment and basic endodontic procedure skill. **CO406.2:** Practice Dentistry in a competent and ethical manner which will contribute to the oral health and general well- being of patient. **CO406.3:** Professional Behaviour, basic skills to carry out range of Dental Procedure in General dental Practice. **CO406.4:** 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.

8	**Outline syllabus**		
	BDS406.A	**UNIT A INTRODUCTION TO ENDODONTICS**	
	BDS406.A1	Unit A Topic 1	Definition
	BDS406.A2	Unit A Topic 2	Importance of Endodontics
	BDS406.A3	Unit A Topic 3	Scope & Future of Endodontics
	BDS406.B	**UNIT B RATIONALE &PRINCIPLES OF ENDODONTICS**	
	BDS406.B1	Unit B Topic 1	Case selection, indication and contraindications for root canal treatments
	BDS406 B2	Unit B Topic 2	Clinical diagnostic methods Case history, diagnosis and treatment plan.
	BDS406 B3	Unit B Topic 3	Microbiology of endodontic infection.

	BDS406 B4	Unit B Topic 4	Isolation and infection control in Endodontics (Rubber dam application)
	BDS406. C	**UNIT C ENDODONTIC INSTRUMENTS**	
	BDS406 C1	Unit C Topic 1	Hand instruments
	BDS406 C2	Unit C Topic 2	Power driven instruments
	BDS406C3	Unit C Topic 3	Standardization

	BDS406 C4	Unit C Topic 4	Principles of using endodontic instruments
	BDS406 C5	Unit C Topic 5	Sterilization
	BDS406 D	**Unit D PULPAL DISEASES**	
	BDS406 D1	Unit D Topic 1	Classification, etiology, diagnosis, management.
	BDS406E	**UNIT E** **PERIAPICAL DISEASES**	
	BDS406E1	Unit E Topic 1	Classification, etiology, diagnosis, management.
	BDS406F	**UNIT F** **VITAL PULP THERAPY:**	
	BDS406F1	Unit F Topic 1	Indirect and direct pulp capping
	BDS406F2	Unit F Topic 2	Pulpotomy - types and medicaments used
	BDS406F3	Unit F Topic 3	Apexogenesis and apexification and problems of open apex
	BDS406G	**Unit G** **Esthetics in dentistry**	
	BDS406 G1	Unit G Topic 1	Introduction and scope
	BDS406 G2	Unit G Topic 2	Anatomy and physiology of smile
	BDS406G3	Unit G Topic 3	Role of colour and translucency
	BDS406 G4	Unit G Topic 4	Esthetic recontouring& Management of discoloured teeth

	BDS406 H	**UNIT H : COMPOSITE RESTORATIONS**	
	BDS406H1	Unit H	Indications, contraindications, advantages and disadvantages

		Topic 1	
	BDS406H2	Unit H Topic 2	Stepwise procedure of tooth preparation for composite restoration.
	BDS406 H3	Unit H Topic 3	Clinical technique for posterior direct composite restorations
	BDS406 H4	Unit H Topic 4	Finishing and polishing of composite restoration
	BDS406 I		
	BDS406I1	Unit I Topic 1	Indications, contraindications, advantage and disadvantages
	BDS406I2	Unit I Topic 2	Materials used & Types of bevels in cast restoration
	BDS406 I3	Unit I Topic 3	Fabrication of wax patterns
	BDS406 I4	Unit I Topic 4	Differences in tooth preparation for amalgam and cast restorations
	BDS406J	**UNIT J: CASTING**	
	BDS406J1	Unit J Topic 1	Die materials and preparation of dies
	BDS406 J2	Unit J Topic 2	Alloys used for casting & Casting procedure
	BDS406 J3	Unit J Topic 3	Casting defects

	BDS406K	**Unit K: Temporisation or interim restoration**	
	BDS406K1	Unit K Topic 1	Materials and procedure
	BDS406L	**UNIT L: ROOT CARIES**	
	BDS406L1	Unit L Topic 1	Etiology, clinical features and management
	BDS406M	**UNIT M: NON- CARIOUS DESTRUCTION OF TOOTH STRUCTURE**	
	BDS406 N	**UNIT N: Ceramic Restorations**	
	BDS406 N1	Unit N Topic 1	Indications, contraindications, advantages, disadvantages
	BDS-406N2	Unit N Topic 2	Recent Advances & Techniques in Brief
	BDS406 O	**UNITO: DIRECT FILLING GOLD RESTORATIONS**	
	BDS406O1	Unit O Topic 1	Tooth preparation and Restoration
	BDS406O2	Unit O Topic 2	Indications, contraindications, advantages, disadvantages
	BDS406 P	**UNIT P: ANATOMY OF PULP SPACE**	
	BDS406 Q	**UNIT Q: ACCESS PREPARATION**	
	BDS406 Q1	UNIT Q Topic1	Objectives& Principles
	BDS406 Q2	UNIT Q Topic2	Instruments & Steps
	BDS406 R	**UNIT R: DISINFECTION OF ROOT CANAL SPACE**	
	BDS406 R1	UNIT R Topic1	Irrigants: Functions & Types
	BDS406 R2	UNIT R Topic2	Intracanal Medicaments: Function & Types
	BDS406 S	**UNIT S: OBTURATION OF THE ROOT CANAL SYSTEM**	
	BDS406 S1	UNIT S TOPIC1	Materials- Ideal root canal filling material, classification of materials
	BDS406 S2	UNIT S TOPIC2	Classification and procedure
	BDS406 T	**UNIT T: POST ENDODONTIC RESTORATION**	
	BDS406 T1	UNIT T TOPIC1	Materials used
	BDS406 T2	UNIT T	Procedure

		TOPIC 2	
	BDS406 U	**UNIT U: TRAUMATIZED TEETH**	
	BDS406 U1	UNIT U TOPIC1	Classification of fractured teeth
	BDS406 U2	UNIT U TOPIC2	Management of fractured tooth
	BDS406 V	**UNIT V: ENDODONTIC SURGERIES**	
	BDS406 V1	UNIT V TOPIC1	Indication &contraindications
	BDS406 V2	UNIT V TOPIC2	Surgical instruments and techniques
	BDS406 W	**UNIT W: RETREATMENT IN ENDODONTICS**	

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 Templates –

2.1 Template A1: Syllabus

School: School of Dental Sciences		Batch: 2019-24
Program:		BDS (Bachelor of Dental Surgery)
1	**Course Code**	BDS-407
2	**Course Title**	PROSTHODONTICS, CROWN AND BRIDGE
3	**Credits**	NA
4	**Contact Hours (L-T-P)**	110-0-460
	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**	**CO407.1** Dental graduate with knowledge on prosthetics needs of patients, fabrication of all Prosthodontic modes of treatment. **CO407.2** Dental graduate who is able to diagnose motivate and treat patients who are completely and partially edentulous (including geriatric patients) with complete & partial dentures **CO407.3** 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		
BDS-407.A	**Unit A** **COMPLETE DENTURES**	
BDS-407.A1	Unit A Topic 1	Applied Anatomy and Physiology- Introduction, Biomechanics of the edentulous state, Residual Ridge Resorption.
BDS-407.A2	Unit A Topic 2	Communicating with the patient-Understanding the patients, mental attitude, Instructing the patient
BDS.407.A3	Unit A Topic 3	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)
BDS-407.A4	Unit A Topic 4	Articulators- Discussion
BDS-407.A5	Unit A Topic 5	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 f) Postoperative procedure
BDS.407.A6	Unit A Topic 6	Principles of Retention, Support and Stability
BDS-407.A7	UnitA Topic 7	Impressions-detail a) Muscles of facial expression b) Biological Considerations for maxillary and mandibular impression incuding anatomy landmark and their interpretation. c) Impression Objectives d) Impression materials e) Impression techniques f) Maxillary & Mandibular Impression procedures i) Preliminary Impressions ii) Final Impressions g) Laboratory procedures involved with impression making (Beading & Boxing, Cast preparation)
BDS-407.A8	Unit A Topic 8	Record Bases and Occlusion Rims a) Materials & Techniques b) Useful Guidelines and Ideal Parameters c) Recording and transferring bases and occlusal rims
BDS.407.A9	UnitA Topic 9	Biological Consideration in jaw relation & jaw movements- Craniomandibular relations.

		A) Mandibular Movements B) Maxillo-mandibular relation including vertical and horizontal jaw relations C) Concept of occlusion
BDS-407.A10	Unit A Topic 10	Relating the patient to the Articulator a) Face bow types & Uses b) Face bow transfer procedure
BDS-407.A11	**Unit A Topic 11**	Recording maxillomandibular relation a) Vertical Relations b) Centric Relation Records c) Eccentric Relation Records d) Lateral relation records
BDS.407.A12	**Unit A Topic 12**	Tooth Selection and Arrangement a) Anterior teeth b) Posterior teeth c) Esthetic & Functional harmony
BDS-407.A13	**Unit A Topic 13**	Relating Inclination of teeth to concept of occlusion a) Neutrocentric Concept b) Balanced Occlusal Concept
BDS-407.A14	**Unit A Topic 14**	Trial Dentures
BDS.407.A15	**Unit A Topic 15**	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 j) Plaster Cast for Clinical Denture Remount Procedure
BDS-407.A16	**Unit A Topic 16**	Denture Insertion a) Insertion procedures b) Clinical errors c) Correction Occlusal disharmony d) Selective Grinding Procedures
BDS-407.A17	**Unit A Topic 17**	Treating Problems with associated denture use

BDS.407. A18	**Unit A Topic 18**	Treating Abused Tissues
BDS-407.A19	**Unit A Topic 19**	Relining and rebasing of dentures
BDS-407.A20	**Unit A Topic 20**	Immediate Complete dentures construction procedure
BDS.407. A21	**Unit A Topic 21**	The Single Complete Denture
BDS-407.A22	**Unit A Topic 22**	Overdentures
BDS-407.A23	**Unit A Topic 23**	Dental Implants in Complete Denture
BDS.407. B	**Unit B REMOVABLE PARTIAL DENTURES**	
BDS.407. B1	Unit B Topic 1	Diagnosis and Treatment planning of Removable Partial Denture Cases.
BDS.407. B2	Unit B Topic 2	Introduction, terminologies and Scope (patient selection/ treatment planning)
BDS.407. B3	Unit B Topic 3	Components of Removable Partial Denture
BDS.407. B4	Unit B Topic 4	Major Connectors
BDS.407. B5		Minor Connectors Rest and Rest seats
BDS.407. B6	Unit B Topic 5	Components of Removable Partial Denture A) Direct retainers B) Indirect Retainers C) Tooth Replacement
BDS.407. B7	Unit B Topic 6	Principles of Removable Partial Denture Design
BDS.407. B8	Unit B Topic 7	Survey and Design a) Surveyors b) Surveying c) Designing
BDS.407. B9	Unit B Topic 8	Mouth preparation and Master Cast
BDS.407. B10	Unit B Topic 9	Impression materials and procedures for RPD
BDS.407.B11	Unit B Topic 10	Preliminary Jaw relation and esthetic try-in form some anterior replacement teeth
BDS.407.B 12	Unit B Topic 11	Laboratory procedures for framework construction

BDS.407.B 13	Unit B Topic 12	Fitting the framework
BDS.407.B 14	Unit B Topic 13	Tri-in of the partial denture
BDS.407.B 15	Unit B Topic 14	Completion of the partial denture
BDS.407.B 16	Unit B Topic 15	Inserting the RPD
BDS.407.B 17	Unit B Topic 16	Postinsertion observations
BDS.407.B 18	Unit B Topic 17	Temporary acrylic Partial Dentures
BDS.407.B 19	Unit B Topic 18	Immediate RPD
BDS.407.B 20	Unit B Topic 19	RPD opposing Single Complete Denture
BDS.407.B 21	Unit B Topic 20	Maintenance phase
BDS-407 C	**Unit C**	**FIXED PARTIAL DENTURES**
BDS-407 C1	Unit C Topic 1	Introduction
BDS-407 C2	Unit C Topic 2	Fundamentals of Occlusion
BDS-407 C3	Unit C Topic 3	Articulators
BDS-407 C4	Unit C Topic 4	Treatment planning for single tooth restorations
BDS-407 C5	Unit C Topic 5	Treatment planning for the replacement of missing teeth including selection and choice of abutment teeth
BDS-407 C6	Unit C Topic 6	Fixed Partial denture Configurations
BDS-407 C7	Unit C Topic 7	Principles of tooth preparation
BDS-407 C8	Unit C Topic 8	Preparations for full veneer crowns
BDS-407 C9	Unit C Topic 9	Preparations for partial veneer crowns
BDS-407 C10	Unit C Topic 10	Provisional Restorations
BDS-407 C11	Unit C Topic 11	Fluid Control & Soft Tissue Management
BDS-407 C12	Unit C Topic 12	Impressions
BDS-407 C13	Unit C Topic 13	Working Casts and Dies
BDS-407	Unit C	Wax Patterns

C14	Topic 14	
BDS-407 C15	Unit C Topic 15	Pontics and Edentulous Ridges
BDS-407 C16	Unit C Topic 16	Esthetic Considerations
BDS-407 C17	Unit C Topic 17	Finishing and Cementation
BDS-407 C18	Unit C Topic 18	Topics to be covered in brief- a) Solder joints and other connectors b) All-Ceramic Restorations 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 i) 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***	8. Syllabus of Complete denture 9. Bouchers "Prosthodontic Treatment for Edentulous Patients 10. Essentials of Complete Prosthodontics 11. 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 Templates –

2.1 Template A1: Syllabus

School: School of Dental Sciences		Batch: 2019-2024
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)**	65-0-200
	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**	CO 408.1: 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. CO 408.2: 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. CO 408.3: 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. CO 408.4: 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**		
	BDS-408 A	**Unit A**	
	BDS-408 A1	Unit A Topic 1	Introduction To Pedodontics And Preventive Dentistry, Growth & Development, Development Of Occlusion, Dental Anatomy And Histology
	BDS-408 A2	Unit A Topic 2	Dental Materials Used In Pediatric Dentistry
	BDS-408 A3	Unit A Topic 3	Dental Radiology Related To Pedodontics, Oral Surgical Procedures In Children.
	BDS-408 B	**Unit B**	
	BDS-408 B1	Unit B Topic 1	Dental Caries
	BDS-408 B2	Unit B Topic 2	Gingival & Periodontal Diseases In Children
	BDS-408 B3	Unit B Topic 3	Pediatric Operative Dentistry
	BDS-408 C	**Unit C**	
	BDS-408 C1	Unit C Topic 1	Child Psychology
	BDS-408 C2	Unit C Topic 2	Dental Emergencies In Children & Their Management
	BDS-404 C2	Unit C Topic 3	Behaviour Management

	BDS-408 D	**Unit D** **ORAL MEDICINE & THERAPEUTICS**	
	BDS-408 D1	Unit D Topic 1	Pediatric Endodontics
	BDS-408 D2	Unit D Topic 2	Traumatic Injuries In Children
	BDS-408 D3	Unit D Topic 3	Preventive And Interceptive Orthodontics

	BDS-408 E		
	BDS-408 E1	Unit E Topic 1	Dental Care Of Children With Special Needs
	BDS-408 E2	Unit E Topic 2	Oral Habits In Children
	BDS-408 E3	Unit E Topic 3	Congenital Abnormalities In Children

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		