

**CURRICULUM  
FOR  
UNDER-GRADUATE DENTAL (BDS) EDUCATION  
IN BANGLADESH  
2007**



**APPROVED  
BY  
BANGLADESH MEDICAL & DENTAL  
COUNCIL**

Compiled & edited  
by  
Centre for Medical Education (CME)  
IPH Building (2<sup>nd</sup> floor), Mohakhali, Dhaka-1212, Bangladesh  
Tel : 8821809, Fax : 8821809, e-mail : [cmed\\_dk@bangla.net](mailto:cmed_dk@bangla.net)  
Web : [www.cmebangla.com](http://www.cmebangla.com)

## Forward

With increasing public expectations about their health care services, the quality of dental care itself is under scrutiny all over the world. Therefore a positive change is needed in the role of doctors practicing orodental surgery. The role of teachers and students in teaching learning with positive changes in orodental education also need to be reviewed and further developed.

This new curriculum has been developed and scientifically designed, which is responsive to the needs of the learners and of the consumers focussed. The present curriculum with its assessment methods is expected to effectively judge competencies acquired with competencies required to cater the health need of our people. It is gratifying to note that all concerned in the promotion of health science in the country have involved themselves in the planning and formulation of this need-based curriculum initiated under the of FIMC project and then followed by the Centre for Medical Education.

Subjects like behavioral science including communication skill, dental health problem management have been given the required emphasis in this document. Though curriculum is not the sole determinant of the outcome, yet it is very important as it guides the faculty in preparing their instruction, tells the students where to go, what to do and what knowledge, skills and attitude they are to develop. The ultimate criterion of measuring curriculum in dental education is the standard and quality of oral and dental health care services provided by the graduates with required competencies in preventive promotive, curative and rehabilitative management.

In conclusion, I would like to state that, the curriculum planning process should be continuous, dynamic and never-ending. If it is to serve best, the needs of the individual students, educational institutions and the expectations of client community to whom we are ultimately accountable, may be assessed.

I congratulate all who were involved in redesigning and developing the curriculum, particularly the Centre for Medical Education. They have done a commendable job and deserve all appreciations.

*Director General* of Health Services  
Govt. of the Peoples Republic of  
Bangladesh.

## **Background and Rationale**

Curriculum planning and designing is not a static process, rather a continuous process done regularly through a system. More than one decade have elapsed since the Centre for Medical Education (CME), in 1988, developed a national **Undergraduate Dental Curriculum** which was supposed to be community-oriented and competency based. The curriculum was partially implemented with the advancement of dental health science and application of newer techniques in dental practices in developed and developing countries. It was felt necessary that it should be reviewed and updated to make it more technology oriented and competency based.

Initially a number of workshops were held with **curriculum Working Group** of different disciplines from dental colleges and a **draft curriculum** was produced. Subsequently, in order to develop a consensus, decision was taken to hold Review Workshops through active participation of different groups of faculty members. A **taskforce** group examined the revised undergraduate dental curriculum to give it a final shape.

The revised undergraduate dental curriculum is expected to be implemented with the newly admitted students of 2006-2007 session with an approval from BMDC the success of this curriculum which is made more community oriented and need-based depends on its proper implementation with active leadership of the teachers and interactive participation of dental students.

It is expected that this curriculum will serve as present day guideline for the students and faculty members. In order to further improve, update and make it effective, this curriculum needs review and revision with time to time updating.

Lastly, I would like to extend my deep and sincere gratitude to all faculty members and others who shared their expertise and insights and worked hard to produce this valuable document.

Director  
Medical Education & Health Manpower  
Development  
DGHS, Mohakhali, Dhaka-1212

## Preface

The Health Science including orodental science is changing with the advancement of health science, educational science & applied technology. Global changes are happening in health science and dental education in accordance and conformity of these advancements and changes. With the application of these knowledge and skill of dental science, future dentists should satisfy their patients with the changing needs of the community. Much change are happening in teaching methods and development of teaching sites or learning environment. It is now an established fact that best learning is achieved through utilizing the learning environment in actual situation. A dentist can better learn from his own patient. Slogan of today is now the unity of education and practice. The undergraduate curriculum for future dental surgeons is expected to be so designed that it should focus more on real life situation and of learning i.e; more community oriented as well as more community based. The teaching should be more in a community oriented way. To achieve this purpose community campus partnership is very much essential and a stronger relationship be established.

The undergraduate dental curriculum followed in the dental colleges was developed in 1988. with an aim to produce community oriented doctors who will be able to provide essential primary dental health care to the community. This was the first documented curriculum ever developed in the country. But evaluation by CME(2000) revealed that the curriculum is neither a community oriented nor competency based and there is room for much improvement. The need to develop a community- oriented and competency-based curriculum was felt by all concerned.

Series of workshops with specialists and experts from every discipline took place to develop a curriculum, which would reflect institutional, departmental objectives as well as subject wise learning objectives. The curriculum should have contents relevant to the dental problems of the country and assessment method should be scientific, reliable and valid and also questions should be objectively set and designed. The teaching methods should also be scientific and more biased for effective small group teaching. As a whole the other components of the curriculum such as, course contents, strategy for teaching, materials or media used and the assessment system within the available timeframe were to be identified scientifically to provide the dental graduates with proper knowledge, skills and attitude.

Factors contributing to an effective health science education system are quality of students, quality of teaching staff, and their effective delivery of need based scientific curriculum. Although the best students are admitted in the dental colleges every year yet the dental graduates are not always of the desired quality for providing dental health services to the community. The answer then should be sought in other factors of which the most important is the curriculum. A curriculum is generally regarded as a programme of instruction for an educational institution and its plan takes the form of a descriptive outline of courses, their arrangement and sequence, the time assigned to them, the contents to be covered in them, the instructional methods to be employed and finally the evaluation as a whole.

The Centre for Medical Education took the responsibility of developing an agreed, over-all policy for the BDS curriculum directly oriented to the needs of Bangladesh. Consequently this enormous task of reorientation and remodeling of the dental curricula was assigned to Centre for Medical Education.

The curriculum was developed with a scientific approach of Delphi Technique in national workshops. The participants of these workshops were almost all the Professors of the concerned departments/subjects of all the dental colleges and a good number of resource personnel. The other supplementary approach was to make it evidence based through need assessments. The overwhelming response of all categories of teachers to the formulation of this curriculum is indeed praiseworthy. They have worked hard to identify and discard the superfluous elements from the course contents and added new elements to make teaching-learning process more relevant, meaningful & up-to date. Congratulations to them, they have done a commendable job.

The composition of the planners of this curriculum is unique. The authorities responsible for approving, implementing & functioning of this curriculum have worked together and involved themselves in its formulation. It is only natural that they left no stone unturned to get a need based applicable curriculum.

I am grateful to all, who actively participated in this great exercise, specially the faculty and staffs of Centre for Medical Education (CME) who worked very hard and efficiently to develop this curriculum. I heartily acknowledge the contribution of dental practitioners and the client consumers for their frank expression of expectations from dental health practitioners, which has been reflected in our dental curriculum need assessment. This was the bases of our approach for the development of the curriculum.

Director  
Centre for Medical Education  
(CME)  
Mohakhali, Dhaka - 1212  
Banglades

# CURRICULUM

## **Objectives of BDS Course ---**

To prepare a dental surgeon with required knowledge, skill and attitude to practice dental surgery to improve the oral & dental health in the community

### **1. Admission Requirements :**

The candidate must have passed S.S.C & H.S.C examinations from any one of the Secondary & Higher Secondary Education Boards of Bangladesh. H.S.C. examination must be in Premedical Group i.e. Science with Physics, Chemistry & Biology. They must have obtained at least 60% marks /GPA 3.0 marks in the combined S.S.C & H.S.C. examinations or equivalent qualifications. Detailed criteria for selection of candidates are determined from year to year by the Director General of Health services (Medical Education & Health Manpower Development). A candidate selected for admission in the Dental College is obliged to follow the curriculum, rules and regulations as approved by the Bangladesh Medical and Dental Council and the respective University. Curriculum, rules or regulations are subject to changes from time to time.

**2. Medium of Instruction And Assessment-** The medium is English.

### **3. Recognised Dental Institutions For Undergraduate Dental Course :-**

Dhaka Dental College, Dental units of Chittagong Medical College and Rajshahi medical college and other institutions which are affiliated and recognised by appropriate authority.

## **DENTAL CURRICULUM FOR UNDER GRADUATE DENTAL EDUCATION**

### **4.1 Duration of The Course :**

The B.D.S course shall comprise four year's of studies followed by one year of compulsory Professional practice in the form of rotatory internship. The course will be divided into Four years and will consists of Eight Terms. The allocation of time for Four years' of academic studies shall be as follows:

**Allocation of Time (In Weeks).**

First Year	Term -1 .....	24 weeks
	Term -2 .....	24 weeks
	University Exam .....	3 weeks
	<u>Vacations .....</u>	<u>1 week.</u>
	<b><u>Total : Part-1 .....</u></b>	<b><u>52 weeks.</u></b>
2nd Year	Term -3 .....	24 weeks
	Term -4 .....	24 weeks
	University Exam .....	3 weeks
	<u>Vacations .....</u>	<u>1 week.</u>
	<b><u>Total : Part-II.....</u></b>	<b><u>52 weeks.</u></b>
3rd yrs	Term -5 .....	24 weeks
	Term -6 .....	24 weeks
	University Exam .....	3 weeks
	<u>Vacations .....</u>	<u>1 week.</u>
	<b><u>Total : Part-III.....</u></b>	<b><u>52 weeks.</u></b>
4th year	Term -7 .....	24 weeks
	Term -8 .....	24 weeks
	University Exam .....	3 weeks
	<u>Vacations .....</u>	<u>1 week.</u>
	<b><u>Total : Part-IV.....</u></b>	<b><u>52 weeks.</u></b>

**Total for four years = 208 weeks (4 years)**

Of the 24 weeks allocated for each TERM, at least 20 weeks should be utilized for teaching. The last four weeks in a term could be utilized for Term examinations and for making up any losses due to official holidays during the term.

4.2. ACADEMIC SCHEME :

A term having 20 weeks for teaching will have at least 100 full working days and therefore approximately 600 hours of teaching time. On this basis each year will have approximately 1200 hours of teaching time.

- 4.2.1 Subject to be taught in each year
- 1st year - Anatomy with Histology  
Physiology with Biochemistry  
Science of Dental Materials
  - 2nd year - General & Dental Pharmacology  
Pathology & Microbiology  
Oral Anatomy & Physiology  
Prosthodontic Technique  
Dental Public Health
  - 3rd year - General Medicine  
General Surgery  
Periodontology & Oral Pathology  
Prosthodontics  
Conservative Dentistry & Endodontics  
Oral & Maxillofacial Surgery  
Orthodontics  
Paediatric Dentistry
  - 4th year - Oral & Maxillofacial Surgery  
Conservative Dentistry & Endodontics  
Prosthodontics  
Orthodontics  
Paediatric Dentistry

4.2.2. Each subject must introduce card and its satisfactory completion by the student should be obligatory before being sent up for University Examination. The card must be made available during practical University Examination and the results of the term-ending card examination may be consulted for reference where required.

4.2.3. The seminar or Integrated Teaching System will be introduced from the beginning of the 1st year and it should be organized periodically, at the end of each system or topics.

4.2.4. At the end of each year, there shall be one University Examination named as First Professional B.D.S, 2nd Professional B.D.S, 3rd Professional B.D.S and Final Professional B.D.S. Examination.



### 5.1. Allocation Of Teaching Time (In Hours) (1st Year)

SI No	Subjects	Lecture Class	Practical & Tutorial Classes	Total
1.	Anatomy With Histology: (400)			
	a. General Anatomy Including neuro-anatomy	28	290	318
	b. Histology-	22	40	62
	c. Developmental anatomy	20		20
2.	Physiology With Biochemistry : (184)			
	a. Physiology	42	60	102
	b. Biochemistry	44	42	82
3.	Science Of Dental Materials (300)	120	180	300
	<b>Total for 1st year</b>	<b>276</b>	<b>612</b>	<b>888</b>

5.2. First Professional B.D.S Examination shall be held at the end of year-I on a prefixed date (as per schedule in 9.1) The subjects to be examined are (I) Anatomy with Histology (ii) Physiology with Biochemistry and (iii) Science of Dental Material.

### 6.1 Allocation Of Teaching Time (In Hours) (2nd Year).

SI No	Subjects	Lecture Class	Practical & Tutorial Classes	Total
1.	General & Dental Pharmacology: (250)			
	a. General Pharmacology	60	70	130
	b. Dental Pharmacology	60	60	120
2.	Pathology & Microbiology (300)			
	a. General Pathology, Hematology, Clinical Pathology	70	140	210
	b. Microbiology	30	60	90
3.	Oral Anatomy & Physiology: (250)	100	150	250
4.	Prosthodontic Technique : (50)	20	30	50
5.	Dental Public Health	100	100	200
	<b>Total for 2nd Year</b>	<b>440</b>	<b>610</b>	<b>1050</b>

6.2 2nd Professional B.D.S. Examination shall be held at the end of Year-II on a pre-fixed date (as per schedule in 9.1) The subjects to be examined are :- (I) General and Dental Pharmacology. (ii) Pathology & Microbiology and (iii) Oral Anatomy & Physiology.

### 7.1. Allocation of Teaching Time (In Hours) (3rd year)

SI No	Subjects	Lecture Class	Practical clinical & Tutorial Classes	Total
1.	GENERAL MEDICINE :	100	100	200
2.	GENERAL SURGERY :	100	100	200
3.	PERIODONTOLOGY & ORAL PATHOLOGY			350
	a. Oral Pathology	50	20	
	b. Periodontology-	20	40	
	c. Oral Medicine	10	20	
4.	PROSTHODONTICS Partial Denture			80
5.	CONSERVATIVE DENTISTRY & ENDODONTICS :			50
	a. Conservative Dentistry			
	b. Dental Radiology			
6.	ORAL & MAXILLOFACIAL SURGERY:			50
	a. Oral Surgery	20	30	
	b. Anesthesiology			
	c. Oral Diagnosis			
7.	ORTHODONTICS:	300	50	80
8.	PAEDIATRIC DENTISTRY :			90
	a. Children Dentistry	20	30	
	b. Preventive Dentistry-	20	20	
	<b>Total for 3rd Year</b>	<b>550</b>	<b>550</b>	<b>1100</b>

### 8.1. ALLOCTION OF TEACHING TIME (IN HOURS) YEAR-IV (Final year)

SI No	Subjects	Lecture Class	Practical clinical & Tutorial Class	Total
1.	ORAL & MAXILLOFACIAL SURGERY			200
	a. Oral Surgery -	55	80	
	b. Oral Diagnosis-	10	20	
	c. Plastic Surgery-	5	10	
	d. Anesthesiology-	10	10	
2.	CONSERVATIVE DENTISTRY & DENTAL RADIOLOGY			230
	a. Conservative Dentistry	50	60	
	b. Endodontics-	20	40	
	c. Dental Radiology-	30	30	
3.	PROSTHODONTICS :	100	150	250
	a) complete denture			
	b) Crown bridges			
	c) Orofacial Prosthesis			
	d) Implantology			
4.	ORTHODONTICS :	80	150	230
5.	PAEDIATRIC DENTISTRY :	100	120	220
	a. Paediatric dentistry-			
	<b>Total for 4th Year</b>	<b>460</b>	<b>670</b>	<b>1130</b>

\*General Medicine includes: Infectious diseases, Chest, diseases and general diseases

\*\*General Surgery includes: Otolaryngology, Ophthalmology & Orthopedic Surgery

3rd. Prof. B.D.S Examination should be held at the end of Year III on a pre fixed

date (as per schedule in 9.1). The subjects to be examined are :- (i) General

Medicine. (ii) General Surgery and (iii) Periodontology and Oral Pathology.

8.2 Final Professional B.D.S Examination shall be held at the end of Year IV on a prefixed date (as per schedule in 9.1) The subjects to be examined are : (i) Oral & Maxillofacial Surgery; (ii) Conservative Dentistry & Endodontics : (iii) Prosthodontics (iv) Orthodontics and (iv) Paediatric dentistry.

9. UNIVERSITY EXAMINATION :

9.1 All the four professional B.D.S examinations will start Simultaneously, in the 1st week of February & August in each year.

Routine for conducting written examinations will be prefixed as follows : (this may be revised on the experiences gathered during 2000-2001)

1st day of Examination	Anatomy with Histology	- 1st year
	General & Dental Pharmacology	- 2nd year
	Medicine	-3rd year
	Prosthodontics	-Final year
2nd day of Examination	Physiology with Biochemistry	-1st year
	Pathology & Microbiology	-2nd year
	General Surgery	-3rd year
	Orthodontia	-Final year
3rd day of Examination	Science of Dental Materials	-1st year
	Oral Anatomy with Physiology	-2nd year
	Period ontology & Oral Pathology	-3rd year
	Conservative Dentistry & Endodontics	-Final year
4th day of Examination	Oral & Maxillofacial Surgery	-Final year
	Dental Public health	-2nd year
5th day of Examination	Paediatrics Dentistry	-Final year.

9.2 Practical, Oral and Clinical examinations for each group of Examiners will start as soon as possible after completion of the written examinations. The routine for practical/oral/Clinical examination will be drawn up in such way that the oral Practical/Clinical examination can be completed within-2-3 weeks and whole examination is completed within a period of 4-5 weeks. The routine for Oral/Practical/Clinical examinations should be drawn up in such a manner, that more or less equal gaps are provided between the subjects for each batch of Examinees. The results of the examinations are to be published within 10(ten) days after the completion of whole examinations.

- 9.3. Simultaneously with the introduction of the new Examination system, card system for each subject (including clinical subjects) shall be gradually introduced for continuous evaluation of students performances during the course of studies. A student who does not complete the card in a particular subject will not be allowed to appear in the University Examination in that subject.
- 9.4. If a student does not pass all the subjects of any one B.D.S Examination he/she will not be eligible to appear in any subject of the next higher B.D.S Examination.
- 9.5. Any student passing all the subjects of any B.D.S Examination & successfully completes one academic year will be allowed to sit for the next higher and subsequent B.D.S. examinations. 9.6 A student who fails in second chance in a particular professional B.D.S examination will not be allowed to attend classes on higher class except 3rd year students, till he/she clears his failed subjects and is promoted to higher class.
- 9.7 Students who do not appear in particular subject or examination will be considered as failed in that subject or examination and will be dealt with accordingly.
- 9.8 Students passing in the regular BDS Examination will be eligible to obtain honors (75%) & place (upto 10 places) in order of merit.
- 9.9 They should be two boards (4 examiners) during exam for each subject.
- 9.10 Term examination will carry some marks allotted for each subject taught during the terms. All the marks allotted for term examination shall be consulted during practical part of the University Examination. The distribution of marks is shown in table 10.2

## 10.2. EXAMINATION AND DISTRIBUTION OF MARKS.

Sl No.	Subjects for tests	Mark for University Exam.			Total
		Theory	Oral	Practical/ Clinical	
1.	Anatomy with Histology	100	50	50	200
2.	Physiology with biochemistry	100	50	50	200
3.	Science of Dental Materials	100	50	50	200
	<b>Total for year -I</b>	<b>300</b>	<b>150</b>	<b>150</b>	<b>600</b>
4.	General & Dental Pharmacology	100	50	50	200
5.	Pathology & Microbiology	100	50	50	200
6.	Dental public health	100	50	50	200
7.	Oral Anatomy and Physiology	100	50	50	200
8.	Conservative Dentistry & Endodontics	-	-	-	
9.	Prosthetic Technique	-	-	-	
	<b>Total for year -II</b>	<b>300</b>	<b>150</b>	<b>150</b>	<b>800</b>
10.	General Medicine	100	50	50	200
11.	General Surgery	100	50	50	200
12.	Periodontology & Oral Pathology	100	50	50	200
13.	Oral & Maxillofacial Surgery	-	-	-	
14.	Conservative dentistry & Endodontics	-	-	-	
15.	Prosthodontics	-	-	-	
16.	Orthodontics	-	-	-	
17.	Paediatric	-	-	-	
	<b>Total for Year. III</b>	<b>300</b>	<b>150</b>	<b>150</b>	<b>600</b>
18.	Oral & Maxillofacial Surgery	100	100	100	300
19.	Conservative dentistry & Endodontics	100	100	100	300
20.	Prosthodontics	100	100	100	300
21.	Orthodontics	100	100	100	300
22.	Paediatric Dentistry	100	100	100	300
	<b>Total for Part -IV</b>	<b>500</b>	<b>500</b>	<b>500</b>	<b>1500</b>

Total Marks for University Exam : 3500

Pass Marks for Term Examination : 60%

Pass Marks for University Examination: 60% in theory, 60% Oral 60% Clinical: and 60% for practical for each separately all universities.

Note: Each student must complete his/her Term card and pass term Examination to be eligible to appear at the University examination for part concerned. The marks allotted for Term Examination/Term Card will be distributed for:

- a) Attendance
- b) Written Test
- c) Oral
- d) Practical
- e) Dissection
- f) Clinical Clerkship
- g) Clinical works
- h) Minor Surgery, etc.
- i) FRST under Dental public Health

## ANATOMY WITH HISTOLOGY

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
<p><b>General Anatomy.</b></p> <ul style="list-style-type: none"> <li>▪ Definition, subdivision of anatomy and its importance in the study of medicine, implications, subdivisions of anatomy with their anatomical terminology and anatomical planes &amp; positions.</li> <li>▪ Skeletal system: bones and cartilages, their types, characters, situations, functions and development.</li> <li>▪ Joint: component parts, classification, characteristics, stability, movements and clinical conditions associated with joints.</li> <li>▪ Muscular system: classification, characteristics, functions and structure.</li> <li>▪ Blood circulatory system: component parts , heart and blood vessels, general, portal and regional circulation.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Define anatomy, explain the subdivisions of anatomy and describe the anatomical planes &amp; terminology.</li> <li>▪ Define the bones &amp; cartilages of the whole body &amp; their functions &amp; development.</li> <li>• Define &amp; classify joints, the characters, stability &amp; movements of joints and correlate with the clinical conditions.</li> <li>• Classify muscles, their properties and functional organization.</li> <li>• Define &amp; classify blood vessels.</li> <li>• Describe the systemic, portal &amp; pulmonary circulation.</li> <li>• Describe different types of vascular anastomosis with their functional &amp; clinical implications.</li> </ul>	Lecture		OHP Transparency Sheet Chalk Board	20 hours	Written/Oral

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
<ul style="list-style-type: none"> <li>• Lymphatic system.</li> <li>• Digestive system: a general outline of its different parts with their function, including the digestive glands and associated organs.</li> <li>• Respiratory system: a general outline of its different parts and functions.</li> <li>• Urinary system in male and in female a general outline.</li> <li>• Genital system in male and in female a general outline.</li> <li>• Endocrine system: its component parts, situation, structure, functions and clinical importance.</li> </ul>	<ul style="list-style-type: none"> <li>• Describe the general plan of lymphatic drainage of the whole body.</li> <li>• Describe the components of the lymphatic system.</li> <li>• Describe the different parts of alimentary tract and associated glands with their functions.</li> <li>□ Describe the different parts and functions of respiratory system.</li> <li>• Describe the different parts and functions of male &amp; female urinary system.</li> <li>• Describe the different parts and functions of male &amp; female genital system</li> <li>• Describe the component parts of endocrine system and their situation, function and clinical importance.</li> </ul>	Lecture		OHP Transparency Sheet Chalk Board		Written /Oral

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
<ul style="list-style-type: none"> <li>• Integumentary system.</li> <li>• Special sense organs – general outline and functional implication.</li> </ul>	<ul style="list-style-type: none"> <li>• Describe the skin &amp; its appendages with their functions.</li> <li>• Describe the components of special sense organs &amp; their functions.</li> </ul>			OHP Transparency Sheet Chalk Board		Written/Oral



Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
Neuroanatomy						
<b>Brain.</b>	<ul style="list-style-type: none"> <li>▪ Describe &amp; identify the different parts of the brain &amp; mention their the functions.</li> <li>▪ Locate the important functional areas of the cerebral cortex.</li> <li>▪ Describe the blood supply of the brain.</li> <li>▪ Identify the ventricles of the brain.</li> <li>▪ Describe the formation and circulation of C.S.F.</li> </ul>	Lecture	Tutorial / Practical	OHP Transparen cy Sheet Chalk Board	Lec. – 1hours Tuto. & Prac. -5hours	Written/Oral/ Practical
Meninges including dural sinuses.	<ul style="list-style-type: none"> <li>▪ Describe &amp; identify the three meninges and dural folds mention the functional significance of the meninges.</li> <li>▪ Identify the dural venous sinuses. Mentioning their communications.</li> <li>▪ Explain the clinical significance of the dural sinuses.</li> </ul>	Lecture	Tutorial / Practical		Lec. – 1hours Tuto. & Prac. -3hours	Written/Oral/ Practical
Cranial Nerves	<ul style="list-style-type: none"> <li>▪ Define cranial nerves &amp; identify them on the brain surface.</li> <li>▪ Describe their nuclear locations, central connection, course, related ganglia, branches, distribution and functions &amp; clinical anatomy.</li> </ul>	Lecture	Tutorial / Practical		Lec. – 3hours Tuto. & Prac. -7hours	Written/Oral/ Practical
Olfactory (I), trigeminal (V), facial (VII), glossopharyngeal (IX), vagus (X) (emphasizing the neck region) and hypoglossal (XII) nerves.						

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
Spinal cord and spinal nerves.	<ul style="list-style-type: none"> <li>▪ Describe &amp; identify the extent, location, basic component, coverings and the roots of the spinal cord.</li> <li>▪ Describe &amp; identify, The formation course &amp; mode of distributions of spinal nerves.</li> <li>▪ Describe &amp; explain the contributions of the spinal nerve in head &amp; neck region.</li> </ul>	Lecture	Tutorial / Practical	OHP Transparen cy Sheet Chalk Board Viscera Dead Body	Lec. – 1hours Tuto. & Prac. -3hours	Written/ Oral/ Practical
Autonomic nervous system	<ul style="list-style-type: none"> <li>➤ Define the autonomic nervous system.</li> <li>➤ Define the sympathetic &amp; parasympathetic nervous system .</li> <li>➤ Describe the basic organization of the sympathetic and parasympathetic systems.</li> <li>➤ Explain the differences between the two systems and their functions.</li> </ul>	Lecture	Tutorial / Practical		Lec. – 2hours Tuto. & Prac. -3hours	Written/ Oral/ Practical

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
<p><b>Cell Biology</b></p> <ul style="list-style-type: none"> <li>Human cell-basic organization, constituents, nucleus and chromosomes, cell cycle and cell division, cell membrane, organelles and inclusions</li> <li>Cell surface specialization</li> <li>Cell Junctions.</li> </ul>	<ul style="list-style-type: none"> <li>Define and describe the human cell &amp; its constituents with their functions.</li> <li>Explain cell cycle.</li> <li>Describe the cell surface specialization &amp; intercellular junctions.</li> </ul>	Lecture		OHP Transparency Sheet Chalk Board Viscera Dead Body Microsc ope Slide	Lecture-22 h Practical & tutorial-40 h	Written/ Oral
<p><b>Histology</b></p> <p>General Histology</p> <ul style="list-style-type: none"> <li>Basics of microscopy :</li> </ul> <p>Light microscopy</p> <p>Electron microscopy</p> <ul style="list-style-type: none"> <li>Basics of tissue processing &amp; staining.</li> </ul>	<ul style="list-style-type: none"> <li>Identify and show the functions of deferent parts of a compound light microscope.</li> <li>Describe the basic principals of light microscopy.</li> <li>Describe the basic principals of transmission &amp; scanning electron microscopy.</li> <li>Describe the basic features of transmission electron micrograph &amp; scanning electron micrograph.</li> <li>Describe the basic principals of tissue processing and staining of the tissues.</li> </ul>	Lecture	Practical & Tutorial			Written/ Oral/ Practical

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
<p><b>Basic tissues:</b> Definition, classification, components, characters, distribution and functions of:</p> <ul style="list-style-type: none"> <li>• Epithelial tissue.</li> <li>• Connective tissue.</li> <li>• Muscular tissue.</li> <li>• Nervous tissue.</li> </ul> <p>• Functional aspects of cell.</p> <p>• Functional aspects of different types of tissue.</p> <p>Systemic Histology</p> <ul style="list-style-type: none"> <li>• Glands.</li> <li>• Digestive system .</li> <li>• Respiratory system.</li> <li>• Vascular system.</li> <li>• Lymphoid system</li> <li>• Endocrine system.</li> <li>• Nervous system.</li> <li>• Special sense organs.</li> </ul> <ul style="list-style-type: none"> <li>• Urinary system.</li> <li>• Male reproductive system.</li> <li>• Female reproductive system</li> </ul>	<ul style="list-style-type: none"> <li>• Define and classify the basic tissues in the body.</li> <li>• Describe the components, characters, distribution and the functions of basic tissues in the body.</li> <li>• Describe the histological structures of different tissues in the body.</li> <li>• Explain the structure, functions, and relationship of different types of cell.</li> <li>• Explain the structure, functions, relationships of different types of tissue .</li> </ul> <ul style="list-style-type: none"> <li>• Describe the functional histology.</li> </ul> <ul style="list-style-type: none"> <li>• Describe the basic aspects of functional histology.</li> </ul>	Lecture	Practical & Tutorial	OHP Transparency Sheet Chalk Board Viscera Dead Body Microscope Slide		Written / Oral/ Practical
		Lecture	Practical & Tutorial			Written/ Oral/ Practical

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
Genetics		Lecture				Written/ Oral
Chromosome.	<ul style="list-style-type: none"> <li>❑ Define chromosome.</li> <li>❑ Describe the structure of chromosome.</li> <li>❑ Define chromatin, gene, genome, genotype, phenotype, karyotyping and karyotype.</li> <li>❑ Describe the structure of DNA, RNA and protein.</li> <li>❑ Define and explain DNA replication.</li> </ul>			OHP Transparency Sheet Chalk Board Viscera Dead Body Microscope Slide		
Protein synthesis.	<ul style="list-style-type: none"> <li>❑ Define and explain different stages of protein synthesis:</li> <li>❑ Transcription.</li> <li>❑ Translation.</li> <li>❑ Define and explain gene mutation.</li> </ul>	Lecture				

	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
Genetic disorders.	<ul style="list-style-type: none"> <li>❑ Define and explain genetic disorders.</li> <li>❑ Define, classify and explain chromosomal anomalies (numerical and structural).</li> </ul>	Lectures		OHP Transparency Sheet Chalk Board		Written/Oral
Autosomal dominant disorders.	<ul style="list-style-type: none"> <li>❑ Define and explain single gene and multifactorial disorders.</li> </ul>	Lectures				
Autosomal recessive disorders.	<ul style="list-style-type: none"> <li>❑ Explain the inheritance patterns of genetic disorders.</li> </ul>					
Sex-linked disorders.	<ul style="list-style-type: none"> <li>❑ Explain anatomically the deferent features of genetic disorders as applicable to the need of the dental, oral and maxillofacial surgery.</li> </ul>					
Multifactorial disorders.						

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
<p>Developmental Anatomy</p> <p><b>General Developmental Anatomy</b></p> <ul style="list-style-type: none"> <li>• Introduction: Terms and definition, developmental periods, historical background and significance of study of embryology.</li> <li>• Basic process of development: proliferation, growth, differentiation, inductors, evocators and organizer.</li> <li>• Cell division: Types, chromosomal anomalies.</li> </ul>	<ul style="list-style-type: none"> <li>• Define terms related to embryology.</li> <li>• Explain the significance of study of embryology.</li> <li>• Describe developmental periods.</li> <li>• Explain the basic mechanism of human development.</li> <li>• Describe different types of cell division.</li> <li>• Describe chromosomal changes during cell division with anomalies.</li> </ul>	Lecture		OHP Transparency Sheet Chalk Board	12 hours	Written/Oral

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
<ul style="list-style-type: none"> <li>• Gametogenesis and maturation of germ cells.</li> <li>• Fertilization: Events, factors influencing the fertilization.</li> <li>• Progress in 1<sup>st</sup>, 2<sup>nd</sup> &amp; 3<sup>rd</sup> week of development</li> <li>• Fetal membranes : Placenta, chorion, amnion, umbilical cord, yolk sac etc.</li> <li>• Derivatives of germ layers: ectoderm, mesoderm &amp; endoderm.</li> <li>• Multiple pregnancy.</li> <li>• Congenital Malformations.</li> </ul>	<ul style="list-style-type: none"> <li>• Describe oogenesis and spermatogenesis.</li> <li>• Describe the process of fertilization and implantation.</li> <li>• Describe the events of 1<sup>st</sup>, 2<sup>nd</sup> &amp; 3<sup>rd</sup> week of development.</li> <li>• Explain the development of foetal membranes.</li> <li>• Describe the development &amp; derivatives of ectoderm, mesoderm &amp; endoderm.</li> <li>• Explain the multiple pregnancy including twin &amp; their types.</li> <li>• Describe the causes &amp; types of congenital anomalies.</li> </ul>	<i>Lecture</i>		OHP Transpar ency Sheet Chalk Board		Written/Oral



Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
<p>Special developmental anatomy</p> <p>Development and developmental anomalies of :</p> <ul style="list-style-type: none"> <li>• The pharyngeal region</li> <li>• The skull and face including nose and mouth.</li> </ul> <p>Development of :</p> <ul style="list-style-type: none"> <li>• The eye and the ear.</li> <li>• Alimentary system.</li> <li>• Respiratory system.</li> <li>• Cardiovascular system.</li> <li>• The central nervous system.</li> </ul>	<p>Describe the details of development of :</p> <ul style="list-style-type: none"> <li>• The pharyngeal region</li> <li>• The skull and face including nose and mouth</li> <li>• Describe the developmental anomalies and their mechanisms in the pharyngeal region, the skull and face including nose and mouth.</li> </ul> <ul style="list-style-type: none"> <li>• Describe the basic concepts of the development of the ear, eye, alimentary system, respiratory system, cardiovascular system and central nervous system.</li> </ul>	Lecture.		<p>OHP</p> <p>Transparency Sheet</p> <p>Chalk Board</p>	8 hours	Written/Oral

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days (including exams).	Assessment
		Class-room	Practical/visit	Aids		
Regional anatomy of the head & neck.						
Scalp and temple:	<ul style="list-style-type: none"> <li>▪ Define the area</li> <li>▪ Describe and identify the boundaries and composition/contents of the areas with their orientation</li> <li>▪ Describe the blood supply and nerve supply to the region</li> <li>▪ Describe the clinical implications of the region relevant to dental oral and maxillofacial surgery</li> </ul>	Tutorial	Practical	OHP Transpa rency Sheet Chalk Board Viscera Dead Body	5 hours	Written/Oral /Practical
Posterior triangle of the neck	<ul style="list-style-type: none"> <li>▪ Define the area</li> <li>▪ Describe and identify the boundaries and composition/contents of the areas with their orientation</li> <li>▪ Describe the blood supply and nerve supply to the region</li> <li>▪ Describe the clinical implications of the region relevant to dental oral and maxillofacial surgery.</li> </ul>				4 hours	
Anterior triangle of the neck	<ul style="list-style-type: none"> <li>▪ Define the area</li> <li>▪ Describe and identify the boundaries and composition/contents of the areas with their orientation</li> <li>▪ Describe the blood supply and nerve supply to the region</li> <li>▪ Describe the clinical implications of the region relevant to dental oral and maxillofacial surgery.</li> </ul>				6 hours	

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days (including exams).	Assessment
		Class-room	Practical/visit	Aids		
Fascial distribution of the head and neck	<ul style="list-style-type: none"> <li>❑ Describe the fascial distribution of the head and neck.</li> <li>❑ Explain the functional implications of the specific fascial distribution.</li> <li>❑ Explain the clinical implication of the distribution relevant to dental, oral and maxillofacial surgery.</li> </ul>	Tutorial	Practical	OHP Transparenc y Sheet Chalk Board Viscera Dead Body Microscope Slide	1 hour	Written / Oral / Practical
Thyroid glad	<ul style="list-style-type: none"> <li>❑ Describe, dissect out and identify the gross anatomical features of the gland.</li> <li>❑ Correlate the gross anatomy of the gland with its function.</li> <li>❑ Describe and explain the clinical correlation of the gross anatomy (including vessels and nerves) of the gland as relevant to dental, oral and maxillofacial surgery.</li> </ul>	Tutorial	Practical		4 hours	
Face	<ul style="list-style-type: none"> <li>❑ Describe, dissect out and identify the gross anatomical structures ( superficial and deep) of the face.</li> <li>❑ Describe the blood supply, nerve supply and lymphatic drainage of the face.</li> <li>❑ Explain the clinical implications of the facial structures as relevant to dental, oral &amp; maxillofacial surgery.</li> </ul>	Tutorial	Practical		6 hours	

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days (including exams).	Assessment
		Class-room	Practical/visit	Aids		
Cranium including the cranial cavity	<ul style="list-style-type: none"> <li>❑ Describe, dissect out &amp; identify the different parts, components (including bones) and contents of the cranium and cranial cavity in relation to each other.</li> <li>❑ List and identify the different structures passing through the foramina of the cranium.</li> <li>❑ Identify and describe the formation of different joints of the cranium.</li> </ul>	Tutorial	Practical	OHP Transparency Sheet Chalk Board Viscera Dead Body	20 hours	Written/Oral/ Practical
Orbit	<ul style="list-style-type: none"> <li>❑ Describe and identify the basic anatomical features including the formation, contents, arterial supply, venous drainage, lymphatic drainage and nerve supply.</li> </ul>	Tutorial	Practical		4 hours	
Parotid region	<ul style="list-style-type: none"> <li>❑ Define the region.</li> <li>❑ Describe, dissect out and identify the structures in the gross anatomical region.</li> <li>❑ Describe and identify the location, parts and structures inside the parotid gland including its duct and its opening.</li> <li>❑ Describe the blood supply and neural control of secretion of the parotid gland.</li> <li>❑ Explain the clinical anatomy of the parotid gland as relevant to dental, oral and maxillofacial surgery.</li> <li>❑</li> </ul>	Tutorial	Practical		4 hours	

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days (including exams).	Assessment
		Class-room	Practical/visit	Aids		
Infratemporal region and temporo-mandibular joint.	<ul style="list-style-type: none"> <li>❑ Define the region.</li> <li>❑ Describe, dissect out and identify the different gross anatomical structures in the region.</li> <li>❑ Describe the components, type and characteristics of the temporo-mandibular joint.</li> <li>❑ Describe and identify the muscles acting on the joint.</li> <li>❑ Demonstrate the action of the muscles on the joint.</li> <li>❑ Describe the nerve supply to the muscles involved and anatomy of proprioception.</li> <li>❑ Describe and explain the mechanism of the movement of the joint, including the axis.</li> <li>❑ Explain the clinical anatomy of the joint.</li> </ul>	Tutorial	Practical	OHP Trans paren cy Sheet Chal k Boar d Visce ra Dead Body	6 hours	Written/Oral/ Practical

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days (including exams).	Assessment
		Class-room	Practical/visit	Aids		
Mandible and submandibular region.	<ul style="list-style-type: none"> <li>□ Describe, dissect out and identify the gross anatomical structures of the region.</li> <li>□ Describe and identify the parts, characteristics, related structures, ossification and age changes of the mandible.</li> <li>▪ Describe the gross anatomy including the blood supply of the submandibular gland.</li> <li>▪ Describe and explain the neural control of the submandibular gland.</li> <li>▪ Describe and explain the clinical anatomy of the submandibular gland.</li> <li>▪ Describe and explain the clinical anatomy of the mandible.</li> </ul>	Tutorial	Practical	OHP Transparency Sheet Chalk Board Viscera Dead Body	6 hours	Written/ Oral/ Practical

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days (including exams).	Assessment
		Class-room	Practical/visit	Aids		
Deep dissection of the neck	<ul style="list-style-type: none"> <li>▪ Describe, dissect out and identify the different gross anatomical structures deeply placed in the neck – including the larynx, trachea, thymus and oesophagus and the main vessels and nerves.</li> <li>▪ Describe the mode of blood supply, nerve supply and lymphatic drainage of the region.</li> <li>▪ Describe and explain the surgical anatomy of the organs, vessels and nerve of the region.</li> </ul>	Tutorial	Practical	OHP Transparency Sheet Chalk Board Viscera Dead Body	6 hours	Written/ Oral/ Practical

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days (including exams).	Assessment
		Class-room	Practical/visit	Aids		
Prevertebral region, vertebral column and joints of the neck.	<ul style="list-style-type: none"> <li>▪ Define the region.</li> <li>▪ Describe the basic organization of the region.</li> <li>▪ Describe the basic organization of the vertebral column at the region.</li> <li>▪ Describe and identify the different cervical vertebrae.</li> <li>▪ Describe the different joints of the cervical vertebral column and explain the mechanism of the movements in those joints.</li> </ul>	Tutorial	Practical	OHP Transparency Sheet Chalk Board Viscera Dead Body	4 hours	WRITTEN/ ORAL/ PRACTICAL
Mouth (oral cavity), including palate and the palatine tonsils	<ul style="list-style-type: none"> <li>▪ Define the region.</li> <li>▪ Describe its formation.</li> <li>▪ Describe and identify its parts.</li> <li>▪ Describe the gross anatomical features of the lips, cheeks and gums.</li> <li>▪ Describe the sublingual glands, their ducts and their neural control.</li> </ul>				6 hours	



Contents	Learning Objectives	Training/Learning experiences			Expected hours/days (including exams).	Assessment
		Class-room	Practical/visit	Aids		
The palatine tonsil	<ul style="list-style-type: none"> <li>▪ Describe and identify the Waldeyer's ring.</li> <li>▪ Explain the significance of the Waldeyr's ring.</li> <li>▪ Describe and identify the gross anatomical features of the palatine tonsil including its arterial supply and venous drainage.</li> <li>▪ Explain the clinical anatomy of the palatine tonsil.</li> </ul>	Tutorial	Practical	OHP Transparenc y Sheet Chalk Board Viscera Dead Body		WRITTEN/ ORAL/ PRACTICAL
The palate	<ul style="list-style-type: none"> <li>▪ Describe and identify the different parts of the palate.</li> <li>▪ Describe the gross structures, blood supply and nerve supply of the hard and soft palate.</li> <li>▪ Describe and explain the clinical anatomy of the palate, explain the anatomy of palatal movements.</li> </ul>	Tutorial	Practical			

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days (including exams).	Assessment
		Class-room	Practical/visit	Aids		
Nose and pterygopalatine fossa	<ul style="list-style-type: none"> <li>▪ Describe and identify the parts of the nose.</li> <li>▪ Describe and identify the gross anatomical features of the nose including those of the nasal septum, lateral nasal wall and nasal openings.</li> <li>▪ Describe the blood supply and nerve supply of the nose, mentioning the functional and clinical implications of each.</li> <li>▪ Describe the gross anatomy of the pterygopalatine fosse including the orientation of the structures in the fosse.</li> </ul>	Tutorial	Practical	OHP Transparency Sheet Chalk Board Viscera Dead Body	5 hours	Written/ Oral/ Practical
Paranasal air sinuses	<ul style="list-style-type: none"> <li>▪ Define, locate and identify the paranasal air sinuses.</li> <li>▪ Describe the boundaries of the sinuses and their openings.</li> <li>▪ Describe the peculiarities of the sinuses.</li> <li>▪ Describe and explain the clinical anatomy of the paranasal air sinuses.</li> </ul>	Tutorial	Practical		4 hours	Written/ Oral/ Practical

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days (including exams).	Assessment
		Class-room	Practical/visit	Aids		
Pharynx	<ul style="list-style-type: none"> <li>▪ Define the pharynx and its parts.</li> <li>▪ Describe the gross anatomical features of the pharynx, including muscles, relations, blood supply and nerve supply.</li> <li>▪ Describe the anatomy of deglutition.</li> <li>▪ Describe and explain the clinical anatomy of the pharynx as applicable to dental, oral and maxillofacial surgery.</li> </ul>	Tutorial	Practical	OHP Transparency Sheet Chalk Board Viscera Dead Body	4 hours	Written/ Oral/ Practical
Larynx	<ul style="list-style-type: none"> <li>▪ Describe, dissect out and identify the gross anatomical features of the larynx –its parts, components, relations, muscles, internal features, blood supply, nerve supply and lymphatic drainage.</li> <li>▪ Describe and explain the muscular action and movement of the larynx.</li> <li>▪ Describe and explain the clinical anatomy of the larynx as relevant to dental oral and maxillofacial surgery.</li> </ul>	Tutorial	Practical		5 hours	Written/ Oral/ Practical

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days(including exams).	Assessment
		Class-room	Practical/visit	Aids		
Tongue	<ul style="list-style-type: none"> <li>▪ Describe and identify the parts, muscular orientation and surface features (including distribution of the papillae) of the tongue with their functional significance.</li> <li>▪ Describe the blood supply, nerve supply and lymphatic drainage of the tongue, explaining their clinical significance.</li> <li>▪ Explain anatomically the nervous control and muscular movements of the tongue.</li> <li>▪ Describe and explain the clinical anatomy of the tongue-specially addressing neural disorder anemia, neoplasm and metastasis.</li> </ul>	Tutorial	Practical	OHP Transparen cy Sheet Chalk Board Viscera Dead Body	5 hours	written/ oral/ practical
Organs of hearing	<ul style="list-style-type: none"> <li>▪ Describe and identify different parts of the ear-external , middle and internal ears.</li> <li>▪ Describe the basic functional anatomy of the different parts including the basics of the anatomy of audition and equilibrium.</li> </ul>	Tutorial	Practical		4 hours	

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days (including exams).	Assessment
		Class-room	Practical/visit	Aids		
Living (surface) anatomy	<ul style="list-style-type: none"> <li>▪ Describe and demonstrate the projection of the following structures on the surface of the head and neck: <ul style="list-style-type: none"> <li>• Frontal sinus.</li> <li>• Maxillary sinus.</li> <li>• Parotid gland and its duct.</li> <li>• Facial nerve and its branches.</li> <li>• Facial artery in the neck and face.</li> <li>• Thyroid gland .</li> <li>• Common carotid artery.</li> </ul> </li> </ul> <p>Palpate and show the following:</p> <ul style="list-style-type: none"> <li>▪ Sternocleidomastiod muscle</li> <li>▪ Masseter muscle</li> <li>▪ Facial artery</li> <li>▪ Common carotid artery</li> <li>▪ Temporomandibular joint</li> <li>▪ Bregma</li> <li>▪ Pterion</li> </ul>	Tutorial	Practical	OHP Transparen cy Sheet Chalk Board Viscera	3 hours	Oral / Practical
Normal radiographs of the head and neck.	<ul style="list-style-type: none"> <li>▪ Identify the major structures of the head &amp; neck in the radiograph and describe the basic orientation of the teeth.</li> </ul>	Tutorial			2hours	Oral / Practical
Card completion examination on head and neck.					24 hours (in six days)	Written/ Oral/ Practical

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days (including exams).	Assessment
		Class-room	Practical/visit	Aids		
<b>Regional anatomy of the thorax</b>  1. General introduction of the thorax  2. The wall of the thorax (including the vertebral column)  3. The diaphragm.  4. The trachea, bronchi, lungs and pleura.	<ul style="list-style-type: none"> <li>▪ Locate the thorax in the body and mention the overall disposition of the organs in it.</li> <li>▪ Describe in brief the formation of the thoracic wall &amp; its apertures.</li> <li>▪ Identify the basic skeletal, muscular, vascular and neural components of the thoracic wall.</li> <li>▪ Describe the location, parts, principal attachments, apertures &amp; nerve supply of the diaphragm including functions.</li> <li>▪ Describe &amp; identify the disposition &amp; interrelationship of these organs in the thorax.</li> </ul> <p>Describe the basic gross anatomy of each organ including the essentials of their vascular &amp; neural supply.</p>	Tutorial  Tutorial  Tutorial  Tutorial	Practical  Practical  Practical  Practical	OHP Transparency Sheet Chalk Board Viscera Dead Body	2 hour  6 hours  3 hours  6 hours	Written/Oral/ Practical  Written/Oral/ Practical  Written/Oral/ Practical  Written/Oral/ Practical

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days (including exams).	Assessment
		Class-room	Practical/visit	Aids		
5. The heart with pericardium & its great vessels.	<ul style="list-style-type: none"> <li>▪ Describe &amp; identify the disposition &amp; interrelationship of these structures in the mediastinum.</li> <li>▪ Describe the basic gross anatomy of the organs including the essentials of their vascular &amp; neural supply.</li> <li>▪ Describe the essentials of the conducting system of the heart.</li> </ul>	Tutorial	Practical	OHP Transparenc y Sheet Chalk Board Viscera Dead Body	6 hours	Written/Oral/ Practical
6. Basic functional anatomy of the thorax.	<ul style="list-style-type: none"> <li>▪ Relate the gross anatomical structures of the thorax with respiration and cardiac activity.</li> </ul>	Tutorial	Practical		1 hours	Written/Oral/ Practical
7. Major blood vessels, lymph vessels and nerves of the thorax.	<ul style="list-style-type: none"> <li>▪ Describe in brief the organization of the major blood and lymph vessels and nerves of the thorax with their principal areas of supply/drainage.</li> </ul>	Tutorial	Practical		5 hours	Written/Oral/ Practical
8. Normal chest radiograph.	<ul style="list-style-type: none"> <li>▪ Identify the major thoracic structures in the radiograph.</li> </ul>	Tutorial	Practical		1 hour	Written/Oral/ Practical
9. Card completion examination on thorax.					24 hours (in six days)	Written/Oral/ Practical

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days (including exams).	Assessment
		Class-room	Practical/visit	Aids		
<b>Regional anatomy of the abdomen</b> <ol style="list-style-type: none"> <li>1. General introduction of the abdomen.</li> <li>2. The abdominal and pelvic wall.</li> <li>3. The oesophagus and the stomach.</li> <li>4. The small intestine.</li> <li>5. The large intestine.</li> <li>6. The liver and biliary apparatus including gall bladder.</li> </ol>	<ul style="list-style-type: none"> <li>▪ Locate the regions of the abdomen in the body and mention the overall disposition of the organs in them and in relation to each other.</li> </ul>	Tutorial	Practical	OHP Transparency Sheet Chalk Board Viscera Dead Body	4 hours	Written/Oral/Practical
	<ul style="list-style-type: none"> <li>▪ Describe in brief the formation of the abdominal wall.</li> <li>▪ Describe the basic organization of the abdominal &amp; pelvic wall.</li> </ul>	Tutorial	Practical		6 hours	Written/Oral/Practical
	<ul style="list-style-type: none"> <li>▪ Describe &amp; identify the major parts of the organs.</li> <li>▪ Outline the arterial supply, venous drainage, lymphatic drainage and nerve supply of the organs.</li> </ul>	Tutorial	Practical		5 hours	Written/Oral/Practical
	<ul style="list-style-type: none"> <li>▪ Describe &amp; identify the major parts of the organs.</li> <li>▪ Outline the arterial supply, venous drainage lymphatic drainage, nerve supply and function of the small intestine.</li> </ul>	Tutorial	Practical		5 hours	Written/Oral/Practical
	<ul style="list-style-type: none"> <li>▪ Describe and identify the major parts of the organs.</li> <li>▪ Outline the arterial supply, venous drainage, lymphatic drainage and nerve supply of the organs of large intestine.</li> </ul>	Tutorial	Practical		5 hours	Written/Oral/Practical
	<ul style="list-style-type: none"> <li>▪ Identify the liver and different parts of the hepatobiliary apparatus and their disposition and interrelationship.</li> </ul>	Tutorial	Practical		4 hours	Written/Oral/Practical



Contents	Learning Objectives	Training/Learning experiences			Expected hours/days (including exams).	Assessment
		Class-room	Practical/visit	Aids		
7. Portal venous system.	<ul style="list-style-type: none"> <li>Name the components, formation &amp; dispositions of the portal venous system.</li> <li>Explain the functional signification of the system.</li> </ul>	Tutorial	Practical	OHP Transparency Sheet Chalk Board Viscera Dead Body	3 hours	Written/Oral/ Practical
8. The pancreas and the spleen.	<ul style="list-style-type: none"> <li>Describe and identify the gross anatomical features &amp; disposition of the pancreas and the spleen including their blood supply, nerve supply and functions.</li> <li>Mention the clinical anatomy of both the pancreas &amp; the spleen.</li> </ul>	Tutorial	Practical		5 hours	Written/Oral/ Practical
9. The kidney and the suprarenal gland.	<ul style="list-style-type: none"> <li>Describe &amp; identify the gross anatomical features and disposition of the kidney &amp; suprarenal gland including their vascular &amp; nervous supply.</li> <li>Mention their functions, hormonal secretion and the clinical anatomy.</li> </ul>	Tutorial	Practical		6 hours	Written/Oral/ Practical
10. The ureter and the urinary bladder.	<ul style="list-style-type: none"> <li>Describe and identify the major parts and disposition of the organs.</li> <li>Mention the blood supply, nerve supply and the clinical anatomy of the organs.</li> </ul>	Tutorial	Practical		4 hours	Written/Oral/ Practical
11. Major blood vessels, lymph vessels and nerves of the abdomen.	<ul style="list-style-type: none"> <li>Describe in brief the organization of the major blood and lymph vessels including the lymph nodes and nerves of the abdomens with their principal areas of supply/ drainage.</li> </ul>	Tutorial	Practical		4 hours	Written/Oral/ Practical
12. Card completion examination on abdomen.					24 hours (in six days)	Written/Oral/ Practical

## Sub: Physiology with Biochemistry

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
1. General Physiology	<b>At the end of session students should be able to:-</b>					
A. Introduction	i. Define Physiology ii. List general functional organization of the human body iii. State principles of control systems iv. Define homeostasis	Lecture Tutorial		OHP Chalk & board Diagram	L = 4 hours T= 6 hours	
B. Cell and its function	i. Organization & function of cell.	Lecture Tutorial Self Study		OHP, chalk & board Cell model Diagram	L= 2 hours T= 4 hours	
C. Active & passive transport mechanism	i. Describe action potentials ii. Describe basic types of active & passive transport mechanisms iii. Explain Donnan equilibrium.	Lecture Tutorial		OHP, Chalk & board, Diagram	L= 2 hours T=4 hours	
2. General Biochemistry						
i) Cell structure & transport through cell membrane.	i. Recall the structure & function cell & biological membranes. ii. Describe transport of different molecules	Lecture Tutorial	Practical	OHP, Chalk & board, Picture & Diagram	L= 10 hours T= 12 hours P= 12 hours	
ii) physicochemical phenomenon and solution.	iii. Describe PH and buffers iv. Recall overall clinical application & importance of enzymes.					
iii) PH Buffers	v. Prepare different types of solutions					
iv) Isotopes	vi. Detec of CHO (known & unknown solution)					
v) Enzymes						
vi) Bioenergetics & biological oxidation						

## Sub: Physiology with Biochemistry

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
3. Blood & homeostasis	i. Describe composition & functions of blood. ii. State formed elements of blood & plasma proteins. iii. Describe blood clotting mechanism iv. Describe blood grouping & transfusion v. State maintenance of internal environment	Lecture (L) Discussion in small group (S) Tutorial (T)	Practical (P)	OHP Chalk & board Instrument & Reagent	L= 6 hours T= 10 hours P= 8 hours	Viva
4. Immune System	i. Describe the cellular and humoral immune responses ii. structure of antibody molecules.	Lecture Tutorial		OHP Chalk & board	L= 2 hours T= 4 hours	Viva
5. Circulation	i. Describe functions of heart & blood vessels. ii. Describe pulse, blood pressure, cardiac output & their regulation. iii. Describe systemic circulation iv. Interpret normal ECG.	Lecture (1) Discussion in small group (2) Question & Answer session (3) Tutorial		OHP Chalk & board Model Diagram	L= 8 hours T= 12 hours P= 6 hours	Written oral

**Sub: Physiology with Biochemistry**

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
6. Respiration	i. Describe mechanism of normal respiration ii. Define lung volumes & capacities. iii. Describe lung function tests. iv. Describe O <sub>2</sub> & Co <sub>2</sub> transport. v. State hypoxia & cyanosis	Lecture Small group discussion Tutorial		Chalk & board OHP	L= 5 hours T= 10 hours	Written as card & Viva
7. Gastrointestinal & Hepatobiliary system  i) Secretion, composition & function of digestive juices ii) Digestion in the mouth, stomach & intestine. iii) absorption of nutrients iv) function of liver	i. State the regulation of secretion, function & composition of digestive juices. ii. Describe the digestion of nutrients. iii. Describe the local hormones of G.I. Tract. iv. Describe the absorption of nutrients. v. State different functions of liver in health & diseases.  i. Describe basic structure of carbohydrate, protein & lipids. ii. Describe the process of glycolysis, gluconeogenesis Glycogenolysis & their interaction in the regulation of blood glucose iii. state the lipoproteins & their role in atherosclerosis iv. Perform tests to demonstrate reactions of carbohydrates and proteins.	Lecture Tutorial          Lecture Tutorial	Practical	OHP Chalk & board Diagram          Chalk & Black Board & OHP Diagram	L= 5 hours T= 8 hours P= 4 hours	Written
8. Metabolism 1) Carbohydrate 2) Lipids 3) protein					L= 5 hours T= 8 hours	Written & Oral

## Sub: Physiology with Biochemistry

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
9. Kidney, fluid & acid- base balance . i) Renal function tests Acid-base & water balance	i) State the functions of the kidney ii) Describe the mechanism of formation of urine including concentration & acidification iii) State the mechanism of acid-base & water balance in health & diseases iv) Describe the renal function tests	Lecture Small group discussion tutorial	Practical	OHP Chalk & board Model/ picture Diagram Reagents & sample	L= 5hrs T= 6 hrs P= 8 hrs	Written & Viva
10.Endocrinology i) General mechanism of hormone action ii) Thyroid and Pancreas iii) Glucose homeostasis	i) State nature of hormones & mechemis of action. ii) Describe the steps leading to the formation of thyroid hormones and their regulation. iii) Correlate the actions of various hormones with the regulation of carbohydrate metabolism. iv) Describe mention function (mormal, hyper and hypo function of all endocrine hormones.	Lecture Tutorial		OHP Chalk & board Diagram	L= 5 hrs T=8 hrs	

## Sub: Physiology with Biochemistry

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
11. Food & Nutrition i) proximate principal of food. ii) Vitamins i) Minerals iii) Dietary fibres	i) Describe the dietary sources and metabolism of important vitamins and minerals ii) Name the manifestations of important vitamins and mineral deficiencies iii) Describe the role of dietary fibres in health and diseases.	Lecture Tutorial		OHP Chalk & board Picture	L= 5 hours T=10 hours	
12. Nervous System	i) Mention the functional organization of nervous system ii) Describe reflex action iii) Describe mechanism of synaptic transmission. iv) Describe physiology of receptors and mechanism of sensory perceptoin v) Describe neuro-physiology of pain functions	Lecture Tutorial		OHP Chalk & board Picture & diagram	L= 6 hours T= 12 hours	
13. Special Sense	i) Describe the mechanism of special sense organs	Lecture Tutorial			L=2 hour T= 4 hours	
14. Temperature regulation.	i) Describe the physiology of temperature regulation.	Lecture Tutorial		OHP, Chalk & board, diagram	L= 1 hour T=2 hours	
15. Musculoskeletal system i) Calcium, phosphorus and vit-D metabolism in relation to the skeleton	i) Describe the mechanism of calcium & phosphorus homeostasis	Lecture Tutorial		OHP Chalk & board Diagram	L= 4 hours T= 6 hours	

**Sub: Physiology with Biochemistry**

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
16. Reproductive system.	i) Primary and secondary Sex character ii) Menstrual and ovarian cycles & ovulation iii) Describe Spermatogenesis	Lecture Tutorial		OHP Chalk & board Model Picture & diagram	L= 3 hours T= 6 hours	
Term Final Exam-1					24 hours	Written Oral Practical
Term Final Exam-2					24 hours	Written Oral Practical

# Science of Dental Materials

After completing the course students should be able to

1. Identify & select confidently the most appropriate materials used in dentistry.
2. Gain knowledge about the composition, properties and various uses in different fields of dentistry.
3. Manipulate, handle and apply the materials properly used in dentistry.

Total lecture hours = 120 hrs.

Total tutorial and practical hours = 120 hrs.



## Subject : Science of Dental Materials

Contents	Learning Objectives	Class-Room	Practical/Visit	Aids	Expected hours/days	Assessment
1. Introduction of aims & objectives of the subject	<ul style="list-style-type: none"> <li>• Student should know the importance &amp; scope of the subject.</li> <li>• General properties of bio materials</li> <li>• Structure of matters.</li> <li>• Classification of dental materials.</li> </ul>	Lecture		OHP & Multimedia	L-8 hrs T-6 hrs	Written Viva
2. Different terminology and properties of the materials.	<ul style="list-style-type: none"> <li>• All terms and their definition with examples.</li> <li>• Biological properties</li> <li>• Mechanical properties</li> <li>• Rheological properties</li> <li>• Thermal properties</li> <li>• Electrical properties</li> <li>• Dental consideration of light, color and Aesthetic.</li> </ul>	Lecture Tutorial	Practical OSPE	OHP Or Multimedia	L-10 hrs T-4 hrs	Written Viva Practical
3. Impression materials	<ul style="list-style-type: none"> <li>• Definition , classification, chemistry. properties.</li> <li>• Manipulation &amp; uses.</li> <li>• Types of Impression tray.</li> <li>• Special Emphases to Alginate and Elastomers impression.</li> <li>• Clinical Consideration of Impression Materials.</li> <li>• Additional Applications of Hydrocolloids.</li> <li>• Care and Handling of Hydrocolloid Impression.</li> <li>• Common Causes for Remaking of Hydrocolloid Impression</li> <li>• New Advance in Impression Material.</li> <li>• Disinfection of Impression Materials.</li> </ul>	Lecture Tutorial	Practical OSPE	OHP or Multimedia	L-12 hrs T-14 hrs	Written Viva Practical
4. Gypsum Products	<ul style="list-style-type: none"> <li>• Sources, Classification , Chemistry, properties.</li> <li>• Manipulation &amp; uses of different gypsum product.</li> <li>• Hygroscopic Setting Expansion of Gypsum Infection Control Concerns.</li> </ul>	Lecture Tutorial	Practical OSPE	OHP or Multimedia	L-8 hrs T-4 hrs	

## Subject : Science of Dental Materials

Contents	Learning Objectives	Class-Room	Practical/ Visit	Aids	Expected hours/days	Assessment
5. Dental investment materials	<ul style="list-style-type: none"> <li>• Classification, composition Properties, manipulation and uses</li> </ul>	Lecture Tutorial	Practical OSPE	OHP Multimedia	L-7 hrs T-6 hr	
6. Dental waxes	<ul style="list-style-type: none"> <li>• Sources, classification &amp; properties.</li> <li>• Manipulation and uses.</li> </ul>	Lecture Tutorial	Practical OSPE	OHP Power Point slide show	L-4 hrs T-10 hrs	Written Viva Practical
7. Separating medium.	<ul style="list-style-type: none"> <li>• Chemistry, Classification.</li> <li>• Properties, application &amp; uses in dental field.</li> </ul>	Lecture Tutorial	Practical OSPE	OHP & Multimedia	L-2 hrs T-3 hr	Written Viva Practical
8. Synthetic resins used in dentistry	<ul style="list-style-type: none"> <li>• Classification, chemistry &amp; properties.</li> <li>• Denture base resins, and its classification, chemistry, properties &amp; manipulation.</li> <li>• Restorative resins, its compositions, classification, properties, manipulation, and uses.</li> <li>• Polymerization</li> <li>• Types of Polymerization</li> <li>• Light Activated Denture base Materials</li> <li>• Denture Lining Materials</li> <li>• Infection Control Procedure</li> <li>• Composite for Posterior Restoration</li> <li>• Prosthodontic Resins</li> <li>• Biocompatibility of Composite</li> <li>• Repair of Composite</li> </ul>	Lecture Tutorial	Practical OSPE	OHP & Multimedia	L-12 hrs T-10 hrs	Written Viva Practical

## Subject : Science of Dental Materials

Contents	Learning Objectives	Class-Room	Practical/Visit	Aids	Expected hours/days	Assessment
9. Dental Ceramics and dental porcelain	<ul style="list-style-type: none"> <li>• Definition</li> <li>• Types, Composition and Properties</li> <li>• Classes of Dental Ceramics for Fixed Prosthetics</li> <li>• Metal Ceramic Restoration</li> <li>• All-Ceramic Restoration</li> </ul>	Lecture Tutorial	Practical & Visit to Dental Prosthetic Lab.	OHP & Multimedia	L-8 hrs T-8 hrs	Written Viva Practical
10. Materials for Abrasion, polishing, and burnishing	<ul style="list-style-type: none"> <li>• Definition, necessity, classification of materials used for these purposes in dentistry.</li> <li>• Composition, mode of action, desirable properties</li> </ul>	Lecture Tutorial	Practical Visit to dental prosthodontic lab.	OHP, Multimedia Projector	L-3 hrs T-4 hrs	Written Viva Practical

## Subject : Science of Dental Materials

Contents	Learning Objectives	Class-Room	Practical/ Visit	Aids	Expected hours/days	Assessment
11. Dental cements and filling materials  (a) PolymersCeramic composit filling materials-  b) Tooth resin bonding agents-  (c) Dental Amalgam-  (d) Direct Goldfilling-  (e)Endodontic filling materials-	<ul style="list-style-type: none"> <li>• Classification, composition, manipulation &amp; properties.</li> <li>• Application, requirements .</li> <li>• Cements based on phosphoric acids.</li> <li>• Organometallic chelate cement.</li> <li>• Polyalkenoate cements.</li> <li>• Composition, light sources selection of materials, manipulation, application, comparative properties of anterior restorative materials.</li> <li>• Acid-etch Technique</li> <li>• Enamel Bonding Agents</li> <li>• Manipulation of Denting Bonding Agents</li> <li>• Treatment of Cervical Lesions</li> <li>• Pit and Fissure Sealants.</li> </ul> <ul style="list-style-type: none"> <li>• Classification of Dental alloy</li> <li>• Composition, properties, Manufacture of alloy</li> <li>• Manupulation, setting reaction, uses.</li> <li>• High copper alloy, Low copper alloy</li> </ul> Classification, ideal properties manipulation of application.	Lecture Tutorial	Practical & Visit to Conservative Department		L-15 hrs T-16 hrs	Written Viva Practical

## Subject : Science of Dental Materials

Contents	Learning Objectives	Class-Room	Practical/ Visit	Aids	Expected hours/days	Assessment
12. Dental metallurgy	<ul style="list-style-type: none"> <li>• Terms used in dentistry.</li> </ul>	Lecture		OHP	L-2 hrs T-2 hrs	
13. Metals and alloys used in dentistry-	<ul style="list-style-type: none"> <li>• Classification, significance, properties, and uses of alloys.</li> <li>• Different types of base and noble metals.</li> <li>• Their dental uses and properties.</li> <li>• Mainly – Gold and its alloy.               <ul style="list-style-type: none"> <li>○ Silver and its alloy.</li> <li>○ Copper and its alloy.</li> <li>○ Platinum and its alloy.</li> </ul> </li> <li>• Steel &amp; stainless steel.</li> <li>• Zinc, lead, nickel &amp; tin.</li> </ul>	Lecture Tutorial	Practical & Visit to Lab. of Prosthodontics department and conservative department	OHP & multimedia	L-14 hrs T-10 hrs	Written Viva Practical
14. Soldering, brazing, and welding	<ul style="list-style-type: none"> <li>• Definition.</li> <li>• Types of soldering,</li> <li>• Mechanism, principles, causes of failure.</li> <li>• Different types of solder, fluxes, flames &amp; their desirable properties.</li> </ul>	Lecture Tutorial	Practical demonstration.	Laptop & multimedia Projector	L-4 hrs T-2 shr.	Written Viva Practical

## Subject : Science of Dental Materials

Contents	Learning Objectives	Class-Room		Aids	Expected hours/days	Assessment
15. Dental casting	<ul style="list-style-type: none"> <li>• Definition.</li> <li>• Parts of casting machine.</li> <li>• Procedure.</li> <li>• Casting defects &amp; how to overcome.</li> <li>• Metals or alloys used for casting-For cast Partial denture,               <ul style="list-style-type: none"> <li>○ For denture base,</li> <li>○ For inlay, onlay crown and bridge</li> </ul> </li> </ul>	Lecture Tutorial	Practical Demonstration & visit to Dental Prosthetic Lab.	OHP, & multimedia	L-7 hrs T-5 hrs	Written Viva Practical
16. Dental Implants	<ul style="list-style-type: none"> <li>• Evaluation,,Implant types&amp; Materials used</li> </ul>	Lecture Tutorial	Practical Demonstration	Laptop & multimedia projector	L-2 hrs T-2 hrs	Written Viva Practical
17. Materials for Preventive Dentistry.	<ul style="list-style-type: none"> <li>• Types and Application.</li> </ul>	Lecture Tutorial	Practical Demonstration		L-2 hrs T-2 hrs	Written Viva Practical

## Subject : Science of Dental Materials

Contents	Learning Objectives	Class-Room	Practical/ Visit	Aids	Expected hours/days	Assessment
LAB/Practical Skill	<ul style="list-style-type: none"> <li>• Identification of different dental materials</li> </ul>		Practical in Lab.		4 hrs	
1.Physical properties & Chemical Properties of Dental materials.	<ul style="list-style-type: none"> <li>• Taking impression with Compound impression materials &amp; Alginate on tooth model or Phantom head or mouth.</li> <li>• Manipulation of various impression materials &amp; taking impression on acrylic Edentulos &amp; dentulous models for making the cast with model materials.</li> </ul>					
2. Impression Materials			Practical in lab.		7 hrs	
3. Gypsum Product.	<ul style="list-style-type: none"> <li>• Manipulation of ordinary plasters and hard plaster.</li> </ul>		Practical.		4 hrs	

## Subject : Science of Dental Materials

Contents	Learning Objectives	Class-Room	Practical/ Visit	Aids	Expected hours/days	Assessment
4. Separating medium	<ul style="list-style-type: none"> <li>• Identification and application of separating media on plaster models</li> </ul>		Practical		4 hrs	
5. Dental waxes	<ul style="list-style-type: none"> <li>• Identification and manipulation of different dental waxes.</li> <li>• Making pattern for model of edentulous arch (both upper and lower).</li> <li>• Making special tray by base plate wax (both upper and lower).</li> </ul>		Practical		7 hrs	
6. Dental Porcelain	<ul style="list-style-type: none"> <li>• Identification, demonstration manipulation, and baking.</li> <li>• Comparison between acrylic and porcelain.</li> </ul>		Practical		10 hrs	
7. Restorative materials a) Dental Amalgam b) Dental Cement c) Denture base Materials	<ul style="list-style-type: none"> <li>• Identification, Manipulation and application on acrylic model.</li> <li>• Identification, Manipulation and application</li> <li>• Same as above</li> <li>• Identification and manipulation of heat cure and self cure acrylic resin</li> </ul>		Practical  Practical		14 hrs	



## Subject : Science of Dental Materials

Contents	Learning Objectives	Class-Room	Practical/ Visit	Aids	Expected hours/days	Assessment
8. Abrasive and polishing materials	<ul style="list-style-type: none"> <li>• Identification of different abrasive and polishing materials.</li> </ul>		Practical visit to prosthodontic dept.		3 hrs	
9. Dental Investments materials	<ul style="list-style-type: none"> <li>• Identification, demonstration and manipulation.</li> </ul>		Practical visit to prosthodontic dept.		6 hrs	
10. Dental casting	<ul style="list-style-type: none"> <li>• Demonstration and identification of the different parts of casting machine.</li> </ul>		Practical visit to prosthodontic dept.		6 hrs	
11. Dental Implants	<ul style="list-style-type: none"> <li>• Identification types and demonstration on model.</li> </ul>		Practical visit to prosthodontic dept. Oral surgery dept.		3 hrs	

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
1. Basic concept of Pharmacology	Students will be able to- <ol style="list-style-type: none"> <li>1. Define Pharmacology, branches of pharmacology, Drug, doses , therapeutic index &amp; ,mention the sources of drugs.</li> <li>2. State the routes of drug administration.</li> <li>3. Describe absorption of drugs-definition, processes and factors modifying drug absorption.</li> <li>4. Describe distribution of drugs-definition, bioavailability, plasma protein binding.</li> <li>5. State the process of biotransformation.</li> <li>6. State the processes &amp; routes of drug elimination.</li> <li>7. State the mechanism of drug action &amp; Dose-response relationship.</li> <li>8. State the Drug interaction , Drug combination &amp; Drug antagonism</li> <li>9. State &amp; identify adverse drug reaction</li> <li>10. Write prescription &amp; mention legal, ethical &amp; economic aspects.</li>   <li>11. Identify the preparation of various formulation</li> </ol>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Lecture</li> <li><input type="checkbox"/> Tutorial</li> <li><input type="checkbox"/> Discuss on</li> <li><input type="checkbox"/> Question-answering session</li> <li><input type="checkbox"/> Self study</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Practical in the lab.</li> <li><input type="checkbox"/> Practical in the lab.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> White board</li> <li><input type="checkbox"/> Pen</li> <li><input type="checkbox"/> OHP</li> <li><input type="checkbox"/> Transparency Paper</li> <li><input type="checkbox"/> Marker</li> <li><input type="checkbox"/> Chart</li> <li><input type="checkbox"/> Hand out</li> <li><input type="checkbox"/> Books</li> <li><input type="checkbox"/> Duster</li> <li><input type="checkbox"/> Item card</li>   <li><input type="checkbox"/> example of different prescriptions</li> <li><input type="checkbox"/> Sample of various formulations</li> </ul>	L. 10 hours T. 10 hours                       P. 10 hours	Formative-item examination Summative-Assessment examination in the form of written oral & practical OSPE

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
2. Drug acting on autonomic nervous system	Students will be able to:- <ol style="list-style-type: none"> <li>1. Define neurotransmitter, neurotransmission, criteria of neurotransmitter &amp; classify autonomic receptor.</li> <li>2. Describe cholinergic drugs- classification, pharmacokinetic &amp; pharmacodynamic, indication, contraindication &amp; adverse drug reaction.</li> <li>3. Describe Anticholinergic drugs- classification, pharmacokinetic &amp; pharmacodynamic, indication, contraindication &amp; adverse drug reaction.</li> <li>4. Describe adrenergic drugs-classification, pharmacokinetic, pharmacodynamic, indication, contraindication &amp; adverse drug reaction.</li> <li>5. List the alpha and beta blockers and their indication, contraindication and side effects.</li> <li>6. Mention the drug used in the treatment of bronchial asthma &amp; glaucoma.</li> <li>7. Interpret &amp; comments of dose-response and drug antagonism curve.</li> <li>8. Demonstrate understanding the processes of sterilization.</li> </ol>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Lecture</li> <li><input type="checkbox"/> Tutorial</li> <li><input type="checkbox"/> Discussion</li> <li><input type="checkbox"/> Self-study</li> <li><input type="checkbox"/> Question-answering session</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Practical in the lab.</li> <li><input type="checkbox"/> Practical in the lab.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> White board</li> <li><input type="checkbox"/> Pen</li> <li><input type="checkbox"/> OHP</li> <li><input type="checkbox"/> Transparency Paper</li> <li><input type="checkbox"/> Marker</li> <li><input type="checkbox"/> Chart</li> <li><input type="checkbox"/> Hand out</li> <li><input type="checkbox"/> Books</li> <li><input type="checkbox"/> Duster</li> <li><input type="checkbox"/> Item card</li> <li><input type="checkbox"/> Chemicals</li> <li><input type="checkbox"/> Equipments</li> </ul>	L-8 hours T-5 hours            P. 10 hours	Formative-item examination summative-Assessment examination in the from of written, oral & practical, OSPE

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
3. Autacoids	Students will be able to:- 1. States the role of histamine in health & disease. 2. Classify anti-histamine and mention their pharmacological effects, indication, contraindication and Toxicity.	<input type="checkbox"/> Lecture <input type="checkbox"/> Tutorial <input type="checkbox"/> Discussion <input type="checkbox"/> Self-study  <input type="checkbox"/> Question-answering session		<input type="checkbox"/> White board <input type="checkbox"/> Pen <input type="checkbox"/> OHP <input type="checkbox"/> Transparency Paper <input type="checkbox"/> Marker <input type="checkbox"/> Chart <input type="checkbox"/> Hand out <input type="checkbox"/> Books <input type="checkbox"/> Duster <input type="checkbox"/> Item card	L. 2 hours	Formative-item examination summative-Assessment examination in the form of written, oral & practical

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
4. Drugs acting on central nervous system.	<p>Students will be able to:-</p> <ol style="list-style-type: none"> <li>1. Define &amp; classify sedatives &amp; Hypnotic and its mechanism, indication, contraindication &amp; toxicity.</li> <li>2. Define &amp; classify analgesic and state their pharmacological effects, indication, contraindication and Toxicity.</li> <li>3. Define &amp; classify general &amp; local anaesthetic and mention their mechanism of action, indication, contraindication and Toxicity.</li> <li>4. Mention the objectives of general anesthesia and pre-anaesthetic medications.</li> <li>5. Mention the anticonvulsant &amp; anxiolytic drugs.</li> </ol>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Lecture</li> <li><input type="checkbox"/> Tutorial</li> <li><input type="checkbox"/> Discussion</li> <li><input type="checkbox"/> Self-study</li> <li><input type="checkbox"/> Question-answering session</li> </ul>		<ul style="list-style-type: none"> <li><input type="checkbox"/> White board</li> <li><input type="checkbox"/> Pen</li> <li><input type="checkbox"/> Books</li> <li><input type="checkbox"/> OHP</li> <li><input type="checkbox"/> Transparency Paper</li> <li><input type="checkbox"/> Marker</li> <li><input type="checkbox"/> Handout</li> <li><input type="checkbox"/> item card</li> </ul>	L.10 hours T.10 hours	Formative - item examination summative - Assessment examination in the form of written, oral & practical

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
6. Drugs acting on cardiovascular and renal system.	<p>Students will be able to:-</p> <ol style="list-style-type: none"> <li>1. Classify antihypertensive drugs and mention their mechanism and Toxicity.</li> <li>2. State the management of hypertension.</li> <li>3. List the antianginal drugs and mention their mechanism, beneficial effects on angina Pectories.</li> <li>4. List the antiarrhythmic drugs and mention their mechanism</li> <li>5. Mention the drug therapy for ischemic heart disease &amp; heart failure and their mechanism, Toxicity.</li> <li>6. List anticoagulants &amp; antiplatelets and Mention their mechanism, indication, contraindication &amp; Toxicity.</li> <li>7. Classify diuretics and mention their mechanism, indication, contraindication &amp; Toxicity.</li> </ol>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Lecture</li> <li><input type="checkbox"/> Tutorial</li> <li><input type="checkbox"/> Discussion</li> <li><input type="checkbox"/> Self-study</li> <li><input type="checkbox"/> Question-answering session</li> </ul>		<ul style="list-style-type: none"> <li><input type="checkbox"/> White board</li> <li><input type="checkbox"/> Pen</li> <li><input type="checkbox"/> Books</li> <li><input type="checkbox"/> OHP</li> <li><input type="checkbox"/> Transparency Paper</li> <li><input type="checkbox"/> Marker</li> <li><input type="checkbox"/> Handout</li> <li><input type="checkbox"/> item card</li> </ul>	L. 8 hours T-5 hours	Formative-item examination summative-Assessment examination in the from of written, oral & practical

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
7. Drug acting on haemopoietic system.	Students will be able to:- 1. Classify iron preparation and mention their uses, sources, kinetic properties. 2. Classify vitamins and mention the mechanism, sources and indication of folic acid and vitamin B <sub>12</sub> .	<input type="checkbox"/> Lecture <input type="checkbox"/> Tutorial <input type="checkbox"/> Discussion <input type="checkbox"/> Self-study <input type="checkbox"/> Question answering session		<input type="checkbox"/> White board <input type="checkbox"/> Pen <input type="checkbox"/> OHP <input type="checkbox"/> Transparency Paper <input type="checkbox"/> Marker <input type="checkbox"/> Chart <input type="checkbox"/> Hand out <input type="checkbox"/> Books <input type="checkbox"/> Duster <input type="checkbox"/> Item card	L.2 hours	Formative-item examination summative-Assessment examination in the from of written, oral
8. Drugs acting on Gastro intestinal tract	Students will be able to:- 1. Mention the Treatment of peptic ulcer. 2. Mention the management of diarrhea and constipation.	<input type="checkbox"/> Lecture <input type="checkbox"/> Tutorial <input type="checkbox"/> Discussion <input type="checkbox"/> Self-study <input type="checkbox"/> Question-answering session		<input type="checkbox"/> White board <input type="checkbox"/> Pen <input type="checkbox"/> OHP <input type="checkbox"/> Transparency Paper <input type="checkbox"/> Marker <input type="checkbox"/> Chart <input type="checkbox"/> Hand out <input type="checkbox"/> Books <input type="checkbox"/> Duster <input type="checkbox"/> Item card	L.2 hours	Formative-item examination summative-Assessment examination in the from of written, oral

Contents	Learning Objectives	Training/Learning experiences			Expected hours/ days	Assessment
		Class-room	Practical/visit	Aids		
8. Endocrine pharmacology	Students will be able to:- 1. Classify anti-diabetic drugs and mention their mechanism, indication, contraindication and Toxicity 2. List the steroids and mention their mechanism, kinetics, indication, contraindication and Toxicity.	<input type="checkbox"/> Lecture <input type="checkbox"/> Tutorial <input type="checkbox"/> Discussion <input type="checkbox"/> Self-study <input type="checkbox"/> Question - answering session		<input type="checkbox"/> White board <input type="checkbox"/> Pen <input type="checkbox"/> OHP <input type="checkbox"/> Transparency Paper <input type="checkbox"/> Marker <input type="checkbox"/> Chart <input type="checkbox"/> Hand out <input type="checkbox"/> Books <input type="checkbox"/> Duster <input type="checkbox"/> Item card	L.3 hours	Formative - item examination summative-Assessment examination in the form of written, oral
9. Antimicrobial agents	Students will be able to:- 1. List the anti-microbial drugs and mention their mechanism & resistance. 2. Mention the general principles of use of anti-microbial drugs. 3. Classify penicillin & cephalosporins and mention their indication, contraindication & Toxicity 4. List aminoglycosides and state their common properties, indication, contraindication & Toxicity. 5. Define co-trimoxazole and mention its mechanism of action, indication, contraindication and Toxicity. 6. List Tetra cyclin & mention the indication, contraindication and Toxicity of chloramphenicol and tetracycline.	<input type="checkbox"/> Lecture <input type="checkbox"/> Tutorial <input type="checkbox"/> Discussion <input type="checkbox"/> Self-study <input type="checkbox"/> Question- answering session		<input type="checkbox"/> White board <input type="checkbox"/> Pen <input type="checkbox"/> OHP <input type="checkbox"/> Transparency Paper <input type="checkbox"/> Marker <input type="checkbox"/> Chart <input type="checkbox"/> Hand out <input type="checkbox"/> Books <input type="checkbox"/> Duster <input type="checkbox"/> Item card	L.13 hours T.10 hours	Formative-item examination summative-Assessment examination in the form of written, oral



Contents	Learning Objectives	Training/Learning experiences			Expected hours/ days	Assessment
		Class-room	Practical/visit	Aids		
	7. List Macrolides & Quinolones and mention their indication , contraindication & Toxicity. 8. List the anti-tubercular drugs and mention their toxicity and management of Tuberculosis. 9. List the antimalarial drugs and mention their toxicity and management of malaria 10. List the antiamoebic drugs and mention their toxicity and management of amoebiasis. 11. List the anthelmintic and antifungal drugs and mention their toxicity and management of helminthiasis & fungal infection.	<input type="checkbox"/> Lecture <input type="checkbox"/> Tutorial <input type="checkbox"/> Discussion <input type="checkbox"/> Self-study <input type="checkbox"/> Question-answering session		<input type="checkbox"/> White board <input type="checkbox"/> Pen <input type="checkbox"/> OHP <input type="checkbox"/> Transparency Paper <input type="checkbox"/> Marker <input type="checkbox"/> Chart <input type="checkbox"/> Hand out <input type="checkbox"/> Books <input type="checkbox"/> Duster <input type="checkbox"/> Item card		Formative-item examination summative-Assessment examination in the form of written, oral

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
9. Essential drug concept & rational drug use.	Students will be able to:- 1. State essential drug and mention the criteria of rational use of drugs. 2. Mention the guide line of a rational prescription.  3. Analysis of Prescription in context of rational use of drug and write prescriptions on different diseases. 4. Preparation of oral re-hydration salt and potassium per manganate solution. 5. Preparation of normal saline	<input type="checkbox"/> Lecture <input type="checkbox"/> Tutorial <input type="checkbox"/> Discussion <input type="checkbox"/> Self-study <input type="checkbox"/> Question-answering session		<input type="checkbox"/> White board <input type="checkbox"/> Pen <input type="checkbox"/> OHP <input type="checkbox"/> Transparency Paper <input type="checkbox"/> Marker <input type="checkbox"/> Chart <input type="checkbox"/> Hand out <input type="checkbox"/> Books <input type="checkbox"/> Duster <input type="checkbox"/> Item card	L- 2 hours	Formative-item examination summative-Assessment examination in the form of written, oral & OSPE
			<input type="checkbox"/> Practical in the lab.  <input type="checkbox"/> Practical in the lab.  <input type="checkbox"/> Practical in the lab.	<input type="checkbox"/> Photocopy of prescriptions  <input type="checkbox"/> Chemicals  <input type="checkbox"/> Equipment	P-10 hours	

# Subject : Dental Pharmacology

Lectures-50 hours, Tutorial & Practical (25+25) 50 hours

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
1. Introductions to dental pharmacology	Students will be able to : 1. Define dental pharmacology, drugs, doses, therapeutic index, sources of drugs. 2. Identify different dental drugs used in dentistry. 3. State dosages and administration of different dental drugs used in dentistry.	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Tutorial</li> <li>▪ Self-study</li> <li>▪ Discussion</li> <li>▪ Question-answering session</li> </ul>		<ul style="list-style-type: none"> <li>▪ Text books</li> <li>▪ OHP</li> <li>▪ White board</li> <li>▪ pen</li> <li>▪ Transparency</li> <li>▪ Marker</li> </ul>	Lecture 2 hours Tutorial 2 hours	<ul style="list-style-type: none"> <li>▪ Formative-Item examination</li> <li>▪ Assessment examination in the form of Written, Oral &amp; practical OSPE</li> </ul>
2. Local Anaesthetics	Students will be able to : 1. Define local anesthesia 2. Classify local anesthetic 3. Describe uses and mode of action of local anesthetic 4. State the routes of administration of local anesthetic 5. Describe indication, contraindication, complication and management of complication of local anesthetics. 6. Describe adverse effects, advantage and disadvantages of local anesthesia. 7. State preparation & composition of L.A. 8. Describe causes of failure to obtain L.A. & how to overcome the failure. 9. State pharmacology of individual L.A. drug.	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Tutorial</li> <li>▪ Self-study</li> <li>▪ Discussion</li> <li>▪ Question-answering session</li> </ul>	<ul style="list-style-type: none"> <li>▪ Practical in the lab</li> </ul>	<ul style="list-style-type: none"> <li>▪ Text books</li> <li>▪ White board</li> <li>▪ OHP</li> <li>▪ Sample of local anesthetics</li> <li>▪ Transparency</li> </ul>	Lecture 8 hours Tutorial 4 hours Practical 2 hours	<ul style="list-style-type: none"> <li>▪ Formative-Item examination</li> <li>▪ Assessment examination in the form of Written, Oral &amp; practical OSPE</li> </ul>

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
3. Sterilization & disinfection of dental instruments.	Students will be able to : 1. Define sterilization 2. State the aims and objects of sterilization. 3. Classify sterilization. 4. Describe the different methods of sterilization. 5. Describe the procedure of disaffection of dental instruments.	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Tutorial</li> <li>▪ Self-study</li> <li>▪ Discussion</li> <li>▪ Question answering session</li> </ul>		<ul style="list-style-type: none"> <li>▪ Text books</li> <li>▪ OHP</li> <li>▪ White board pen</li> <li>▪ Transparency</li> <li>▪ Marker</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lecture 7 hours</li> <li>▪ Tutorial 4 hours</li> </ul>	<ul style="list-style-type: none"> <li>▪ Formative item</li> <li>▪ Assessment examination in the form of Written, Oral &amp; practical</li> </ul>
4. Antiseptic and disinfectants .	Students will be able to : 1. Define antiseptics & Disinfectants 2. Classify anti-septic and disinfectants 3. Adverse effect of antiseptics & disinfectants. 4. State difference between antiseptic & disinfection. 5. Describe ideal properties of antiseptic & disinfectant. 6. Uses of antiseptics and disinfectants	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Tutorial</li> <li>▪ Self-study</li> <li>▪ Discussion</li> <li>▪ Question answering session</li> </ul>	<ul style="list-style-type: none"> <li>▪ Practical in the lab</li> </ul>	<ul style="list-style-type: none"> <li>▪ Text books</li> <li>▪ OHP</li> <li>▪ White board pen</li> <li>▪ Transparency</li> <li>▪ Marker</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lecture 4 hours</li> <li>▪ Tutorial 2 hours</li> <li>▪ Practical 2 hours</li> </ul>	<ul style="list-style-type: none"> <li>▪ Formative item</li> <li>▪ Assessment examination in the form of Written, Oral &amp; practical</li> </ul>
5. Mummifying agents	Students will be able to: 1. Define mummifying agents 2. Classify mummifying agents 3. State the procedure of mummification 4. Describe its uses and adverse effects of mummifying agents 5. Perform mummification	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Tutorial</li> <li>▪ Self-study</li> <li>▪ Discussion</li> <li>▪ Question answering session</li> </ul>	<ul style="list-style-type: none"> <li>▪ Practical in the lab</li> </ul>	<ul style="list-style-type: none"> <li>▪ Text books</li> <li>▪ OHP</li> <li>▪ White board pen</li> <li>▪ Transparency</li> <li>▪ Marker</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lecture 2 hours</li> <li>▪ Practical 4 hours</li> <li>▪ T-5 hour</li> </ul>	<ul style="list-style-type: none"> <li>▪ Formative item</li> <li>▪ Assessment examination in the form of Written, Oral &amp; practical</li> </ul>
				<ul style="list-style-type: none"> <li>▪ Text books</li> </ul>		

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
6. Obtundents	Students will be able to: 1. Define obtundents 2. Classify obtundents 3. Describe its uses and adverse effects of obtundents 4. State Mechanism of achieve action of obtundents.	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Tutorial</li> <li>▪ Self-study</li> <li>▪ Discussion</li> <li>▪ Question answering session</li> </ul>		<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ White board pen</li> <li>▪ Transparency</li> <li>▪ Marker</li> <li>▪ Text books</li> <li>▪ OHP</li> <li>▪ White board</li> <li>▪ pen</li> <li>▪ Transparency</li> <li>▪ Marker</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lecture 2 hours</li> <li>▪ T-1hour</li> </ul>	<ul style="list-style-type: none"> <li>▪ Formative item</li> <li>▪ Assessment examination in the form of Written, Oral &amp; practical</li> </ul>
7. Root canal therapy (RCT)	Students will be able to: 1. Define RCT 2. State the concept of RCT 3. List the materials used in RCT 4. State the ideal properties and objects of RCT 5. Describe the procedure of RCT 6. Perform RCT.	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Tutorial</li> <li>▪ Self-study</li> <li>▪ Discussion</li> <li>▪ Question answering session</li> </ul>	<ul style="list-style-type: none"> <li>▪ Practical in the clinic</li> </ul>		<ul style="list-style-type: none"> <li>▪ Lecture 3 hours</li> <li>▪ Practical 3 hours</li> <li>▪ T-1hour</li> </ul>	<ul style="list-style-type: none"> <li>▪ Formative item</li> <li>▪ Assessment examination in the form of Written, Oral &amp; practical</li> </ul>
8. Flouride component.	Students will be able to: 1. Define flouride component 2. Describe uses of flouride component 3. State adverse reaction of flouride 4. Describe the mechanism of action of flouride 5. Perform flouride application	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Tutorial</li> <li>▪ Self-study</li> <li>▪ Discussion</li> <li>▪ Question answering session</li> </ul>	<ul style="list-style-type: none"> <li>▪ Practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ Text books</li> <li>▪ OHP</li> <li>▪ White board</li> <li>▪ pen</li> <li>▪ Transparency</li> <li>▪ Marker</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lecture 4 hours</li> <li>▪ Practical 2 hours</li> <li>▪ T-1hour</li> </ul>	<ul style="list-style-type: none"> <li>▪ Formative item</li> <li>▪ Assessment examination in the form of Written, Oral &amp; practical</li> </ul>

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
9. Astringent & Styptics	Students will be able to: 1. Define astringent 2. State Ideal properties of astringent & styptics 3. Mention their uses & mode of action 4. Mention the dose & administration of Astringent & styptics 5. Describe the side effect of Astringent	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Tutorial</li> <li>▪ Self-study</li> <li>▪ Discussion</li> <li>▪ Question-answering session</li> </ul>	<ul style="list-style-type: none"> <li>▪ Practical in the clinic</li> </ul>	<ul style="list-style-type: none"> <li>▪ Text books</li> <li>▪ OHP</li> <li>▪ White board</li> <li>▪ pen</li> <li>▪ Transparency</li> <li>▪ Marker</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lecture 2 hours</li> <li>▪ Practical 2 hours</li> <li>▪ T-1 hour</li> </ul>	<ul style="list-style-type: none"> <li>▪ Formative item</li> <li>▪ Assessment examination in the form of Written, Oral &amp; practical</li> </ul>
10. Sialogogue & Antisialagogue	Students will be able to: 1. Define sialogogue and antisialagogue 2. Classify sialogogue and antisialagogue 3. State Uses of sialogogue and antisialagogue. 4. Describe Toxic-effects of sialogogue and antisialagogue.	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Tutorial</li> <li>▪ Self-study</li> <li>▪ Discussion</li> <li>▪ Question-answering session</li> </ul>	<ul style="list-style-type: none"> <li>▪ Practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ Text books</li> <li>▪ OHP</li> <li>▪ White board pen</li> <li>▪ Transparency</li> <li>▪ Marker</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lecture 2 hours</li> </ul>	<ul style="list-style-type: none"> <li>▪ Formative item</li> <li>▪ Assessment examination in the form of Written, Oral</li> </ul>
11. Mouth wash & Dentifrices	Students will be able to: 1. Define Mouth wash & Dentifrices 2. State the ideal properties of Mouth wash & Dentifrices 3. State the ideal Composition of Mouth wash & Dentifrices 4. Classify Mouth wash & Dentifrices 5. State the uses and the side effects of Mouth wash & Dentifrices 6. Identify mouth wash	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Tutorial</li> <li>▪ Self-study</li> <li>▪ Discussion</li> <li>▪ Question answering session</li> </ul>		<ul style="list-style-type: none"> <li>▪ Text books</li> <li>▪ OHP</li> <li>▪ White board pen</li> <li>▪ Transparency</li> <li>▪ Marker</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lecture 2 hours</li> <li>▪ Practical 2 hours</li> <li>▪ T-1 hour</li> </ul>	<ul style="list-style-type: none"> <li>▪ Formative item</li> <li>▪ Assessment examination in the form of Written, Oral &amp; practical</li> </ul>

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
12. Anti-caries & anti-plaque agents	Students will be able to: 1. Define Anti-caries & anti-plaque agents 2. Describe the mechanism of actions of Anti-caries & anti-plaque agents 3. State the methods of application of Anti-caries & anti-plaque agents 4. Describe the uses & adverse effects of Anti-caries & anti-plaque agents 5. Perform application of Ant-caries & ant-plaque agents.	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Tutorial</li> <li>▪ Self-study</li> <li>▪ Discussion</li> <li>▪ Question answering session</li> </ul>	<ul style="list-style-type: none"> <li>▪ Practical in the clinic</li> </ul>	<ul style="list-style-type: none"> <li>▪ Text books</li> <li>▪ OHP</li> <li>▪ White board pen</li> <li>▪ Transparency</li> <li>▪ Marker</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lecture 4 hours</li> <li>▪ Practical 3 hours</li> <li>▪ T-1hour</li> </ul>	<ul style="list-style-type: none"> <li>▪ Formative item</li> <li>▪ Assessment examination in the form of Written, Oral &amp; practical</li> </ul>
13. Haemostatic agents & Haemostasis	Students will be able to: 1. Define Haemostatic agents 2. Describe the mechanism of actions of Haemostatic agents 3. State the methods of application of Haemostatic agents 4. Describe the uses and adverse effects of Haemostatic agents 5. Perform application of Haemostatic agent	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Tutorial</li> <li>▪ Self-study</li> <li>▪ Discussion</li> <li>▪ Question answering session</li> </ul>	<ul style="list-style-type: none"> <li>▪ Practical in the clinic</li> </ul>	<ul style="list-style-type: none"> <li>▪ Text books</li> <li>▪ OHP</li> <li>▪ White board pen</li> <li>▪ Transparency</li> <li>▪ Marker</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lecture 2 hours</li> <li>▪ Practical 3hours</li> <li>▪ Tutorial 1 hours</li> </ul>	<ul style="list-style-type: none"> <li>▪ Formative item</li> <li>▪ Assessment examination in the form of Written, Oral &amp; practical</li> </ul>
14. Vitamins	Students will be able to: 1. Define Vitamins & classify Vitamins 2. Describe the source, deficiency syndrome, prophylactic uses Vitamins 3. State the daily requirements of Vitamins	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Tutorial</li> <li>▪ Self-study</li> <li>▪ Discussion</li> <li>▪ Question answering session</li> </ul>			<ul style="list-style-type: none"> <li>▪ Lecture 4 hours</li> </ul>	<ul style="list-style-type: none"> <li>▪ Formative item</li> <li>▪ Assessment examination in the form of Written, Oral</li> </ul>

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
15. Silver Compound .	Students will be able to:- 1. Describe classification 2. State uses of silver compound. 3. Mention mechanism action 4. State adverse effects & management composition of silver compound. 5. Perform the application of silver compound	<input type="checkbox"/> Lecture <input type="checkbox"/> Tutorial	<input type="checkbox"/> Practical	<input type="checkbox"/> Text Book <input type="checkbox"/> OHP <input type="checkbox"/> Transparency	<input type="checkbox"/> Lecture 1 hour <input type="checkbox"/> Tutorial 1hour <input type="checkbox"/> Practical 2hour	<input type="checkbox"/> Written & Oral



# Subject : Pathology with Microbiology

## A-General Pathology

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
1. Cell injury	Student will be able to : 1. State the causes of diseases & Pathology 2. State the causes of cell injury, types with examples. 3. State Reversible and irreversible cell injury, Necrosis – types and morphology. Apoptosis, Fate, pathogenic calcification 4. Identify gross specimen & microscopic examples of necrosis.	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Tutorial</li> <li>▪ Item exam</li> <li>▪ Practical</li> <li>▪ Self study</li> </ul>	<ul style="list-style-type: none"> <li>▪ Practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ White board</li> <li>▪ pen</li> <li>▪ OHP</li> <li>▪ Slide projector</li> <li>▪ Transparency</li> <li>▪ Marker</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lecture 40 hrs</li> <li>▪ Practical &amp; Tutorial 40 hrs</li> <li>▪ Small group disc. 80 hrs</li> </ul>	<ul style="list-style-type: none"> <li>▪ Formative item examine</li> <li>▪ Summative assessment – write, oral, practical</li> <li>▪ Formative item examine</li> <li>▪ Assignments exposure &amp; case report of 5 case of Inflammation lesion of oral cavity</li> </ul>
2. Inflammation	Student will be able to : 1. Define acute and chronic inflammation-granulomatous inflammations. 2. State basic tissue changes in inflammation, acute and chronic. Utilites & drawback of inflammatory responses. 3. Mention morphological types of inflammation, chemical mediators & cells, compliment system. 4. State fate of different types of inflammation 5. State common inflammatory lesions of oral cavity. 6. Identify acute, chronic and granulomatous inflammatiom.	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Tutorial</li> <li>▪ Item exam</li> <li>▪ Practical</li> <li>▪ Self study</li> </ul>	<ul style="list-style-type: none"> <li>▪ Practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ Handout</li> <li>▪ Duster</li> <li>▪ Item card</li> <li>▪ Specimen</li> <li>▪ Slide</li> <li>▪ Microscope</li> </ul>	<ul style="list-style-type: none"> <li>▪ OSPE</li> </ul>	<ul style="list-style-type: none"> <li>▪ Summative assessment – write, oral, practical</li> </ul>

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
3. Wound healing	<p>Student will be able to :</p> <ol style="list-style-type: none"> <li>1. Define primary and secondary wound healing</li> <li>2. State stages of wound healing, Factors influencing wound healing, complication, and demonstrate understanding healing after dental surgery (tooth extraction)</li> </ol> <ul style="list-style-type: none"> <li>▪ To identify granulation issue under microscope.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Tutorial</li> <li>▪ Item exam</li> <li>▪ Practical</li> <li>▪ Self study</li> </ul> <ul style="list-style-type: none"> <li>▪ Practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ Practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ White board</li> <li>▪ pen</li> <li>▪ HOP</li> <li>▪ Slide projector</li> <li>▪ Transparency</li> <li>▪ Marker</li> </ul>		<ul style="list-style-type: none"> <li>▪ Formative item examine</li> <li>▪ Assignments exposure &amp; case report of 3 case of wound healing</li> <li>▪ Summative assessment – write, oral, practical</li> </ul>
3. Haemodynamic changes	<p>Student will be able to :</p> <ol style="list-style-type: none"> <li>1. Define oedema and state principals &amp; types of oedema, localized &amp; generalized .</li> <li>2. Define thrombosis &amp; embolism., Mention their formations &amp; fate.</li> <li>3. Define shock &amp; state clinical stages, principle of management of shock.</li> <li>4. Mention body's response to acute haemorrhage.</li> </ol>	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Tutorial</li> <li>▪ Item exam</li> <li>▪ Practical</li> <li>▪ Self study</li> </ul>	<ul style="list-style-type: none"> <li>▪ Practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ Handout</li> <li>▪ Duster</li> <li>▪ Item card</li> <li>▪ Specimen</li> <li>▪ Slide</li> <li>▪ Microscope</li> <li>▪ Glass slide</li> </ul>		<ul style="list-style-type: none"> <li>▪ Formative item examine</li> <li>▪ Summative assessment – write, oral, practical</li> </ul>
5. Genetics	<p>Student will be able to :</p> <ol style="list-style-type: none"> <li>1. Define common terms used in medical genetics – examples, Cytogenetic disorders, single gene disorders, molecular basis disorders.</li> <li>2. Pathogenesis of commonly encountered genetic diseases of oral cavity.</li> </ol>					

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
6. Adaptive changes	<p>Student will be able to :</p> <ol style="list-style-type: none"> <li>1. Define atrophy, hyperplasia, hypertrophy, metaplasia-with examples.</li> <li>2. Identify gross and microscopic example of adaptive changes.</li> </ol>	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Tutorial</li> <li>▪ Item exam</li> <li>▪ Practical</li> <li>▪ Self study</li> </ul>	<ul style="list-style-type: none"> <li>▪ Practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ Microscope</li> <li>▪ Specimen Slides</li> </ul>		<ul style="list-style-type: none"> <li>▪ Formative item examine</li> <li>▪ Summative assessment – write, oral, practical</li> </ul>
7. Neoplasia (tumour)	<p>Student will be able to :</p> <ol style="list-style-type: none"> <li>1. Define Neoplasia, features of benign &amp; Malignant neoplasia, Biological behavior of Neoplasia, anaplasia, invasion, metastasis, para neoplastic syndrome. Common tumours &amp; tumour like lesions of the oral cavity.</li> <li>2. State different diagnostic procedure of tumour.</li> <li>3. State principles of tissue preservation and procedure of sending a biopsy and cytology specimen to the laboratory .</li> <li>5. Differentiate between benign &amp; maliagnant tumours grossly &amp; Microscopically</li> </ol>	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Tutorial</li> <li>▪ Item exam</li> <li>▪ Practical</li> <li>▪ Self study</li> </ul>	<ul style="list-style-type: none"> <li>▪ Practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ Microscope</li> <li>▪ Specimen Slides</li> <li>▪ Reagents</li> </ul>		<ul style="list-style-type: none"> <li>▪ Formative item examine</li> <li>▪ Assignments exposure &amp; case report of 5 case of Neoplatic lesion of oral cavity</li> <li>▪ Summative assessment – write, oral, practical</li> </ul>

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
8) Immune system	<p>Student will be able to :</p> <ol style="list-style-type: none"> <li>1. State components OF Immune system active &amp; passive immunity, concept of humoral &amp; cell mediated immunity.</li> <li>2. State the immunological disorder &amp; their basic mechanisms</li> </ol> <ul style="list-style-type: none"> <li>▪ Hypersensitivity reactions</li> <li>▪ Autoimmune disorders</li> <li>▪ Immuno deficiency disease</li> </ul> <ol style="list-style-type: none"> <li>3. State body's response to infections principal of immunization.</li> </ol>	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Tutorial</li> <li>▪ Item exam</li> <li>▪ Practical</li> <li>▪ Self study</li> </ul>		<ul style="list-style-type: none"> <li>▪ Microscope</li> <li>▪ Specimen Slides</li> </ul>		<ul style="list-style-type: none"> <li>▪ Formative item examine</li> <li>▪ Summative assessment – write, oral, practical</li> </ul>

B- Hematology

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
<b>B. Hematology (Disorder of blood)</b>	<p>Student will be able to :</p> <ol style="list-style-type: none"> <li>1. Define Anaemia, classification &amp; Aetiology of Anemia, Common anaemias, Thalassemia &amp; Haemoglobinopathies.</li> <li>2. State white blood cell disorders- Leucocytosis, Leucopenia, Leucoid Reaction.</li> <li>3. State Leukaemia-classification, clinical features of AML/ALL.</li> <li>4. State haemorrhagic disorders-classification, etiology, causes of gum bleeding, investigation procedures</li> <li>5. State principles &amp; indication of blood transfusion, transfusion reactions.</li> <li>6. Perform, interpret, &amp; be able to determine clinical significance of DC, Blood film, ESR platelet count.</li> </ol>	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Tutorial</li> <li>▪ Item exam</li> <li>▪ Practical</li> <li>▪ Self study</li> </ul> <ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Tutorial</li> <li>▪ Item exam</li> <li>▪ Practical</li> <li>▪ Self study</li> </ul>	<ul style="list-style-type: none"> <li>▪ Practical</li> </ul> <ul style="list-style-type: none"> <li>▪ Practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ Microscope</li> <li>▪ Specimen Slides</li> </ul> <ul style="list-style-type: none"> <li>▪ Handout</li> <li>▪ Duster</li> <li>▪ Item care</li> <li>▪ Specimen Slide</li> <li>▪ Microscope</li> <li>▪ Glam slide</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lecture 20 hrs</li> <li>▪ Practical 20 hrs</li> <li>▪ Tutorial &amp; Small group disc. 40 hrs</li> </ul>	<ul style="list-style-type: none"> <li>▪ Formative item examine</li> <li>▪ Assignments exposure &amp; case report of 3 case of Anaemia lesion of oral Leukaemia</li> <li>▪ Summative assessment – write, oral, practical</li> </ul>

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
<b>C. Clinical Pathology</b>	Student will be able to : 1. Define jaundice & state classification of jaundice, importance of jaundice in dentistry. 2. State diabetes mellitus, lab. Diagnosis, importance in dentistry 3. Perform and interpret urine examination-sugar & albumin, bleeding time & coagulation time.	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Tutorial</li> <li>▪ Item exam</li> <li>▪ Practical</li> <li>▪ Self study</li> </ul>	<ul style="list-style-type: none"> <li>▪ Practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ Handout</li> <li>▪ Duster</li> <li>▪ Item care</li> <li>▪ Specimen</li> <li>▪ Slide</li> <li>▪ Microscope</li> <li>▪ Glam slide</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lecture 10 hrs</li> <li>▪ Tutorial</li> <li>▪ Practical</li> <li>▪ Small group disc. 20 hrs</li> </ul>	<ul style="list-style-type: none"> <li>▪ Formative item examine</li> <li>▪ Assignments exposure &amp; case report of 1 case of Jaundice &amp; D.M</li> <li>▪ Summative assessment – write, oral, practical</li> <li>▪ SOPE</li> </ul>

## D. Microbiology

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
1. <b>Bacteriology</b>	Student will be able to : 1. Define & classify micro-organism- bacteria, virus, fungus. 2. State bacterial, anatomy, physiology, growth & death. 3. Define Sterilization & mention different methods, importance in dental practice. 4. State normal flora of oral cavity & important pathogenic bacteria & bacterial infection. 5. State gram positive & gram negative bacteria- Staphylococi, streptococci: pyogens & viridence, Pnuemococci, C. diphtheriae, Gonococci, Meningococci, Enterobacteriaecae With common diseases they produce. 6. State pathogenesis of dental caries. 7. State mycobacteria & actinomyces, Clostridia-pathogenesis of tetanus. 8. Classify Antimicrobial agents & state their mode of action. 9. State culture & sensitivity & its clinical importance. 10. Perform gram staining, identify gram Positive & gram Negative bacteria & study sensitivity test. Identify different culture media & common bacterial colonies	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Tutorial</li> <li>▪ Item exam</li> <li>▪ Practical</li> <li>▪ Self study</li> </ul>		<ul style="list-style-type: none"> <li>▪ Handout</li> <li>▪ Duster</li> <li>▪ Item care</li> <li>▪ Specimen</li> <li>▪ Slide</li> <li>▪ Microscope</li> <li>▪ Glam slide</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lecture 30 hrs</li> <li>▪ Tutorial &amp; Practical</li> <li>▪ Small group disc.- 60 hrs</li> </ul>	<ul style="list-style-type: none"> <li>▪ Formative item examine</li> <li>▪ Summative assessment – write, oral, practical</li> </ul>

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
2. Viruses	<p>Student will be able to :</p> <ol style="list-style-type: none"> <li>1. Define Viruses &amp; differentiate with bacteria and fungus .</li> <li>2. Classification of common viruses related to the dental practice.-examples Hepatitis viruses- B-viruses, Herpes simplex viruses, Human papilloma viruses, Human immuno deficiency viruses (AIDS)</li> </ol>	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Tutorial</li> <li>▪ Item exam</li> <li>▪ Practical</li> <li>▪ Self study</li> </ul>		<ul style="list-style-type: none"> <li>▪ Handout</li> <li>▪ Duster</li> <li>▪ Item care</li> <li>▪ Specimen</li> <li>▪ Slide</li> <li>▪ Microscope</li> <li>▪ Glam slide</li> </ul>		<ul style="list-style-type: none"> <li>▪ Formative item examine</li> <li>▪ Summative assessment – write, oral, practical</li> </ul>
3. Fungus	<p>Student will be able to :</p> <ol style="list-style-type: none"> <li>1. Define fungus, Common fungal diseases of oral cavity (oral thrush)</li> </ol>					
4. Parasitology	<p>Student will be able to :</p> <ol style="list-style-type: none"> <li>1. Classify parasites, name &amp; diseases caused by helminthes &amp; protozoa in Bangladesh</li> <li>2. Identify ova of AL, AD, TT &amp; cysts of EH &amp; Giardia.</li> </ol>					



## Subject : Dental Public Health

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
1.a) Prevention & control of periodontal disease b) Oral Health Promotion	Student should know the- i. classification ii. Diagnosis instruction & management. i. Importance of oral cleanliness ii. Prevention iii. Dental Health education	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	Practical Group discussion	<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ patient</li> <li>▪ Video</li> <li>▪ Film</li> <li>▪ Slide</li> </ul>	L= 4hr T= 2hr P= 2hr	<ul style="list-style-type: none"> <li>▪ Written examination</li> <li>▪ Viva</li> <li>▪ Practical</li> </ul>
2. Prevention of Dental trauma.	Student should be able to describe- i. Primary Protection (mouthguards), secondary protection ii. Describe, classify, objectives & measures	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	Practical Group discussion	<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ patient</li> <li>▪ Video</li> <li>▪ Film</li> <li>▪ Slide</li> </ul>	L= 2hrs T= 2hrs	<ul style="list-style-type: none"> <li>▪ Written examination</li> <li>▪ Viva</li> <li>▪ Practical</li> </ul>
3. Prevention in the aging dentition geriatric dental condition	Student should be able to - i. Identify the different dental condition prevailing the geriatric patient with prevention & management	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>		<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ patient</li> <li>▪ Video</li> <li>▪ Film</li> <li>▪ Slide</li> </ul>	L= 2hr T= 2hr	<ul style="list-style-type: none"> <li>▪ Written</li> <li>▪ Viva</li> </ul>
4. Prevention of dental handicap	i. Identify handicap conditions and different measures of management.	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>		<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ patient</li> <li>▪ Video</li> <li>▪ Film</li> <li>▪ Slide</li> </ul>	L= 2hr T= 2hr	<ul style="list-style-type: none"> <li>▪ Written</li> <li>▪ Viva</li> </ul>
5. Prevention of dental caries	Should know about the prevention by fluoride, immunology, vaccination, Diet & dental caries etc.	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ patient</li> <li>▪ Video</li> <li>▪ Film</li> <li>▪ Slide</li> </ul>	L= 8hr T= 4hr P= 4hr	Written Viva Practical
6. Prevention of malocclusion, Oral cancer & Potentially malignant lesions	Student should know identification of such cases with screening, prevalence, management take measures.  Factors responsible.	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>		<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ patient</li> <li>▪ Video</li> <li>▪ Film</li> <li>▪ Slide</li> </ul>	L= 6 hr T= 6 hr	Written Viva

## Sub: Dental Public Health

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
1. Bio statistics	Student should be able to- i. Define importance of bio-statistic & mean, median, mode, Normal distribution, standard deviation. ii. Selection of Data Definition appraisal of variability, co-relation & other test.	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>		<ul style="list-style-type: none"> <li>▪ OHP</li> </ul>	L= 12 hrs T= 12 hrs	<ul style="list-style-type: none"> <li>▪ Written examination</li> <li>▪ Viva</li> </ul>
2. Dental epidemiology, Survey procedure & research methodology.	Student should be able to learn the i) General principle, objective & in relation to dental caries, periodontal diseases and other common dental diseases. ii. Define & classify sample, sampling, Index with their Importance. iii. Describe the different types of research study & indices.	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ Patient</li> <li>▪ Video</li> <li>▪ Film</li> <li>▪ Slide</li> </ul>	L= 10 hrs T= 8 hrs	<ul style="list-style-type: none"> <li>▪ Written examination</li> <li>▪ Viva</li> </ul>
3. Dental manpower & ancillary personal.	Student should be able to- i. Define, classify, & utility & planing of different types of dental manpower.	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>		<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ Patient</li> <li>▪ Video</li> <li>▪ Film</li> <li>▪ Slide</li> </ul>	L= 6 hrs T-3 hrs	<ul style="list-style-type: none"> <li>▪ Written examination</li> <li>▪ Viva</li> </ul>
4. Primary Health Care	Student should be able to- i. Define Primary Health Care. List out the different principle & component describe about the AlamaAta conference	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>		<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ Patient</li> <li>▪ Video</li> <li>▪ Film</li> <li>▪ Slide</li> </ul>	L= 2hrs T-2 hrs	<ul style="list-style-type: none"> <li>▪ Written examination</li> <li>▪ Viva</li> </ul>

## Sub: Community Dentistry

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
5. School Health Education	Student should be able to- i. Describe class room Health Education.	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Filed visit</li> <li>▪ Practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ Patient</li> <li>▪ Video</li> <li>▪ Film</li> <li>▪ Slide</li> </ul>	L= 2 hrs T= 2 hrs whole day	<ul style="list-style-type: none"> <li>▪ Written examination</li> <li>▪ Viva</li> <li>▪ Practical</li> </ul>
6. Dental Health Education & emergency service for community.	Student should be able to- i. Provide Dental Health Education to community & provide emergency treatment.	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Filed visit</li> <li>▪ Practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ Patient</li> <li>▪ Video</li> <li>▪ Film</li> <li>▪ Slide</li> </ul>	L= 3 hrs T= 1 hrs Whole day	<ul style="list-style-type: none"> <li>▪ Written examination</li> <li>▪ Viva</li> <li>▪ Practical</li> </ul>
7. Planning & evaluation of dental services.	Student should be able to know about the health services, National, School, Industrial, Aram forces, Chronically ill and other special groups.	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>		<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ Patient</li> <li>▪ Video</li> <li>▪ Film</li> <li>▪ Slide</li> </ul>	L= 8 hrs T= 4 hrs	<ul style="list-style-type: none"> <li>▪ Written examination</li> <li>▪ Viva</li> </ul>
8. Computer application of dentistry.	Basic Principle, Application of computers in dental epidemiology & other aspects of dentistry.	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ Patient</li> <li>▪ Video</li> <li>▪ Film</li> <li>▪ Slide</li> </ul>	L= 1 hrs T= 1 hrs P= 10 hrs	<ul style="list-style-type: none"> <li>▪ Written</li> <li>▪ Practical</li> <li>▪ Practical</li> </ul>
9. Survey (Field work)	Student should be able to work i. As a team member to conduct survey.	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Filed visit</li> </ul>	<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ Patient</li> <li>▪ Video</li> <li>▪ Film</li> <li>▪ Slide</li> </ul>	<b>L= 1hrs</b> p= Whole Day	<ul style="list-style-type: none"> <li>▪ Written examination</li> <li>▪ Viva</li> <li>▪ Practical</li> </ul>

## Subject : Dental Jurisprudence

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
1. Importance of law & ethics in dentistry.	Student should be able to know- i) Definition ii) legal process iii) Civil Law iv) Criminal law	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ Patient</li> <li>▪ Video</li> <li>▪ Film</li> <li>▪ Slide</li> </ul>	<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ Patient</li> <li>▪ Video</li> <li>▪ Film</li> <li>▪ Slide</li> </ul>	L= 10 hrs T= 5 hrs	Written Viva
2. The acts and ordinance relating to Medical & Dental practice and drug regulation	Student should be able to- i. Describe this ordinances & regulations relating to medical & dental Practice	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ Patient</li> <li>▪ Video</li> <li>▪ Film</li> <li>▪ Slide</li> </ul>	<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ Patient</li> <li>▪ Video</li> <li>▪ Film</li> <li>▪ Slide</li> </ul>	L= 2 hrs T= 1 hrs	<ul style="list-style-type: none"> <li>▪ Written examination</li> <li>▪ Oral</li> </ul>
3. Legal rights & protection	Student should be able to- Describe legal right and protection	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ Patient</li> <li>▪ Video</li> <li>▪ Film</li> <li>▪ Slide</li> </ul>	<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ Patient</li> <li>▪ Video</li> <li>▪ Film</li> <li>▪ Slide</li> </ul>	L= 3 hrs T= 1 hrs	<ul style="list-style-type: none"> <li>▪ Written examination</li> <li>▪ Oral</li> </ul>
4. Dental record keeping &	Student should be able to- Describe the procedure of record keeping.	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ Patient</li> <li>▪ Video</li> <li>▪ Film</li> <li>▪ Slide</li> </ul>	<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ Patient</li> <li>▪ Video</li> <li>▪ Film</li> <li>▪ Slide</li> </ul>	L= 2 hrs T= 1 hrs	<ul style="list-style-type: none"> <li>▪ Written examination</li> <li>▪ Oral</li> </ul>
5. a) Professional Ethics b) The practitioner his staff & assistant.	Student should be able to- Describe ethical issue related to colleagues, public & patient	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ Patient</li> <li>▪ Video</li> <li>▪ Film</li> <li>▪ Slide</li> </ul>	<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ Patient</li> <li>▪ Video</li> <li>▪ Film</li> <li>▪ Slide</li> </ul>	L= 2 hrs T= 1 hrs	<ul style="list-style-type: none"> <li>▪ Written examination</li> <li>▪ Oral</li> </ul>
6. Organizations National & International	Student should be able to describe a. National health services, BMDC & National Dental Organization. b. WHO, FDI etc.	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ Patient</li> <li>▪ Video</li> <li>▪ Film</li> <li>▪ Slide</li> </ul>	<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ Patient</li> <li>▪ Video</li> <li>▪ Film</li> <li>▪ Slide</li> </ul>	L= 3 hrs T= 2 hrs	<ul style="list-style-type: none"> <li>▪ Written examination</li> <li>▪ Oral</li> </ul>
7. Scope & importance of Forensic odontology	Student should be able to- Describe the process of person identification other accepts	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	Practical	<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ Patient</li> <li>▪ Video</li> <li>▪ Film</li> <li>▪ Slide</li> </ul>	L= 4 hrs T= 2 hrs P= 1	<ul style="list-style-type: none"> <li>▪ Written</li> <li>▪ Oral</li> <li>▪ Practical</li> </ul>

**Subject : Behavioural Science**

Contents	Learning Objectives	Teaching/ Learning experiences			Expected hours /days	Assessment
		Class-room	Practical/visit	Aids		
<p><b>CORE</b>                      Concept of behavioural science.</p> <p>Social, cultural and psychological factors in health and illness.</p> <p>Interpersonal relationship                      Doctors-patient relationship                      Family in health and illness                      Illness behaviour and its management</p> <p>Social change and health and illness.</p> <p>Behavioural change communication (BCC)</p>	<p><b>II. Behavioural Sciences</b>                      Concept of Behavioural Science.                      Students will be able to:</p> <p>A. Define behavioural science.</p> <p>B. Explain the principles of sociology and their application in understanding human behaviour and behavioural change.</p>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Self-study</li> <li>• Short presentation with video</li> <li>• Discussion</li> <li>• Brain-storming &amp; discussion</li> </ul>		<ul style="list-style-type: none"> <li>• Video</li> <li>• Film strip</li> <li>• Handout</li> <li>• Textbook</li> <li>• OHT</li> <li>• Other reading materials</li> </ul>	<p>L-1hrs</p> <p>T-1hrs</p>	<ul style="list-style-type: none"> <li>• Written</li> <li>• Oral</li> <li>• Checklist</li> </ul>

L = Lecture, T = Tutorial, V = Day Visit

Contents	Learning Objectives	Teaching/ Learning experiences			Expected hours /days	Assessment
		Class-room	Practical/visit	Aids		
	<p><b>II. Behavioural Sciences (cont'd)</b></p> <p>Social, Cultural and psychological factors in health and illness</p> <p>A. Identify cultural factors (such as, beliefs, values, norms, and practices) those which are beneficial and those which are harmful for the maintenance of health.</p> <p>B. Analyse various social and cultural factors which influence the health of (e.g values, names, practice):</p> <p>(a) individual (b) family and (c) community</p> <p>C. Assess socio-cultural factors which act as barriers to good health and recovery from illness.</p>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Self-study</li> <li>• Short presentation with video</li> <li>• Discussion</li> </ul>	<ul style="list-style-type: none"> <li>• Student project (clinico-social case study)</li> <li>• Visits to UDA</li> <li>• Family attachment</li> </ul> <p>(as situation permits 1<sup>st</sup>/2<sup>nd</sup> year)</p>	<ul style="list-style-type: none"> <li>• Video</li> <li>• Film strip</li> <li>• Handout</li> <li>• Textbook</li> <li>• OHT</li> <li>• Other reading materials</li> </ul>	<p>L-1 hrs</p> <p>T-2 hrs</p> <p>V-2 days</p>	<ul style="list-style-type: none"> <li>• Written</li> <li>• Oral</li> </ul>

L = Lecture, T = Tutorial, V = Day Visit

Contents	Learning Objectives	Teaching/ Learning experiences			Expected hours /days	Assessment																
		Class-room	Practical/visit	Aids																		
	<p><b>II. Behavioural sciences (cont'd)</b></p> <p>Interpersonal Relationships</p> <p>A. Understand interpersonal relationships</p> <p>B. Appreciate how the doctor-patient relationship may be influenced by the behaviour of either the patient or the doctor.</p> <table border="0"> <tr> <td>Doctor</td> <td>Patient</td> </tr> <tr> <td>-emotional involvement</td> <td>-denial of illness</td> </tr> <tr> <td>-sentimentality</td> <td></td> </tr> <tr> <td></td> <td>-using doctor for</td> </tr> <tr> <td>-offending the patient</td> <td>-emotional</td> </tr> <tr> <td>-attention</td> <td>-support</td> </tr> <tr> <td>-compassion</td> <td>-respect</td> </tr> <tr> <td></td> <td>-confidence</td> </tr> </table> <p>C. Recognise and demonstrate the body language which reflects common emotions and influences interpersonal communication in health context</p> <p>Family in health and illness.</p> <p>A. Appreciate the role of family in health and illness</p>	Doctor	Patient	-emotional involvement	-denial of illness	-sentimentality			-using doctor for	-offending the patient	-emotional	-attention	-support	-compassion	-respect		-confidence	<ul style="list-style-type: none"> <li>Lecture</li> <li>Self-study</li> <li>Short presentation with video</li> <li>Discussion</li> </ul>	<ul style="list-style-type: none"> <li>Student project (Clinico-social case study)</li> </ul>	<ul style="list-style-type: none"> <li>Video</li> <li>Film strip</li> <li>Handout</li> <li>Textbook</li> <li>OHT</li> <li>Other reading materials</li> </ul>	<p>L-1.00h</p> <p>T-2.00h</p>	<ul style="list-style-type: none"> <li>Written</li> <li>Oral</li> </ul>
Doctor	Patient																					
-emotional involvement	-denial of illness																					
-sentimentality																						
	-using doctor for																					
-offending the patient	-emotional																					
-attention	-support																					
-compassion	-respect																					
	-confidence																					
		<ul style="list-style-type: none"> <li>Self-study</li> <li>Short presentation with video</li> <li>Brain storming &amp; discussion</li> </ul>	<ul style="list-style-type: none"> <li>Family attachment (if situation permits 1s<sup>st</sup>/2<sup>nd</sup> Year)</li> </ul>	<ul style="list-style-type: none"> <li>Video</li> <li>Reading materials</li> <li>OHT</li> </ul>	<p>V-1 days</p> <p>T-1 hr.</p>	<ul style="list-style-type: none"> <li>Written</li> <li>Oral</li> <li>Check-list</li> </ul>																

L = Lecture, T = Tutorial, V = Day Visit

Learning Objectives	Contents	Teaching/ Learning experiences			Expected hours /days	Assessment
		Class-room	Practical/visit	Aids		
	<p><b>II. Behavioural sciences (cont'd)</b></p> <p>Illness behaviour and its management</p> <p>A. State behavioural changes during illness of an individual</p> <p>Social change and health and illness</p> <p>A. Understand the relationship between social change and development of health of the aged, women and children, in particular.</p> <p>Behavioural Change Communication (BCC)</p> <p>A. Explain how behaviour changes and the role of communication in the process of behavioural change.</p>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> </ul> <ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> </ul>	<ul style="list-style-type: none"> <li>• Student project (Clinico-social case study)</li> </ul>	<ul style="list-style-type: none"> <li>• Video</li> <li>• OHT/ slides</li> <li>• Prepared questionnaire</li> <li>• Handout</li> <li>• Study instrument</li> <li>• Video</li> <li>• Films strip</li> <li>• OHT/slides</li> </ul>	<p>L-1 hrs.</p> <p>T- 1 hrs.</p> <p>V-1 days</p>	<ul style="list-style-type: none"> <li>• Written</li> <li>• Oral</li> <li>• Check-list</li> </ul>

L = Lecture, T = Tutorial, V = Day Visit



## Subject : Oral Anatomy & Physiology

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
<p><b>1. Development of Oro-dental tissue:</b></p> <p>i. Development of Face, palate, jaw (mandible, maxilla) tongue &amp; lip.</p> <p>ii. Amelogenesis/ dentinogenesis/ development of pulp, root &amp; periodontal ligament/cementogenesis</p> <p>iii. Physiologic tooth movement, eruption &amp; shedding.</p> <p>iv. General Embryology</p> <p>v. Developing of the tooth and its supporting tissue.</p>	<p>Student should be able to-</p> <p>i. State briefly the development of face. Palate, jaw (mandible, maxilla), Tongue lip with applied aspects.</p> <p>ii. Describe the development of different structure of a tooth.</p> <p>iii. Describe pre-eruptive, eruptive, post eruptive tooth movement, cells &amp; pattern of shedding, orthodontic tooth movement.</p> <p>iv. Germ cell formation and fertilization, formation of three layered embryos, formation of the neural crest and fate of the germ cell.</p> <p>v. Primary epithelial band &amp; its concepts, Dental lamina and its different stage, formation of the permanent dentition, Hard tissue formation &amp; crown stage</p>	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Tutorial</li>   <li>▪ Lecture</li> <li>▪ Tutorial</li>   <li>▪ Lecture</li> <li>▪ Tutorial</li> </ul>	<ul style="list-style-type: none"> <li>▪ Practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ White board</li> <li>▪ Black board</li>   <li>▪ OHP</li> <li>▪ White board</li> <li>▪ Black board</li>   <li>▪ OHP</li> <li>▪ White board</li> <li>▪ Black board</li> <li>▪ Micro-scope</li> </ul>	<ul style="list-style-type: none"> <li>▪ 5 hrs</li>   <li>▪ 5 hrs</li>   <li>● 3 hrs</li> <li>● 60 hrs (Development item exam.)</li> </ul>	<p>Item Examination</p> <p>10 items examination</p>

## Subject : Oral Anatomy & Physiology

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
<p><b>2. Tooth Morphology:</b> Introduction</p> <p>a. Human dentition, stages of dentition, dental formula, notation</p> <p>b. Tooth surfaces, their junction, line angles &amp; point angles.</p> <p>c. Definition of terms used in dentistry.</p> <p>d. Contact area embrasures &amp; clinical significance.</p>	<p>Student should be able to-</p> <p>2.</p> <p>i. Describe Types of dentition,</p> <p>ii. Write down dental formula</p> <p>iii. Describe the different methods of notation</p> <p>iv. Out line the tooth surface</p> <p>v. Out line contact area</p>	<ul style="list-style-type: none"> <li>▪ Lecturer</li> <li>▪ Tutorial</li> <li>▪ Demonstration</li> </ul>		<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ White board</li> <li>▪ Black board</li> <li>▪ Speci-mens</li> </ul>	<ul style="list-style-type: none"> <li>▪ 4hrs</li> <li>▪ 18 hrs ( For item exam)</li> </ul>	Item exam.
<p>3. Morphology of individual permanent /deciduous tooth-</p> <p>a) Identification of individual tooth.</p> <p>b) Variation &amp; anomalies commonly seen.</p>	<p>3. i) Identify the individual permanent/deciduous tooth,</p> <p>ii) Describe the chronology of tooth development.</p>	<ul style="list-style-type: none"> <li>▪ Lecturer</li> <li>▪ Tutorial</li> <li>▪ Demonstration</li> </ul>		<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ White board</li> <li>▪ Black board</li> <li>▪ Specimens</li> </ul>	<ul style="list-style-type: none"> <li>▪ 10 hrs</li> <li>▪ 18 hrs (Item examination)</li> </ul>	Item examination

## Subject : Oral Anatomy & Physiology

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
<p>4. Occlusion:</p> <p>a) Factors influence occlusion.</p> <p>b) Inclination of individual tooth. Compensatory curves.</p> <p>c) Centric relation &amp; centric occlusion.</p> <p>d) Clinical significance of normal occlusion.</p> <p>e) Introduction &amp; classification of malocclusion.</p>	<p>Student should be able to-</p> <p>a) Describe the various relations which makeup normal occlusion, clinical significance of occlusion &amp; classification of occlusion.</p> <p>b) Define factors influencing occlusion.</p> <p>c) Estimate age by pattern of teeth eruption from plaster casts.</p> <p>d) Describe tooth morphology with the help of models &amp; specimens.</p> <p>e) Carve crowns of permanent teeth in wax.</p>	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Tutorial</li> <li>▪ Demonstration</li> </ul>		<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ White board</li> <li>▪ Black board</li> <li>▪ Specimens</li> </ul>	<ul style="list-style-type: none"> <li>▪ 4 hrs</li> <li>▪ 12 hrs (Practical exam)</li> </ul>	Practical exam.
<p>5. Histology of Oro-dental tissue:</p> <p>a) Enamel.</p>	<p>Student should be able to- Study briefly about-</p> <p>a) Enamel prisms &amp; crystals.</p> <p>b) Incremental lines, Hunter-Schreger bands</p> <p>c) The enamel-dentine junction.</p> <p>d) The surface features of enamels.</p>	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Tutorial</li> <li>▪ Practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ Practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ White board</li> <li>▪ Black board</li> <li>▪ Micro-scope</li> </ul>	<ul style="list-style-type: none"> <li>▪ 4 hrs</li> <li>▪ 6 hrs (Item exam)</li> </ul>	Item exam
<p>b) Investing organic layers on enamel surfaces.</p>	<p>Student should be able to-</p> <p>a) Pre-eruptive investing layers.</p> <p>b) Investing layers associated with the crowns of erupted teeth.</p>	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Tutorial</li> <li>▪ Practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ Practical</li> </ul>	Do	<ul style="list-style-type: none"> <li>▪ 2 hrs with enamel item</li> </ul>	

## Subject : Oral Anatomy & Physiology

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
c) Dentin	<p>Student should be able to describe-</p> <p>a) Physical &amp; chemical properties of dentine.</p> <p>b) Dentinal tubules, Peritubular dentin, Intertubular dentin, Predentin, Odontoblast process</p> <p>c) Primary dentin, secondary dentin, Tertiary dentin, Incremental lines, Interglobular dentin, Granular layer.</p> <p>d) Innervation of dentin &amp; clinical consideration.</p>	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Tutorial</li> <li>▪ Practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ Practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ White board</li> <li>▪ Black board</li> <li>▪ Micro-scope</li> </ul>	6 hrs 6hrs (Item exam)	Item exam.
d) Dental Pulp	<p>Student should be able to-describe</p> <p>a) Cells of dental pulp.</p> <p>b) Fibers &amp; ground substance of dental pulp.</p> <p>c) Blood supply of the dental pulp.</p> <p>d) Innervation of dental pulp.</p>	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ Practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ White board</li> <li>▪ Black board</li> <li>▪ Microscope</li> </ul>	3 hrs 6hrs (Item exam)	Item exam.
e) Cementum	<p>Student should be able to out line-</p> <p>a) Classification of cementum.</p> <p>b) The ultrastructural appearance of cementum.</p> <p>c) Resorption &amp; repair of cementum.</p>	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Tutorial</li> <li>▪ Practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ Practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ White board</li> <li>▪ Black board</li> <li>▪ Microscope</li> </ul>	2 hrs 6hrs (Item exam)	Item exam.
f) Periodontal ligament	<p>Student should be able to-out line</p> <p>a) Cells &amp; extracellular substance of periodontal ligament</p> <p>b) fibers of the periodontal ligaments Fibers of periodontal ligament.</p> <p>c) Ground substance of periodontal ligam</p> <p>d) Blood vessels &amp; nerves of the periodontal ligaments.</p> <p>e) Periodontal ligaments as a special connective tissue.</p> <p>f) The tooth support mechanism.</p>	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Tutorial</li> <li>▪ Practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ Practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ White board</li> <li>▪ Black board</li> <li>▪ Microscope</li> </ul>	4 hrs 6hrs (Item exam)	Item exam.

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
g) Alveolar bone.	Student should be able to describe a) Gross bone histology, bone cells, Bone development, bone turnover	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Tutorial</li> </ul>		<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ White board</li> <li>▪ Black board</li> <li>▪ Micro-scope</li> </ul>	1 hrs 6hrs (Item exam)	Item exam.
h) Oral Mucosa.	Student should be able to describe a) The epithelium. b) The Lamina propria. c) Epithelial-connective tissue interface. d) Regional variations in the structure of the oral mucosa.	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Tutorial</li> <li>▪ practical</li> </ul>	<i>Practical</i>	<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ White board</li> <li>▪ Black board</li> <li>▪ Micro-scope</li> </ul>	3 hrs 6hrs (Item exam)	Item exam.
i) The salivary gland.	Student should be able to study - a) Classification of salivary gland b) Structural pattern of salivary gland c) Composition of saliva	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Tutorial</li> <li>▪ Practical</li> </ul>	<b>Practical</b>	<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ White board</li> <li>▪ Black board</li> <li>▪ Micro-scope</li> </ul>	3 hrs 6hrs (Item exam)	Item exam.
j) T.M Joints	Student should be able to describe a) Anatomy, histology & clinical consideration.	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Tutorial</li> <li>▪ Practical</li> </ul>	Practical		2 hrs 6 hrs (Item exam j+k)	Item exam.
k) Maxillary Sinus	Student should be able to describe a) Anatomy, histology & clinical relevance.	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Tutorial</li> </ul>		<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ White board</li> <li>▪ Black board</li> </ul>	1 hrs	Item exam.
l) Dental pain & its pathway.	Student should be able to- a) Describe the physiology of pain pathway.	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Tutorial</li> </ul>		<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ Work book</li> <li>▪ Black board</li> </ul>	1 hr 6 hrs	Item exam
m) Swallowing	Theories of deglutition, phase of mature deglutition cycle, control of deglutition, Dysphasia & conclusion	<ul style="list-style-type: none"> <li>▪</li> </ul>		<ul style="list-style-type: none"> <li>▪</li> </ul>		
n) Speech	Phonation, Neural basis of language, clinical, consideration, Summary	<ul style="list-style-type: none"> <li>▪</li> </ul>		<ul style="list-style-type: none"> <li>▪</li> </ul>		
o) Mastication	Muscles of mastication masticator movements, control of mastication, summary	<ul style="list-style-type: none"> <li>▪</li> </ul>		<ul style="list-style-type: none"> <li>▪</li> </ul>		
<b>Taste</b>	Taste receptors, central taste pathway, Development and aging, role of saliva in taste function.	<ul style="list-style-type: none"> <li>▪</li> </ul>		<ul style="list-style-type: none"> <li>▪</li> </ul>		
p) Smell	Smell receptors, Central olfactory pathways, developing and aging, summary.	<ul style="list-style-type: none"> <li>▪</li> </ul>		<ul style="list-style-type: none"> <li>▪</li> </ul>		

## Subject : Oral Anatomy & Physiology

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
6. The vasculature & innervation of the mouth (Macroscopic anatomy of the oral cavity):	Student should be able to- a) Blood supply, venous drainage, lymphatic drainage & innervation of oro-dental tissues.	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Tutorial</li> </ul>		<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ Work book</li> <li>▪ Black board</li> <li>▪ Micro-scope</li> </ul>	1 hrs	Item exam
7. Contents age changes in teeth & jaws: i) Enamel ii) Dentine iii) Pulp iv) Periodontal ligaments v) Cementum vi) Alveolus vii) Epithelial attachment viii) T.M.J, Oral mucosa	Student should be able to- a) The changes in form & structure of the tooth jaw & oral tissues as age advances.	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Tutorial</li> </ul>		<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ Work book</li> <li>▪ Black board</li> </ul>	1 hrs	Item exam
8. Comparative dental anatomy : a) Classification of vertebrates & vertebrate dentition. The subdivision of time general characteristics of vertebrate dentition.	Student should be able to- a) Out time fishes, amphibians, reptiles, birds & mammals together with the dentition.	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Tutorial</li> </ul>		<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ Work book</li> <li>▪ Black board</li> </ul>	1 hr	Item exam

**Subject : Oral Anatomy & Physiology**

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
b) Evolution of the jaws & of the mandibular joint	Student should be able to- a) Describe the origination of jaws & joints from earlier form.	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Tutorial</li> </ul>		<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ Work book</li> <li>▪ Black board</li> </ul>	1 hr	Item exam
c) Comparative Anatomy of the dental tissue, the structure of the rodent incisor	Student should be able to- a) The characteristics of the three calcified tissue in mammals with that of other animals.	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Tutorial</li> </ul>		<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ Work book</li> <li>▪ Black board</li> </ul>	1 hr	Do
d) Dental adaptation to the demands of function.	Student should be able to- a) Describe animals in the wild state depend upon their teeth for their existence.	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Tutorial</li> </ul>		<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ Work book</li> <li>▪ Black board</li> </ul>	1 hr	
e) Characteristics of human dentition in light of comparative anatomy	Student should be able to- a) Distinguish number, form, tooth succession, sequence of tooth eruption with tooth functions with that of other animals.	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Tutsorial</li> </ul>	Practical	<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ Work book</li> <li>▪ Black board</li> <li>▪ Micro-scope</li> </ul>	1 hrs 12 hrs (all comparative exam)	2 item exam.

**Subject : Medicine**

Contents	Learning/ Objectives	Training/Learning experiences			Expected Hours/days	Assessment
		Class-room	Practical/Visit	Aids		
<b>Respiratory system:</b> i. Pneumonia. ii. Lung Abscess. iii. Ch. Obstructive pulmonary disease. iv. Pulmonary Tuberculosis. v. Pleural effusion. vi. Pneumothorax. vii. Bronchiectasis. viii. Lung cancer. ix. Respiratory failure.	<b>Proper examination of respiratory system :</b> i. Evaluate respiratory problem from the history. ii. Ascertain respiratory ailments, by physical examination iii. Interpret & e.g. X-ray, sputum examination & Hematology.	Lecture class group discussion	History taking clinical examination case presentation X-ray & instrument	White Board View Box	Lecture 10 hrs Practical 18 hrs	Written, Viva, Practical & Clinical examination
<b>CVS:</b> i. Acute Rheumatic fever ii. Rheumatic valvular disease. iii. Hypertension, Ischaemic heart disease. iv. Infective endocarditis. v. Common congenital heart disease. vi. CCF.	<b>Proper examination of cardiovascular system :</b> i. Evaluate cardiovascular . ii. Ascertain cardiovascular ailments, by physical examination iii. Interpret & Correlate physical findings with investigation e.g. X-ray, ECG, Echo. Throat swab.	Lecture class Group discussion	History taking clinical examination case presentation X-ray	White Board View Box B.P. machine stethoscope.	Lecture 7 hrs Practical 12 hrs	Written, Viva, Practical & Clinical examination



**Subject : Medicine**

Contents	Learning/ Objectives	Training/Learning experiences			Expected Hours/days	Assessment
		Class-room	Practical/Visit	Aids		
<p><b>Haemopoetic system and Reticulo endothelial system:</b></p> <p>i. Anaemia.                      ii. Leukaemia.                      iii. Bleeding disorder.                      iv. Lymphoma.                      v. Clotting disorder.                      vi. Disorder of immune system.</p>	<p><b>Proper examination of respiratory system :</b></p> <p>i. Evaluate Haemopoetic problem from the history.                      ii. Ascertain Haemopoetic ailments, by physical examination                      iii. Interpret &amp; correlate physical findings with investigation e.g. Haematology                      Bone marrow examination.</p>	Lecture class Group discussion	History taking clinical examination & case presentation	White Board	Lecture 8 hrs Ward 16 hrs	Written, Viva, & Clinical examination
<p><b>G.I. Tract:</b></p> <p>i. Stomatitis.                      ii. Gingival, Hyperplasia.                      iii. Dysphagia.                      iv. Acid Peptic disease.                      v. Jaundice.                      vi. Acute &amp; chronic hepatitis.                      vii. CLD.                      viii. Diarrhoea.                      ix. Dysentery.                      x. Amoebiasis                      xi. Abdominal tuberculosis</p>	<p><b>Proper examination of G.I.T. system :</b></p> <p>i. Evaluate G.I.T. problem from the history.                      ii. Ascertain G.I.T. ailments, by physical examination                      iii. Interpret &amp; Correlate physical findings with investigation e.g. X-ray contrast media, Ultrasonography, Hematology, Stool examination.</p>	Lecture class Group discussion	History taking clinical examination case presentation X-ray & instrument.	White Board Tongue, Depressor, Ryles tube.	Lecture 11 hrs Ward 25 hrs	Written, Viva, Practical & Clinical examination

**Subject : Medicine**

Contents	Learning/ Objectives	Training/Learning experiences			Expected Hours/days	Assessment
		Class-room	Practical/Visit	Aids		
<b>Endocrine &amp; Metabolic disorder system:</b> i. Diabetes mellitus. ii. Hypothyroidism. iii. Hyperthyroidism.	<b>Proper examination of endocrine &amp; metabolic system:</b> i. Evaluate endocrine. ii. Matabolic problem from the history. iii. Ascertain endocrine ailments, by physical examination. iv. Interpret & corelate with physical findings investigations. e.g. Ultrasonography, Biochemistry & Hormone analysis.	Lecture class Group discussion	History taking clinical examination case presentation & examination	White Board, Test-tube, Rsegent.	Lecture 7 hrs Ward 10 hrs	Written, Viva, & Clinical examination
<b>Renal &amp; Fluid electrolyte disorder.</b> i. AGN ii. NS(Nephrotic Syndrome) iii. UTI iv. Acid base balance. v. Fluid electrolyte disturbance	<b>Proper examination of Renal system :</b> i. Evaluate renal problem from the history. ii. Ascertain renal ailments, by physical examination iii. Interpret & Corelate physical. vi. Findings with investigation e.g. X-ray, urine examination & Hematology.	Lecture class Group discussion	History taking clinical examination case & urine examination	White Board Test-tube, reagent.	Lecture 4 hrs Ward 10 hrs	Written, Viva, & Clinical examination

**Subject : Medicine**

Contents	Learning/ Objectives	Training/Learning experiences			Expected Hours/days	Assessment
		Class-room	Practical/Visit	Aids		
<b>Infectious disease :</b> i. Enteric Fever. ii. Diphtheria. iii. Aids. iv. PUO. v. Malaria. vi. Kala-azar. vii. Dengue. viii. Helminthiasis. ix. Measles. x. Scabies. xi. Syphilis. xii. Gonorrhoea. xiii. Aphthousulcer.	<b>Proper examination of Infectious disease :</b> i. Evaluate Infectious disease problem from the history. ii. Ascertain Infectious disease ailments, by physical examination. iii. Interpret & corelate physical findings with investigation. e.g. X-ray, Sputum examination & Hematology.	Lecture class Group discussion	History taking clinical examination & case presentation	White Board,	Lecture 10 hrs Ward 20 hrs	Written, Viva, & Clinical examination
<b>Nervous System:</b> i. Cranial nerves & their disorder. ii. Haedache. iii. Meningitis. iv. Polio Mylitis. v. Motor neuron disease.	<b>Proper examination of nervous system :</b> i. Evaluate nervous problem from the history. ii. Ascertain nervous ailments, by physical examination iii. Interpret & Corelate physical. iv. Findings with investigation e.g. X-ray, CT scane	Lecture class & Group discussion	History taking clinical examination case presentation.	White Board, Hammer, pin, torchlight, tape, salt, sugar, hot & cold water etc.	Lecture 8 hrs Ward 16 hrs	Written, Viva, & Clinical examination

**Subject : Medicine**

Contents	Learning/ Objectives	Training/Learning experiences			Expected Hours/days	Assessment
		Class-room	Practical/Visit	Aids		
<b>Nutrition :</b> i. Iodine. ii. Vitamins. iii. Balance diet.	<b>Proper examination of Nutrition system :</b> i. Evaluate nutrition problem from the history. ii. Ascertain nutrition ailments, by physical examination. iii. Interpret & corelate physical findings with investigation. e.g. X-ray, Urine examination & Hematology.	Lecture class Group discussion	History taking clinical examination & Urine examination.	White Board, Test-tube, reagent.	Lecture 5 hrs Ward 8 hrs	Written, Viva, & Clinical examination

**Sub: General Surgery**

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
History writing	<p>Student will be able to perform-</p> <ul style="list-style-type: none"> <li>▪ History writing</li> <li>▪ Clinical examination</li> <li>▪ To develop cordial attitude to wards patients, teachers, colleagues and stuff</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Practical – how to talk with a patient</li> <li>▪ History writing, clinical examination, Case presentation,</li> <li>▪ Develop communication skill with patient</li> </ul>	<ul style="list-style-type: none"> <li>▪ Clinical word</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lecture 4hrs</li> <li>▪ Practical 8 hours</li> </ul>	<ul style="list-style-type: none"> <li>▪ Practical-bedside history writing Exam</li> </ul>
Wounds	<p>Student will be able to-</p> <ul style="list-style-type: none"> <li>• Define and classify wound</li> <li>• Process of wound healing and repair of tissue</li> <li>• Factor influencing wound</li> <li>• Wound closure</li> <li>• The treatment of wound</li> <li>• Complications</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>• Surgery ward placement</li> <li>• OPD,OT</li> </ul>	<ul style="list-style-type: none"> <li>▪ Teaching board</li> <li>▪ OHP</li> <li>▪ Slide projector/mul timedia</li> <li>▪ Clinical ward</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lecture 6 hrs</li> <li>▪ Practical 10 hrs</li> </ul>	<ul style="list-style-type: none"> <li>▪ Written exam</li> <li>▪ Formative item</li> </ul>
Infections	<p>Student will able to- Define, Classify, Clinical feature, treatment, complications of-</p> <ul style="list-style-type: none"> <li>• Inflammation, Cellulitis, Erysipelas, Bacteremia, Septicemia</li> <li>• Boil, Carbuncle, Ulcer</li> <li>• Fistula, Sinus</li> <li>• Tetanus</li> <li>• Gas gangrene</li> <li>• Tuberculosis, HIV</li> <li>• Prevention of infections</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>• Practical &amp; clinical–Surgery word, bed side demonstration</li> <li>• Case presentation</li> <li>▪ Word duties</li> </ul>	<ul style="list-style-type: none"> <li>▪ White board</li> <li>▪ OHP</li> <li>▪ Slide projector</li> <li>▪ Clinical ward</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lecture 6 hrs</li> <li>▪ Practical 10 hrs</li> </ul>	<ul style="list-style-type: none"> <li>▪ Written exam</li> <li>▪ Formative item exam- OSPE, OSCE</li> </ul>

Contents	Learning Objectives	Class room	Practical/ visits	Aids	Expected hours/days	Assessment
Shock & Haemorrhage Fluid , Eletrolytes and Blood transfusion	Student will able to- Define ,Classify, management, Clinical feature, Pathophysiology of <ul style="list-style-type: none"> <li>Shock and Hemorrhage</li> <li>Management of Shock in Dental chair</li> <li>Basis of fluid and electrolytes and Blood transfusion-Indication, complications</li> </ul>	<ul style="list-style-type: none"> <li>Lecture</li> </ul>	<ul style="list-style-type: none"> <li>Practical &amp; clinical ward-bed side demonstration</li> <li>Case presentation</li> </ul>	<ul style="list-style-type: none"> <li>White/black board</li> <li>OHP</li> <li>Slide projector</li> </ul>	<ul style="list-style-type: none"> <li>Lect- 6 hrs</li> <li>Practical 8 hrs</li> </ul>	<ul style="list-style-type: none"> <li>practical</li> <li>Formative item examination &amp; OSPE</li> </ul>
Principle of surgical operation	Student will be able to- <ul style="list-style-type: none"> <li>Asepsis, Aseptic, Sterilization</li> <li>pre per and postopetrative care</li> <li>Postoperative complications <ul style="list-style-type: none"> <li>Wound disruption</li> <li>Bacteremia, Sepecimia</li> <li>Deep vein thrombosis</li> <li>Pulmonary embolism</li> </ul> </li> <li>Surgical Instrument</li> </ul>	<ul style="list-style-type: none"> <li>Lecture</li> </ul>	<ul style="list-style-type: none"> <li>Surgery word-bed side demonestration</li> <li>Case presentation</li> <li>Word duties</li> </ul>	<ul style="list-style-type: none"> <li>White board</li> <li>OHP</li> <li>Slide projector</li> <li>Patients</li> <li>Instruments</li> </ul>	<ul style="list-style-type: none"> <li>Lecture 8 hrs</li> <li>Practical 8 hrs</li> </ul>	<ul style="list-style-type: none"> <li>Practical</li> <li>Formative item exam &amp; OSCE, OSPE</li> </ul>
Burn	Student will able to – <ul style="list-style-type: none"> <li>Define ,Classify Burn</li> <li>First Aid of Burn</li> <li>Basic management protocol of burn</li> <li>Complication of burn</li> </ul>	<ul style="list-style-type: none"> <li>Lecture</li> </ul>	<ul style="list-style-type: none"> <li>Surgery word-bed side demonstration</li> <li>Dressing room-demonstration</li> <li>Case presentation</li> <li>Word duties</li> </ul>	<ul style="list-style-type: none"> <li>Slide projector</li> <li>OHP</li> <li>Multimedia</li> <li>Burn unit</li> </ul>	<ul style="list-style-type: none"> <li>Lecture 6 hrs</li> <li>Practical 6hrs</li> </ul>	<ul style="list-style-type: none"> <li>Written exam</li> <li>Clinical practical exam</li> </ul>

Contents	Learning Objectives	Class room	Practical /visit	Aids	Expected hours/days	Assessment
Tumor & Cysts	<ul style="list-style-type: none"> <li>• Difference of benign and malignant tumor, spread of tumor</li> <li>• Some important tumors of soft tissue and bony tissue</li> <li>• Basic concept of cyst</li> <li>• Physical examination of Tumors and cyst</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>• Surgery word-bed side demonstration</li> <li>• Clinical examination</li> </ul>	<ul style="list-style-type: none"> <li>▪ White board</li> <li>▪ OHP</li> <li>▪ Slide projector</li> <li>▪ Patients</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lecture 6 hrs</li> <li>▪ Practical 8 hrs</li> </ul>	<ul style="list-style-type: none"> <li>▪ Written exam</li> <li>▪ Clinical exam-bed side</li> </ul>
Swelling of Head Neck and Thyroid	<p>Physical examination of Swelling</p> <ul style="list-style-type: none"> <li>• Midline Swelling , Lateral neck swelling- ( Bronchial cyst, Thyroglossal cyst, Cystic hygroma, Haemangioma, Dermoid, Cervical lymphadenopathy )</li> <li>• Thyroid swelling- Common surgical conditions with thyroid and management</li> <li>• Thyroid function test</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>• Surgery word-bed side demonstration</li> <li>• Case presentation</li> </ul> <p>Word duties</p>	<ul style="list-style-type: none"> <li>▪ White board</li> <li>▪ OHP</li> <li>▪ Slide projector</li> <li>▪ Clinical ward-ENT, Maxillo facial surgery</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lecture 6 hrs</li> <li>▪ Practical 10 hrs</li> </ul>	<ul style="list-style-type: none"> <li>▪ Written exam</li> <li>▪ practical</li> <li>▪ Formative item exam-OSCE</li> </ul>
Face, oral cavity and salivary gland (Stomatitis, glossitis, cancer tongue, cleft lip palate, Salivary neoplasm)	<ul style="list-style-type: none"> <li>▪ Dignosis the stomatitis, glossitis, out line the principle of tongue ulcer and cancer and cyst of oral cavity.</li> <li>▪ Dignosis management of inflammation, abscess, stone, tumors of salivary gland.</li> <li>▪ Classify and out line principle of management of cleft lip palate.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>• Surgery word-bed side demonstration</li> <li>• Case presentation</li> <li>• Word duties</li> </ul>	<ul style="list-style-type: none"> <li>▪ Ward patients</li> <li>▪ X rays</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lecture 6 hrs</li> <li>▪ Practical 8 hrs</li> </ul>	<ul style="list-style-type: none"> <li>▪ Formative item exam-OSCE</li> </ul>

Contents	Learning Objectives	Class room	Practical/visit	Aids	Expected hours/days	Assessment
Trauma, injury and diseases of bone	<p>Student will be able to:</p> <ul style="list-style-type: none"> <li>▪ General principle management of trauma patient</li> <li>▪ Define fracture, dislocation</li> <li>▪ Principles of management of fractures</li> <li>▪ complication of fracture</li> <li>▪ Osteomyelitis</li> <li>▪ Management of mandibular fracture</li> <li>▪ Principal of management of traumatic brain injury</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>• Surgery word-bed side demonstration</li> <li>• Case presentation</li> <li>• Word duties</li> </ul>	<ul style="list-style-type: none"> <li>▪ White board</li> <li>▪ OHP</li> <li>▪ Slide projector</li> <li>▪ Multimedia</li> <li>▪ Patients</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lecture 6 hrs</li> <li>▪ Practical 6 hrs</li> </ul>	<ul style="list-style-type: none"> <li>▪ Practical :Clinical bedside</li> <li>▪ Formative item exam</li> </ul>
Diseases of pharynx, oesophagus, larynx, CPR Airway management	<ul style="list-style-type: none"> <li>▪ Diagnosis of Recurrent tonsilitis, common tumor pharynx, larynx</li> <li>▪ Airway management,</li> <li>▪ Trachiotomy</li> <li>▪ CPR</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>• Practical – Surgery word-bed side demonstration</li> <li>• Case presentation</li> <li>Word duties</li> </ul>	<ul style="list-style-type: none"> <li>▪ White board</li> <li>▪ OHP</li> <li>▪ Slide projector</li> <li>▪ Multimedia</li> <li>▪ Patients</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lecture 6 hrs</li> <li>▪ Practical 10 hrs</li> </ul>	<ul style="list-style-type: none"> <li>▪ Clinical Practical</li> </ul>
Anaesthesia	<ul style="list-style-type: none"> <li>▪ Basic concept of Local and General anesthesia and few complication and management</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>• Practical – Surgery word-bed side demonstration</li> <li>• Case presentation</li> <li>• Word duties</li> </ul>	<ul style="list-style-type: none"> <li>▪ White board</li> <li>▪ OHP</li> <li>▪ Slide projector</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lecture 6 hrs</li> <li>▪ Practical 6 hrs</li> </ul>	<ul style="list-style-type: none"> <li>Written exam</li> </ul>



Contents	Learning Objectives	Class room	Practical/visit	Aids	Expected hours/days	Assessment
Common Surgical problems	Student will able to Diagnosis the- <ul style="list-style-type: none"> <li>▪ Acute abdomen-DU perforation,</li> <li>▪ Intestinal obstruction</li> <li>▪ Ch.Cholecystitis with Cholelethasis</li> <li>▪ Peripheral vascular diseases</li> <li>▪ Acute and chronic urinary retention</li> </ul>	Lecture	<ul style="list-style-type: none"> <li>• History writing, clinical examination</li> <li>• Interpretation of investigations</li> <li>• bed side discussion</li> </ul>	<ul style="list-style-type: none"> <li>▪ Surgical ward</li> <li>▪ Indoor/out door patients</li> <li>▪ X-ray</li> <li>▪ OT</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lecture-16hrs</li> <li>▪ Clinical-24 hrs</li> </ul>	<ul style="list-style-type: none"> <li>▪ History Written</li> <li>▪ Practical</li> </ul>

### Objectives of Curriculum

At the end of the course the student should be able to-

1. History writing
2. proper general ,systemic and local examination
3. Identify the common surgical problems.
4. Develop cordial attitude to wards patients, colleagues and stuff.
5. Consider the differential diagnosis and complications
6. Request for cost effective investigation
7. Interpret of investigation result, X-rays of common surgical problem.
8. Provide first aid and refer complicated patients in proper center
9. Adopt universal precaution against HIV, hepatitis

**Note:** The course of study in General surgery will be conducted under arranges of the department of General Surgery Dhaka Medical College Hospital , Dhaka , Bangladesh.

## Subject : Periodontology (Basic Concepts)

Lectures – 40 hours

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
1. Introduction	History and advancement	Lecture			1 hr	
2. Anatomy and physiology of periodontium	Gingiva, Periodontal Ligaments, Root Cementum, Alveolar Bone; Blood supply of the Periodontium, Lymphatic system of the Periodontium, Nerves of the Periodontium	Lecture			4 hr	Written & Viva
3. Classification and epidemiology of periodontal disease	Classification, Examination methods, Index System; Risk factors.	Lecture Tutorial			L = 2 hr T = 4 hr	Written & Viva
4. Dental Plaque and Calculus	Formation, structure, and clinical appearance, implication and diagnosis of dental plaque and calculus	Lecture Tutorial			L = 2 hr T = 4 hr	Written & Viva
5. Microbiology of Periodontal	Primary role of bacteria	Lecture			2 hr	Written & Viva
6. Pathogenesis of Periodontitis	Etiology and pathogenesis of periodontal diseases	Lecture Tutorial			L = 2 hr T = 2 hr	Written & Viva
7. Periodontal Pathology	Histopathology, clinical features, diagnosis, and treatment of specific gingival and periodontal diseases	Lecture Tutorial			L = 2 hr T = 4 hr	Written & Viva

## Subject : Periodontology (Basic Concepts)

Lectures – 40 hours

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
8. Systemic Disorders and the periodontium	Congenital, hereditary and other systemic disorders, Viral and fungal infections, periodontal manifestations of medications	Lecture Tutorial			L = 2 hr T = 4 hr	Written & Viva
9. Tumors and Cysts of the periodontium	Reactive processes, neoplasms of periodontal soft and hard tissues, Cysts of the periodontium	Lecture Tutorial			L = 2 hr T = 4 hr	Written & Viva
10. Periodontics and Endodontics	Influence of pulp and endodontic treatment on the periodontium; Influence of periodontal disease and treatment on the pulp. Treatment strategies for combined endodontic and periodontal lessons.	Lecture Tutorial			L = 2 hr T = 4 hr	Written & Viva

## Subject : Periodontology (Clinical Concept)

Tutorial- 30 hours

Clinical- 80 hours

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
1. Examination of Patient	Symptoms; Clinical assessment; Radiographic Analysis; Diagnosis	OPD/ Ward	Clinical	Patient	3 hr	Clinical Exam. & Viva
2. Treatment Planning	Treatment of emergencies; Initial treatment plan; Case presentation	OPD/ Ward	Clinical	Patient	3 hr	Clinical Exam. & Viva
3. Phase 1 or Cause-Related Periodontal Therapy	Objectives and means of cause-related periodontal therapy; Motivation, OHI or TBI; Scaling and Root Planning; Procedure and instrumentation; Removal of plaque-retention factors; Evaluation of the effect of the cause related periodontal therapy.	OPD/ Ward	Clinical Demonstration	Patient	24 hr	Clinical Exam. & Viva
4. Phase 2. or Corrective Therapy	General guidelines for periodontal Surgery; Periodontal Pocket Surgery; Flap procedures; Gingivectomy procedures; Regenerative procedures; Distal wedge procedures; Osseous surgery; Mucogingival surgery; Gingival Augmentation Procedures. Root Coverage Procedures; Crown Lengthening Procedures; Treatment of Furcation-involved teeth; Occlusal Therapy.	OPD/ Ward	Clinical Demonstration		24 hr	Clinical Exam. & Viva
5. Phase- 3 or Mainteanuthery	Supportive Periodontal therapy and Recall.	OPD/ Ward	Clinical Demonstration		9 hr	Clinical Exam. & Viva

### OPD = Out Patient Department/ Ward

Examination of Periodontology and Oral Pathology

In course assessment : 50 marks

Written : 100 marks

Practical : 100 marks

Oral : 50 marks

## Subject : Periodontology and Oral pathology

### Oral Pathology : Lecture & Practical

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
1. Introduction	1. Student should be able to ➤ Describe different pathological problems involving the oral cavity and oral manifestations of systemic diseases	Lecture		OHP	L = 1hr GD = 1hr	Written Viva Spot identification of slide
2. Developmental disturbances of teeth, jaws, soft tissues of oral and paraoral region	1. Student should be able to ➤ Describe the importance of developmental disturbances ➤ Describe etiology, clinical features, radiology, histopathology of developmental disturbances of teeth ➤ Describe developmental disturbances of jaws ➤ Describe developmental disturbances of oral soft tissue of paraoral tissues	Lecture		OHP		Written Viva
		Lecture	Practical	OHP Slide projector Microscope	L - 5 hrs T - 2 hrs P - 3 hrs	Practical Microscopic findings Do
		Lecture	Practical	OHP Slide projector Microscope	L - 4 hrs T - 2 hrs P - 3 hrs	Do
		Lecture	Practical	OHP, Slide projector Patient	L - 2 hrs T - 2 hrs P - 3 hrs	do
3. Dental caries	3. Students should be able to ➤ Describe aetiology, microbiology, histopathology, clinical features and sequelae ➤ Describe precautions of caries	Lecture	Practical	OHP Slide projector Microscope	L - 2 hrs T - 2 hrs P - 4 hrs	Written Viva Practical

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
4. Pathology of pulp, periapical tissue and osteomyelitis	5. Students should be able to ➤ Describe aetiology, microbiology, histopathology, clinical features	Lecture	Practical	OHP Slide projector Microscope	L - 3 hrs T - 2 hrs P - 3 hrs	Written Viva Practical
5. Microbial infections of oral soft tissues	5. Students should be able to Describe microbiology, histopathology, oral manifestations of bacterial, viral and fungal infections	Lecture	Practical	OHP Slide projector Microscope	L - 6 hrs T - 4 hrs P - 6 hrs	Written Viva Practical
6. Common non-inflammatory diseases of the jaws	6. Students should be able to ➤ Describe aetiology, histopathology, clinical features of fibrous dysplasia, osteogenesis imperfecta etc	Lecture	Practical	OHP Slide projector Microscope	L - 4hrs T - 2 hrs P - 6 hrs	Written Viva Practical
7. Diseases of Temporo mandibular joint	7. Students should be able to ➤ Describe types of arthritis, developmental malformations, traumatic injuries, limitation movement of jaws	Lecture	Practical	OHP Slide projector Patient	L - 2hrs T - 2 hrs P -3 hrs	Written Viva Practical
8. Cysts of the oral cavity	8. Students should be able to ➤ Describe & classify cysts of the jaws and soft tissues	Lecture		OHP Slide projector	L - 1hrs	Written Viva
	➤ Describe the clinical features, radiology and histopathology of odontogenic and non-odontogenic cysts	Lecture	Practical	OHP Slide projector Patient	L - 6 hrs T - 3 hrs P -6hrs	Written Viva Practical

**Subject : Periodontology and Oral pathology**

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
9. Tumours of the oral cavity	9. Students should be able to ➤ Classify tumors of the jaws & soft tissues. ➤ Describe aetiology, clinical features, histopathology, radiological features of odontological tumours of jaws ➤ Describe aetiology, clinical features, histopathology, radiological features of common benign and malignant tumors of epithelial and mesenchymal tissue	Lecture		OHP Slide projector	L - 1 hrs	Written Viva
		Lecture	Practical	OHP Slide projector Microscope	L – 4 hrs T – 3 hrs P – 9hrs	Written Viva Practical
		Lecture	Practical	OHP Slide projector Microscope	L – 8 hrs T – 6 hrs P – 12 hrs	Written Viva Practical

**Subject : Periodontology and Oral pathology**

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
10. Diseases of maxillary sinus	10. Students should be able to <ul style="list-style-type: none"> <li>➤ Describe injuries to sinus</li> <li>➤ Describe dental causes and non-dental causes of sinusitis</li> <li>➤ Describe common cysts, tumours of maxillary sinus</li> </ul>	Lecture	Practical	OHP Slide projector Microscope	L – 4hrs T –3hrs P – 3 hrs	Written Viva Practical
11. Biopsy & frozen section in diagnosis of oral diseases	11. Students should be able to <ul style="list-style-type: none"> <li>➤ Perform staining of biopsy material and describe types of biopsy</li> </ul>	Lecture	Practical	OHP Slide projector Microscope	L – 2 hrs T –2 hrs P – 6 hrs	Written Viva Practical



**Subject : Periodontology and Oral pathology**  
**Oral Medicine : Theoretical & Clinical**

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
1. Introduction	1. Students should be able to ➤ Explain the usefulness of oral medicine	Lecture	practical	Black board OHP	1 hr	Q/A
2. Oral ulceration	2. Students should be able to ➤ Define and classify oral ulcers ➤ Describe infective, non-infective and miscellaneous lesions	Lecture	practical	Black board OHP, slide ptojector	L – 4 hrs T –2hrs P – 2 hrs	Q/A Written Viva
3. White lesions	3. Students should be able to ➤ classify white lesions on aetiological basis ➤ Describe pathogenesis, clinical features, D/D, treatment of white lesions	Lecture	practical	Black board OHP Slide projector	L – 4 hrs T –2hrs P – 3 hrs	Q/A Written Viva
4. Acute immune disease / vesiculo bullous lesions	4. Students should be able to ➤ Classify all lesions ➤ Describe pathogenesis, clinical features, D/D, treatment of individual diseases	Lecture	practical	Black board OHP Slide projector	L – 5 hrs T –2hrs P – 3 hrs	Q/A Written Viva
5. Orofacial pain/ Neuralgic pain	5. Students should be able to ➤ Describe dental and non-dental pain ➤ Describe trigeminal neuralgia and its management ➤ Describe facial paralysis and management	Lecture	practical	Black board OHP Slide projector	L – 3hrs T –2hrs P – 3hrs	Q/A Written Viva
6. Diseases of Salivary glands	6. Students should be able to ➤ Anatomy of S. glands ➤ Various lesions in S. glands ➤ H/P, C/F, management, Treatment of commonly ocured S. gland diseases	Lecture	Clinical diagnosis	Class room OHP Slide projector	L-6 hrs	Q/A Written Viva
7. Disease of Tongue	7. Students should be able to explain the ➤ Anatomy of Tongue. Tongue lesions: Infective non-Infective. pre malignant and malignant lesions.	Lecture	Clinical diagnosis	Class room OHP Slide projector	L-4 hrs	Q/A Written Viva

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
9. Traumatic, Reactive and Regressive lesions of oral cavity	12. Students should be able to <ul style="list-style-type: none"> <li>➤ Describe aetiology, clinical features, histopathology, radiological features of common lesions in the oral region</li> </ul>	Lecture	Practical	OHP Slide projector Microscope	L – 5 hrs T – 4hrs P – 9. hrs	Written Viva Practical
10. Neoplastic and non-neoplastic diseases of salivary glands	13. Students should be able to <ul style="list-style-type: none"> <li>➤ Describe common infective and non-infective diseases of the salivary glands</li> <li>➤ Classify salivary gland tumours, its clinical features, aetiology and histopathology</li> </ul>	Lecture	Practical	OHP Slide projector Microscope	L – 8 hrs T – 6 hrs P – 9 hrs	Written Viva Practical

## Subject : Oral & Maxillofacial Surgery

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
1. Principle of Oral & Maxillofacial Surgery a) Examination & Diagnosis	Student should be able to- i. Perform general & local examination of patient. ii. Take complete history. iii. Interpretate the radiological, Bacteriological, pathological & histological. investigations. iv. Establish the diagnosis	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Bed side/chair side teaching</li> <li>▪ Demonstration</li> <li>▪ Bed side/chair side teaching</li> <li>▪ Demonstration</li> <li>▪ Bed side/chair side teaching</li> <li>▪ Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>▪ Board</li> <li>▪ OHP</li> <li>▪ Patient</li> <li>▪ Board</li> <li>▪ Patient</li> <li>▪ Investigation Reports</li> <li>▪ Board</li> <li>▪ OHP</li> <li>▪ Patient</li> </ul>	<ul style="list-style-type: none"> <li>▪ 2 hrs lecture</li> <li>▪ 4 hrs practical</li> <li>▪ 2 hrs practical</li> <li>▪ 2 hrs practical</li> <li>▪ 2 hrs lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Practical</li> <li>▪ Practical</li> <li>▪ Practical</li> </ul>
b) Asepsis	Student should be able to- i. Define asepsis ii. Describe the preventive measures of controlling infection during surgery. iii. Describe the various methods of sterilization & disinfection of surgical instruments and setups sterilization of Dental Operating room.	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Bed side/chair side teaching</li> <li>▪ Demonstration</li> <li>▪ Bed side/chair side teaching</li> <li>▪ Demonstration</li> <li>▪ Bed side/chair side teaching</li> <li>▪ Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>▪ Board</li> <li>▪ OHP</li> <li>▪ Board</li> <li>▪ OHP</li> </ul>	<ul style="list-style-type: none"> <li>▪ 2 hrs lecture</li> <li>▪ 2 hrs lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Written &amp; Oral</li> <li>▪ Written &amp; Oral</li> </ul>
2. Wounds & injuries of the soft tissues of the head & neck region.	Student should be able to- i. Classify the wounds ii. Describe the mechanism of wound healing, bone healing. iii. Describe the principles of wounds & burn treatment	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Lecture</li> </ul>		<ul style="list-style-type: none"> <li>▪ Board</li> <li>▪ OHP</li> <li>▪ SP</li> </ul>	<ul style="list-style-type: none"> <li>▪ 2 hrs lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Written &amp; Oral</li> </ul>

**Subject : Oral & Maxillofacial Surgery**

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
3. Infections : a) Odontogenic	<p>Student should be able to-</p> <ol style="list-style-type: none"> <li>i. Define odontogenic infection principle of management of anaerobic infection mixed infection, abscess, alveolar abscess, space infections, cellulitis, Ludwigs angina, cavernous sinus thrombosis, osteomyelitis.</li> <li>ii. Describe the anatomical boundary of the facial planes.</li> <li>iii. Differentiate the bacteriological involvement in infections.</li> <li>iv. Diagnose &amp; manage the odontogenic infections .</li> </ol>	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Bed side/chair side teaching</li> <li>▪ Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>▪ Board</li> <li>▪ OHP</li> <li>▪ SP</li> </ul>	<ul style="list-style-type: none"> <li>▪ 3 hrs lecture</li> <li>▪ 4 hrs practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ Written &amp; Oral</li> <li>▪ Written &amp; Oral</li> </ul>
		<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Board</li> <li>▪ OHP</li> <li>▪ Patient</li> </ul>	<ul style="list-style-type: none"> <li>▪ 2 hrs Lecture</li> <li>▪ 1 hrs Practical</li> <li>▪ 2 hrs lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Written &amp; Oral</li> </ul>	
b) Non odontogenic	<p>Student should be able to-</p> <ol style="list-style-type: none"> <li>i. Define osteomyelitis, Acute and chronic osteomyelitis, actinomycosis, osteoradionecrosis, tuberculous osteomyelitis, syphilitic osteomyelitis, Non-specific chronic osteomyelitis.</li> </ol>	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Bed side/chair side teaching</li> <li>▪ Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>▪ Board</li> <li>▪ OHP</li> <li>▪ SP</li> <li>▪ Patient</li> </ul>	<ul style="list-style-type: none"> <li>▪ 3 hrs lecture</li> <li>▪ 4 hrs practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ Written &amp; Oral</li> </ul>

## Subject : Oral & Maxillofacial Surgery

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
4. Hemorrhage & shock	<p>Student should be able to-</p> <p>i. Describe bleeding &amp; clotting phenomenon, factors influencing clotting mechanism, laboratory tests &amp; analysis of haemorrhagic disorders.</p> <p>ii. Describe the systemic bleeding disorders &amp; management.</p> <p>iii. Describe general &amp; local management of bleeding disorders.</p> <p>iv. Describe clinical parameter of assessing the amount of blood loss.</p> <p>v. Clinical management of Shock.</p>	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Bed side/chair side teaching</li> <li>▪ Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>▪ Board</li> <li>▪ OHP</li> <li>▪ SP</li>   <li>▪ Board</li> <li>▪ OHP</li> <li>▪ Patient</li> </ul>	<ul style="list-style-type: none"> <li>▪ 8 hrs lecture</li> <li>▪ 6 hrs practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ Written &amp; Oral</li> <li>▪ Written &amp; Oral</li> </ul>

## Subject : Oral & Maxillofacial Surgery

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
5. Exodontia a) Extraction of teeth & related problems	Student should be able to- i. Describe the general principle of extractions. ii. Describe indication, contra-indications, complications & management of extractions. . iii. Perform the perfect chair, patient & doctor's position iv. Do the draping, proper identification & use of elevators & forceps. v. Perform the extraction of tooth. vi. Extraction of tooth in medically compromised patient.	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Bed side/chair side teaching</li> <li>▪ Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>▪ Board</li> <li>▪ OHP</li> </ul>	<ul style="list-style-type: none"> <li>▪ 2 hrs lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Written &amp; Oral</li> </ul>
b) Surgical extraction	Student should be able to- i. Define & classify the impacted tooth. ii. Describe the assessment & surgical procedure of impacted tooth, & retained root. iii. Describe the procedure of odontotomy & odotectomy iv. Describe the complications & management of surgical extraction.	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Bed side/chair side teaching</li> <li>▪ Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>▪ Board</li> <li>▪ OHP</li>   <li>▪ D. chair</li> <li>▪ Patient</li> <li>▪ Instruments</li> </ul>	<ul style="list-style-type: none"> <li>▪ 6 hrs lecture</li> <li>▪ 65 hrs practical</li>   <li>▪ 3 hrs lecture</li> <li>▪ 10 hrs practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ Oral &amp; Practical</li>   <li>▪ Written &amp; Oral</li> </ul>

## Subject : Oral & Maxillofacial Surgery

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
6. Cyst of the oral cavity a) Jaw cysts	Student should be able to- i. Define & classify the jaw cysts. ii. Describe the pathology of cysts iii. Describe the clinical features investigations & management of jaw cysts. iv. Narrate the surgical procedure of enucleation & marsupialisation.	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Bed side/chair side teaching</li> <li>▪ Demonstration</li>   <li>▪ Bed side/chair side teaching</li> <li>▪ Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>▪ Board</li> <li>▪ OHP</li> <li>▪ SP</li> <li>▪ Patient</li>   <li>▪ D. chair</li> <li>▪ Patient</li> <li>▪ Instruments</li> </ul>	<ul style="list-style-type: none"> <li>▪ 3 hrs lecture</li> <li>▪ 6 hrs practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ Written &amp; Oral</li>   <li>▪ Oral &amp; Practical</li> </ul>
b) Soft tissue cysts	Student should be able to- i. Define & classify the soft tissue cysts. ii. Describe the clinical features, investigations & management of soft tissue cysts.	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Bed side/chair side teaching</li> <li>▪ Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>▪ D. chair</li> <li>▪ Patient</li> <li>▪ Instruments</li> </ul>	<ul style="list-style-type: none"> <li>▪ 1 hr lecture</li> <li>▪ 4 hrs practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ Written &amp; Oral</li> </ul>

## Subject : Oral & Maxillofacial Surgery

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
7. Tumours of the Oral Cavity a) Odontogenic Tumour	Student should be able to- i. Define & classify the odontogenic tumour. ii. Describe the clinical features, investigations, histopathology & management of odontogenic tumours.	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Bed side/chair side teaching</li> <li>▪ Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>▪ Board</li> <li>▪ OHP</li> <li>▪ SP</li> <li>▪ Patient</li> </ul>	<ul style="list-style-type: none"> <li>▪ 5 hrs Lecture</li> <li>▪ 2 hrs Practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ Written &amp; Oral</li> </ul>
b) Non odontogenic	Student should be able to- i. Define & classify the odontogenic tumour. ii. Describe the clinical features, investigations, histopathology & management of non odontogenic tumours.	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Bed side/chair side teaching</li> <li>▪ Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>▪ Board</li> <li>▪ OHP</li> <li>▪ SP</li> <li>▪ Patient</li> </ul>	<ul style="list-style-type: none"> <li>▪ 5 hrs Lecture</li> <li>▪ 2 hrs Practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ Written &amp; Oral</li> </ul>



## Subject : Oral & Maxillofacial Surgery

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
8. Facial injuries	<p>Student should be able to-</p> <ol style="list-style-type: none"> <li>Describe the aetiology, classification of jaw fractures.</li> <li>Examine the different jaw fractures.</li> <li>Advise the necessary investigations for diagnosis.</li> <li>Describe the clinical features &amp; management of mandibular &amp; maxillary fractures of the middle third of the facial skeleton.</li> </ol>	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Bed side/chair side teaching</li> <li>▪ Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>▪ Board</li> <li>▪ OHP</li> <li>▪ SP</li> <li>▪ Patient</li> </ul>	<ul style="list-style-type: none"> <li>▪ 8 hrs lecture</li> <li>▪ 6 hrs Practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ Written &amp; Oral</li> </ul>
9. Oral premalignant & malignant lesions.	<p>Student should be able to-</p> <ol style="list-style-type: none"> <li>Define &amp; classify the premlignant lesions.</li> <li>Describe the actiological factors, clinical features, histopathology &amp; management of the premalignant lesions.</li> <li>Describe the actiological factors &amp; classification of the malignant lesions of oral cavity.</li> <li>Describe the clinical features, histopathology &amp; TNM classificatins of oral malignancy.</li> <li>Describe the principles of management, progonsis &amp; prevention of oral malignancy.</li> </ol>	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>		<ul style="list-style-type: none"> <li>▪ Board</li> <li>▪ OHP</li> <li>▪ SP</li> <li>▪ Patient</li> </ul>	<ul style="list-style-type: none"> <li>▪ 6 hrs lecture</li> <li>▪ 4 hrs Practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ Written &amp; Oral</li> </ul>

## Subject : Oral & Maxillofacial Surgery

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
10. Salivary gland disorders	<p>Student should be able to-</p> <p>i. Describe the inflammatory, obstructive &amp; functional disorders of salivary glands.</p> <p>ii. Describe the clinical features, histopathology &amp; management of the tumors &amp; cysts of salivary glands.</p>	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Bed side/chair side teaching</li> <li>▪ Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>▪ Board</li> <li>▪ OHP</li> <li>▪ SP</li> <li>▪ Patient</li> </ul>	<ul style="list-style-type: none"> <li>▪ 4 hrs lecture</li> <li>▪ 4 hrs Practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ Written &amp; Oral</li> </ul>
11. Temporomandibular joint disorders (TMJ)	<p>Student should be able to-</p> <p>i. Describe the anatomy &amp; physiology of TMJ.</p> <p>ii. Describe the Etiology, clinical features of various TMJ disorders.</p> <p>iii. Describe the diagnostic procedures &amp; management of TMJ disorders, particularly ankylosis, dislocation &amp; pain dysfunction disorders.</p>	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Bed side/chair side teaching</li> <li>▪ Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>▪ Board</li> <li>▪ OHP</li> <li>▪ SP</li> <li>▪ Patient</li> </ul>	<ul style="list-style-type: none"> <li>▪ 4 hrs lecture</li> <li>▪ 4 hrs Practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ Written &amp; Oral</li> </ul>

## Sub: Oral & Maxillofacial Surgery

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
12. Diseases of the Maxillary sinus	Student should be able to- i. Describe common odontogenic & nonodontogenic problems of maxillary sinus. ii. Oral antrl fistula, Nasal antrestomy, coldwellue operation	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Bed side/chair side teaching</li> <li>▪ Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>▪ Board</li> <li>▪ OHP</li> <li>▪ SP</li> <li>▪ Patient</li> </ul>	<ul style="list-style-type: none"> <li>▪ 2 hrs lecture</li> <li>▪ 2 hrs Practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ Written &amp; Oral</li> </ul>
13. Neurological disorders of the maxillofacial region	Student should be able to- i. Describe the etiology, clinical features & management of common neurological disorders of maxillofacial region.	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪</li> </ul>	<ul style="list-style-type: none"> <li>▪ Board</li> <li>▪ OHP</li> <li>▪ SP</li> </ul>	<ul style="list-style-type: none"> <li>▪ 1 hr lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Written &amp; Oral</li> </ul>
14. Pre prosthetic surgery	Student should be able to- i. Describe the basic knowledge of frenectomy, alveoloplasty alveolectomy, ridge augmentation, deepening of the alveolar sulcus. ii. Describe the basic principles, typs & surgical procedure of the dental implants.	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Bed side/chair side teaching</li> <li>▪ Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>▪ Board</li> <li>▪ OHP</li> <li>▪ SP</li> <li>▪ Patient</li> </ul>	<ul style="list-style-type: none"> <li>▪ 3 hrs lecture</li> <li>▪ 2 hrs Practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ Written &amp; Oral</li> </ul>

**Sub: Oral & Maxillofacial Surgery**

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
15. Cleft lip & palate	Student should be able to- i. Describe the embryology, etiology & classification of cleft lip & palate.	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>▪ Board</li> <li>▪ OHP</li> <li>▪ SP</li> <li>▪ Patient</li> </ul>	<ul style="list-style-type: none"> <li>▪ 3 hrs lecture</li> <li>▪ 2 hrs Practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ Written &amp; Oral</li> </ul>
16. Dento facial Deformity	Student should be able to- i. Describe the basic principles of the dentofacial deformities & its management.	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>▪ Board</li> <li>▪ OHP</li> <li>▪ SP</li> <li>▪ Patient</li> </ul>	<ul style="list-style-type: none"> <li>▪ 1 hr lecture</li> <li>▪ 2 hrs Practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ Written &amp; Oral</li> </ul>
17. Infectious diseases related to Oral & Maxillofacial surgery.	Student should be able to- i. Narrate common infectious diseases like tuberculosis, syphilis, hepatitis, AIDS etc.	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>		<ul style="list-style-type: none"> <li>▪ Board</li> <li>▪ OHP</li> <li>▪ SP</li> </ul>	<ul style="list-style-type: none"> <li>▪ 2 hrs lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Written &amp; Oral</li> </ul>

## Sub: Oral and Maxillofacial Surgery & Anaesthesia

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
1) Patient evaluation	<p>Student will be able to perform Physical evaluation and takes preliminary history &amp; follow up history</p> <p>Able to take history of any metabolic disease such as Diabetic, Hypertension Cardiovascular disease, Allergic condition</p> <p>Students will be able to perform physical examination correctly &amp; Basic concept of CPR.</p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Lecture</li> <li><input type="checkbox"/> Tutorial</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Bedside Teaching</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Pen</li> <li><input type="checkbox"/> white board</li> </ul>	<p>2 hrs Lecture</p> <p>2 hrs Practical</p>	<p>Practical examination</p>
2) Local Anaesthesia	<p>At the end of the session student will be able to</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Define and classify local Anaesthesia</li> <li><input type="checkbox"/> List the Indications, contra-indications, complications of L.A. and the treatment of complications of L.A.</li> <li><input type="checkbox"/> To Perform the technique of L.A. and technique of nerve infiltration and nerve block.</li> <li><input type="checkbox"/> Demonstrate the technique of local Anaesthesia for Maxillary and mandibular tissue and extra oral nerve block.</li> <li><input type="checkbox"/> Dose of local anaesthesia.</li> <li><input type="checkbox"/> Comparism of long &amp; short acting L.A.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Lecture</li> <li><input type="checkbox"/> Tutorial</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Practical</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Model</li> <li><input type="checkbox"/> Chalk</li> <li><input type="checkbox"/> Black Board</li> <li><input type="checkbox"/> O.H.P.</li> </ul>	<p>2 hrs Lecture</p> <p>2 hrs Practical</p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Written</li> <li><input type="checkbox"/> Practical</li> </ul>

**Sub: Oral and Maxillofacial Surgery Anaesthesia**

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
3) Sedation and L.A. in dentistry	At the end of the session the student able to	<input type="checkbox"/> Lecture <input type="checkbox"/> Tutorial	Demonstration	Dummy	2 hrs Lecture 2 hrs Practical	Practical examination
<input type="checkbox"/> Complication from sedation and local Anaesthesia. <input type="checkbox"/> Local Complications (Contamination, reaction, breakage of needle, lip-chewing, emphysema, Trauma of injection)	<input type="checkbox"/> Discuss indication and purpose of sedation and L.A. in dentistry. <input type="checkbox"/> Enumerate the ideal drugs for sedation and can choice the drug for sedation. <input type="checkbox"/> Perform the methods of administering premedicant or sedative drugs. <input type="checkbox"/> Will to able to prepare the patient	<input type="checkbox"/> Lecture		<input type="checkbox"/> Pen <input type="checkbox"/> white board	2 hrs Lecture 2 hrs Practical	<input type="checkbox"/> Written
<input type="checkbox"/> systemic complications. <input type="checkbox"/> Prophylaxis, treatment and Management for Toxic reactions	Student able to describe the complications of local anaesthetic-Local complications and systemic complications. <input type="checkbox"/> At the end of session the student will be able to describe prophylaxis of the patient. <input type="checkbox"/> Student will be able to do treatment and management of the reactions <input type="checkbox"/> Post Operative medication.	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practical	<input type="checkbox"/> Pen <input type="checkbox"/> White Board	2 hrs Lecture 1 hrs Practical	<input type="checkbox"/> Practical

## Sub: Maxillofacial Surgery and Anaesthesia

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
4) Concept of general Anaesthesia  <input type="checkbox"/> Role of general Anaesthesia in dentistry <input type="checkbox"/> Pre operative preparation for in-patient and out patient general Anaesthesia. <input type="checkbox"/> Indications for general Anaesthesia. <input type="checkbox"/> Types and Technique of general Anaesthesia <input type="checkbox"/> Supplementati on of general Anaesthesia. <input type="checkbox"/> Pre Operative medication.	At the end of the course the students should be able to:  1. Describe the concepts of general Anaesthesia 2. Perform pre-anaesthetic evaluation of the patients 3. Enumerate complications & indications of general Anaesthesia.  4. Will be able to demonstrate the technique of general Anaesthesia. 5. Will be able to describe the supplementation of the general Anaesthesia. 6. Able to describe the pre operative medication. 7. Know the complications of G.A	<input type="checkbox"/> Lecture <input type="checkbox"/> Tutorial <input type="checkbox"/> Practical  <input type="checkbox"/> Lecture  <input type="checkbox"/> Practical	<input type="checkbox"/> Practical	<input type="checkbox"/> Pen <input type="checkbox"/> White Board <input type="checkbox"/> Dummy	4 hrs Lecture 4 hrs Practical	<input type="checkbox"/> Written <input type="checkbox"/> oral <input type="checkbox"/> Practical

## Subject : Conservative Dentistry (3<sup>rd</sup> Year)

Lectures- 20 hours

Practical- 60 hours

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
1. Introduction	Definition and history, factors affecting operative treatment, factors affecting the future demand for operative dentistry, future development of operative dentistry.	Lecture			2 hr	Written & Viva
2. Clinical significance of dental anatomy, histology, physiology and occlusion.	Teeth and investing tissues; dental pulp; occlusion	Lecture			4 hr	Written & Viva
3. Dental caries (Cardiology)	Definition and classification, etiology pathogenesis, prevention and control.	Lecture			3 hr	Written & Viva
4. Preliminary considerations for operative dentistry	Infection control measures, Patient and operator positions, General considerations.	Lecturer	Practical		L - 2 hrs P – 4 hrs	Practical & Viva
5. Cavity preparation	Classification, instruments and equipment; factors affecting cavity preparation; principle and steps of cavity preparation for amalgam and other tooth colour material restoration and also for inlay.	Lecture	Practical		L - 3 hr P -12 hr	Practical & Viva
6. Instruments and equipment in operative Dentistry	Hand and powered instruments, Hazards with cutting instruments	Lecture	Practical		L - 2 hr P – 4 hr	Practical & Viva
7. Root canal treatment	Endodontic cavity preparation, biomechanical preparation and obturation of the canal.	Lecture	Practical		L - 3 hr P – 12 hr	Practical & Viva



## Subject : Operative Dentistry (Final Year)

Lectures- 50 hours

Tutorial- 30 hours

Clinical- 60 hours

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
1. Introduction	Definition and history, factors affecting operative treatment, factors affecting the future demand for operative dentistry, future development of operative dentistry.	Lecture			2 hr	Written & Viva
2. Restorative dental materials	Properties, preparation, insertion and use	Lecture	Practical		L- 2 hr P- 4 hr	Practical & Viva
3. Instruments and equipment in Operative Dentistry	Hand and powered instruments, Hazards with cutting instruments	Lecture	Practical		L-2 hr P-4 hr	Practical & Viva
4. Infection control	Introduction, impact of infection and exposure risk on Dentistry, Sterilization	Lecture	Practical		L-2 hr P-4 hr	Practical & Viva
5. Patient assessment, examination and diagnosis and treatment planning	Patient assessment, examination and diagnosis, and treatment planning	Lecture		Clinical	L-2 hr P-6 hr	Practical & Viva
6. Pain control	Local anesthesia, analgesia, hypnosis	Lecture		Clinical	L-1 hr P-2 hr	Practical & Viva
7. Isolation of the operational field	Conceptual elements of operating field isolation, anesthetics, rubber dam, high volume suction, saliva ejectors, absorbents and throat shields, drugs.	Lecture		Clinical	L-3 hr P-6 hr	Practical & Viva

8. Amalgam restorations	Amalgam restoration for class I, II, V, VI cavity, complex amalgam restorations	Lecture		Clinical	L-3 hr P-12 hr	Practical & Viva
9. Tooth coloured restorations	For Class III, IV, V and I, II, VI cavity.	Lecture		Clinical	L-3 hr P-12 hr	Practical & Viva
10. Pin retained restorations	Plan, selection and insertion for different restorations	Lecture		Clinical	L-3 hr P-12 hr	Practical & Viva
11. Additional conservative esthetic Procedures	Alterations of tooth contours and contacts; Conservative treatment of discoloured tooth; Veneers	Lecture		Clinical	L-3 hr P-12 hr	Practical & Viva
12. Hypersensitive tooth (Erosin, abrasion, attrition)	Etiology, Sequelae, and management	Lecture		Clinical	L-2 hr P-6 hr	Practical & Viva
13. Inlay and onlay	Definition, Indications, contraindications, basic principle of preparation and cementation	Lecture		Clinical	L-2 hr P-4 hr	Practical & Viva

## Subject : Endodontics (Final Year)

Lecture- 40 hours

Tutorial- 30 hours

Clinical- 80 hours

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
1. Introduction	History, concept of modern endodontic therapy	Lecture			1- hrs	Written & Viva
2. Anatomy and physiology of dental pulp	Anatomy, histology, physiology, and age changes of dental pulp	Lecture			L- 4 hrs	Written & Viva
3. Asepsis in endodontics	Infection control; Sterilization	Lecture	Practical		L- 2 hrs P- 4 hrs	Written & Viva
4. Pulpal pathology	Etiology and prevention	Lecture Tutorial			L- 2 hrs T- 4 hrs	Written & Viva
5. Periradicular Pathology	Etiology and prevention	Lecture Tutorial			L- 2 hrs T- 4 hrs	Written & Viva
6. Endodontic diagnostic procedures	Patient description, chief complaint, history clinical and radiographic examination	Lecture		Clinical	L- 2 hrs C- 6 hrs	Clinical & Viva
7. Diagnosis and treatment of dental pain.	Diagnosis and management of pulpal and periradicular pain	Lecture		Clinical	L- 2 hrs C- 4 hrs	Clinical & Viva
8. Preparation for endodontic treatment	Endodontic radiograph; Instrument, Crown preparation; Periodontal therapy, Isolation of tooth	Lecture		Clinical	L- 2 hrs C- 4 hrs	Clinical & Viva
9. Endodontic cavity preparation	Coronal and radicular cavity preparation	Lecture		Clinical	L- 3 hrs C- 6 hrs	Clinical & Viva

10. Pharmacology for endodontics	Infection and pain control, anxiety reduction	Lecture Tutorial			L- 3 hr T- 3 hr	Written & Viva
11. Obturation of the radicular space	Objectives, Materials and methods	Lecture		Clinical	L- 2 hr C- 4 hr	Clinical & Viva
12. Restoration of root filled tooth	Temporary and final coronal restoration	Lecture		Clinical	L- 2 hr C- 6 hr	Clinical & Viva
13. Endodontic surgery	Indication and contraindication; classification, instruments, methods, post operative care	Lecture		Clinical	L- 4 hr C- 9 hr	Clinical & Viva
14. Dental Trauma	Classification, examination, diagnosis and management	Lecture		Clinical	L- 4 hr C- 6 hr	Clinical & Viva
15. Pediatric endodontics	Pulp morphology; pulp capping, pulpotomy, pulpectomy	Lecture		Clinical	L- 4 hr C- 4 hr	Clinical & Viva

### **Examination of conservative dentistry**

In course assessment : 50 marks  
Written : 100 marks  
Practical : 100 marks  
Oral : 50 marks



## Subject: Dental Radiology/ Imaging

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
1. Introduction to Dental Radiology & X-Ray production properties of X-Rays.	Student will be able to define oral Radiology, describe the production & properties of X-Ray etc.	❖ Lecturer ❖ Tutorial		OHP	1 hour	❖ Oral / Written
2. General & Technical considerations ❑ Intra Oral X-ray are Periapical , Bitewing, Occusal,	At the end of session student will able to ❖ Define X ray. ❖ Classify intra oral X-Ray. ❖ Enumerate the indication of intra oral X-Ray. ❖ Able to interpret finding in the intra oral X-Ray.	❖ Lecturer ❖ Tutorial	Demonstration	❖ OHP ❖ Board & Specimen ❖ Transparency	1 hours	❖ Oral / Written
3. Extra Oral Dental Radiology ❑ Orthopantomography (OPG) ❑ Lateral Oblique view. ❑ Lat. skulls cephalometrics, Water views (PNS) & etc. and other Extra – oral radiography.	At the end of the session students will be able to describe different types of extra oral X-Ray. Interpretations of different types of extra oral X-Ray.	❖ Lecturer ❖ Tutorial	Practical	❖ X-Ray film ❖ view Box ❖ OHP ❖ X-Ray film ❖ view Box ❖ Transparency	1 hour 1 hours	❖ Practical ❖ Oral / Written
4. Normal Radiographic anatomy of the maxilla & mandible.	Student will be describe normal Radiographic anatomy of teeth.		Practical	❖ OHP ❖ X-Ray film ❖ view Box ❖ Transparency	1 hours	❖ Practical

## Subject: Dental Radiology/ Imaging

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
5. Normal Radio-opaque & Radio-lucent structures.	Student will be able to describe different types of Radio-opaque Radio-lucent & structure in the X-Rays films.	❖ Lecturer ❖ Tutorial	❖ Practical	❖ OHP ❖ View Box ❖ Transparency	L/T=1 P=1	
6. Identifying of X-Ray films (method of examination of x-ray films.)	To identify to X-Ray films & position of the teeth (upper & lower jaws and left and right of the x-ray films.)	❖ Tutorial	❖ Practical	❖ OHP ❖ View Box ❖ Transparency	P=1	
7. X-Ray machine & their uses.	<input type="checkbox"/> At the end of session identify the different types & parts of the x-ray machine. <input type="checkbox"/> Able to describe the uses of x-ray machine.	❖ Lecturer ❖ Tutorial	❖ Practical	❖ OHP ❖ White Board ❖ Pencil	1 hour	❖ Practical
8. Technique of Dental & oral Radiography	The student will be able demonstrate the technique of dental radiography with correct exposure & angulation of different Teeth.	❖ Tutorial	❖ Practical	❖ OHP ❖ Transparency ❖ X-ray machine	T=1 P=1	❖ Practical
9. Development & preparation of dental X-Ray films. ❖ Photography ❖ Dark Room developing ❖ Fixing light.	At the end of the session & student will be able to describe & demonstrate development & preparation of dental films considering the accurate & correct exposure, photography. Dark room developing & fixing the light.	❖ Lecturer	❖ Practical	❖ OHP ❖ Transparency ❖ Dark Room Materials .	L=1 P=1	❖ Practical
10. Interpretations of differential diagnosis of different x-ray.	At the end of session the students will be able to identify, Explain & interpretate the different types of dental diseases by the different x-ray films.	❖ Lecturer	❖ Practical	❖ OHP ❖ X-Ray View Box ❖ X-Ray films.	L=1 P=1	❖ Practical ❖ Written

## Subject: Dental Radiology/ Imaging

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
11. Radiographic defects, faults and artifacts.	At the end of the course student should be able to identify defects, faults & artifacts of the various x-ray films.		❖ Practical	❖ OHP ❖ View box ❖ X-Ray films ❖ Transparency ❖ film holders	P=1	❖ Practical
12. Radiation hazard and protection. ❖ Types & nature of Radiation ❖ Effects of Radiation on the mouth and jaws. ❖ Hazards of Dental Radiography ❖ Effects of Radio-therapy on the mouth and Jaws. ❖ Dental management of the patients before Radiotherapy	Student will be able to describe the different types Radiation hazards and will be able to mention the protective measure of the different types of dental x-ray procedures.	❖ Lecture ❖ Tutorial  ❖ Lecture  ❖ Lecture  ❖ Lecture   ❖ Lecture		❖ OHP ❖ View box ❖ Lead apron ❖ film holders	L=1 P=1 L=1  L=1  L=1  L=1	❖ Written ❖ Practical



## Sub: Dental Radiology/Imaging

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
13. Special investigation ❖ Immunofluorescence. Siologyraphy, Scintigraphy. ❖ Computerized tomography (CT) ❖ Magnetic resonance imaging (MRI) ❖ Tomography & Sonography on diagnosis of oral and dental anomalies .	Student will be able to describe the different types of latest (updated) investigation for oral diseases.	❖ Lecture ❖ Tutorial	❖ Practical	❖ OHP	L= 1 P= 1	❖ Practical

## Sub: Prosthodontics

Contents	Learning Objectives	Training Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
1. Prosthodontics Technique Construction of model, special tray, Base wax rim	Student should be able to – i. Construct model, base, special tray, acrylic base, wax rim practically.	<ul style="list-style-type: none"> <li>Lecture</li> </ul>	<ul style="list-style-type: none"> <li>Demonstration</li> <li>Laboratory works</li> </ul>	<ul style="list-style-type: none"> <li>Specimen</li> <li>Model</li> <li>Video tape</li> <li>OHP</li> <li>Epidiascope</li> </ul>	<ul style="list-style-type: none"> <li>10 hrs. lecture</li> <li>10 hrs practical</li> </ul>	<ul style="list-style-type: none"> <li>Written examination</li> <li>Practical, Oral</li> </ul>
2. Articulation of model on articulator Alignment of teeth, wax up carving, flasking DEWAXING, application of separating media, packing, curing, deflasking, finishing, polishing.	Student should be able to- 1. Attach the maxillary & mandibular cast including base & with rim in articulator representing jaw relations 2. Align the teeth correctly for the production of functionally effective and esthetically pleasing.	<ul style="list-style-type: none"> <li>Lecture</li> </ul>	<ul style="list-style-type: none"> <li>Demonstration</li> <li>Laboratory works</li> </ul>	<ul style="list-style-type: none"> <li>Specimen</li> <li>Model</li> <li>Video tape</li> <li>OHP</li> <li>Epidiascope</li> </ul>	<ul style="list-style-type: none"> <li>10 hrs. lecture</li> <li>20 hrs practical</li> </ul>	<ul style="list-style-type: none"> <li>Written examination</li> <li>Practical, Oral</li> </ul>
<b>Subject : Complete denture</b>		<b>To be taught in 2<sup>nd</sup> year.</b>			<b>Lecture =20</b>	<b>Practical=30</b>

### 3<sup>rd</sup> years

#### Sub: Partial Denture Prosthesis (Removable)

Contents	Learning Objectives	Training Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
1. Introduction, Examination & diagnosis	Student should be able to – i. Enumerate the definition & terminology of RPD.	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Tutorial</li> </ul>	<ul style="list-style-type: none"> <li>• Chair side teaching</li> <li>• Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>• Specimen</li> <li>• Model</li> <li>• Video tape</li> <li>• OHP</li> <li>• Epidiascope</li> </ul>	<ul style="list-style-type: none"> <li>• 1 hrs. lecture</li> <li>• 2 hrs Lecture</li> <li>• 2 hrs practical</li> </ul>	<ul style="list-style-type: none"> <li>• Written examination</li> <li>• Practical, Oral</li> </ul>
2. Treatment planning & mouth preparation	Student should be able to- i. Formulate a treatment plan ii. Carry out the mouth preparation to improve the foundation of RPD.	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Tutorial</li> </ul>	<ul style="list-style-type: none"> <li>• Chair side teaching</li> <li>• Clinical</li> <li>• Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>• Specimen</li> <li>• Model</li> <li>• Video tape</li> <li>• OHP</li> <li>• Epidiascope</li> </ul>	<ul style="list-style-type: none"> <li>• 2 hrs. lecture</li> <li>• 3 hrs practical</li> </ul>	<ul style="list-style-type: none"> <li>• Written &amp; Oral examination</li> <li>• Practical</li> </ul>
3. Impression	The student should be able to record the imprints of the tissue of upper & lower Jaw	<ul style="list-style-type: none"> <li>• Lecture</li> </ul>	<ul style="list-style-type: none"> <li>• Chair side teaching</li> <li>• Clinical</li> <li>• Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>• Specimen</li> <li>• Model</li> <li>• Video tape</li> <li>• OHP</li> <li>• Epidiascope</li> </ul>	<ul style="list-style-type: none"> <li>• 2 hrs. lecture</li> <li>• 4 hrs practical</li> </ul>	<ul style="list-style-type: none"> <li>• Written &amp; Oral examination</li> <li>• Practical</li> </ul>
4. Model Surveying	Student should be able to- i. Describe the part of surveyor & technique of surveying. ii. Prepare & a master cast.	<ul style="list-style-type: none"> <li>• Lecture</li> </ul>	<ul style="list-style-type: none"> <li>• Clinical</li> <li>• Demonstration</li> <li>• Laboratory</li> </ul>	<ul style="list-style-type: none"> <li>• Specimen</li> <li>• Model</li> <li>• Video tape</li> <li>• OHP</li> <li>• Epidiascope</li> </ul>	<ul style="list-style-type: none"> <li>• 2 hrs. lecture</li> <li>• 3 hrs practical</li> </ul>	<ul style="list-style-type: none"> <li>• Written &amp; Oral examination</li> <li>• Practical</li> </ul>

Contents	Learning Objectives	Training Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
5. Classification component of partial denture	Student should be able to- i. Describe the classification & design the part of a partial denture.	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Tutorial</li> </ul>	<ul style="list-style-type: none"> <li>• Chair Side teaching</li> <li>• Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>• Specimen</li> <li>• Model</li> <li>• Video tape</li> <li>• OHP</li> <li>• Epidiascope</li> </ul>	<ul style="list-style-type: none"> <li>• 5 hrs. lecture</li> <li>• 6 hrs Practical</li> </ul>	<ul style="list-style-type: none"> <li>• Written &amp; Oral examination</li> <li>• Practical</li> </ul>
<b>To be taught in 3<sup>rd</sup> year.</b>						

## 3rd years

### Sub: Partial Denture Prosthesis (Removable)

Contents	Learning Objectives	Training Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
1. Partial denture equations	Student should be able to- i. determine to the balance which must be struck between good & bad which can arise from partial denture.	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Tutorial</li> </ul>	<ul style="list-style-type: none"> <li>• Chair side teaching</li> <li>• Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>• Specimen</li> <li>• Model</li> <li>• Video tape</li> <li>• OHP</li> <li>• Epidiascope</li> </ul>	<ul style="list-style-type: none"> <li>• 1 hrs. lecture</li> </ul>	<ul style="list-style-type: none"> <li>• Written examination</li> <li>• Practical, Oral</li> </ul>
2. Designing partial denture	Student should be able to- construct the pattern of denture .	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Tutorial</li> </ul>	<ul style="list-style-type: none"> <li>• Chair side teaching</li> <li>• Clinical</li> <li>• Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>• Specimen</li> <li>• Model</li> <li>• Video tape</li> <li>• OHP</li> <li>• Epidiascope</li> </ul>	<ul style="list-style-type: none"> <li>• 1 hrs. lecture</li> <li>• 2 hrs practical</li> </ul>	<ul style="list-style-type: none"> <li>• Written &amp; Oral examination</li> <li>• Practical</li> </ul>
3. Preparation of master cast	Student should be able to- Block undesirable under cut area.	<ul style="list-style-type: none"> <li>• Lecture</li> </ul>	<ul style="list-style-type: none"> <li>• Chair side teaching</li> <li>• Clinical</li> <li>• Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>• Specimen</li> <li>• Model</li> <li>• Video tape</li> <li>• OHP</li> <li>• Epidiascope</li> </ul>	<ul style="list-style-type: none"> <li>• 1 hrs. lecture</li> <li>• 3 hrs practical</li> </ul>	<ul style="list-style-type: none"> <li>• Written &amp; Oral examination</li> <li>• Practical</li> </ul>
4. Duplication	Student should be able to- Construct of working model	<ul style="list-style-type: none"> <li>• Lecture</li> </ul>	<ul style="list-style-type: none"> <li>• Clinical</li> <li>• Demonstration</li> <li>• Laboratory</li> </ul>	<ul style="list-style-type: none"> <li>• Specimen</li> <li>• Model</li> <li>• Video tape</li> <li>• OHP</li> <li>• Epidiascope</li> </ul>	<ul style="list-style-type: none"> <li>• 1 hrs. lecture</li> <li>• 4 hrs practical</li> </ul>	<ul style="list-style-type: none"> <li>• Written &amp; Oral examination</li> <li>• Practical</li> </ul>

Contents	Learning Objectives	Training Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
5. Wax pattern for cast partial denture		<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Tutorial</li> </ul>	<ul style="list-style-type: none"> <li>• Clinical</li> <li>• Demonstration</li> <li>• Laboratory</li> </ul>	<ul style="list-style-type: none"> <li>• Specimen</li> <li>• Model</li> <li>• Video tape</li> <li>• OHP</li> <li>• Epidiascope</li> </ul>	<ul style="list-style-type: none"> <li>• 1 hrs. lecture</li> <li>• 2 hrs practical</li> </ul>	<ul style="list-style-type: none"> <li>• Written &amp; Oral examination</li> <li>• Practical</li> </ul>
6. Spruing, investing, burnout, casting, finishing of partials denture frame work.		<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Tutorial</li> </ul>	<ul style="list-style-type: none"> <li>• Clinical</li> <li>• Demonstration</li> <li>• Laboratory</li> </ul>	<ul style="list-style-type: none"> <li>• Specimen</li> <li>• Model</li> <li>• Video tape</li> <li>• OHP</li> <li>• Epidiascope</li> </ul>	<ul style="list-style-type: none"> <li>• 4 hrs. lecture</li> <li>• 6 hrs practical</li> </ul>	<ul style="list-style-type: none"> <li>• Written &amp; Oral examination</li> <li>• Practical</li> </ul>
7. Ocusal rim		<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Tutorial</li> </ul>	<ul style="list-style-type: none"> <li>• Clinical</li> <li>• Demonstration</li> <li>• Laboratory</li> </ul>	<ul style="list-style-type: none"> <li>• Specimen</li> <li>• Model</li> <li>• Video tape</li> <li>• OHP</li> <li>• Epidiascope</li> </ul>	<ul style="list-style-type: none"> <li>• 1 hrs. lecture</li> <li>• 2 hrs practical</li> </ul>	<ul style="list-style-type: none"> <li>• Written &amp; Oral examination</li> <li>• Practical</li> </ul>
8. Arranging teeth,		<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Tutorial</li> </ul>	<ul style="list-style-type: none"> <li>• Clinical</li> <li>• Demonstration</li> <li>• Laboratory</li> </ul>	<ul style="list-style-type: none"> <li>• Specimen</li> <li>• Model</li> <li>• Video tape</li> <li>• OHP</li> <li>• Epidiascope</li> </ul>	<ul style="list-style-type: none"> <li>• 1 hrs. lecture</li> <li>• 2 hrs practical</li> </ul>	<ul style="list-style-type: none"> <li>• Written &amp; Oral examination</li> <li>• Practical</li> </ul>
9. Trial,		<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Tutorial</li> </ul>	<ul style="list-style-type: none"> <li>• Clinical</li> <li>• Demonstration</li> <li>• Laboratory</li> </ul>	<ul style="list-style-type: none"> <li>• Specimen</li> <li>• Model</li> <li>• Video tape</li> <li>• OHP</li> <li>• Epidiascope</li> </ul>	<ul style="list-style-type: none"> <li>• 1 hrs. lecture</li> <li>• 2 hrs practical</li> </ul>	<ul style="list-style-type: none"> <li>• Written &amp; Oral examination</li> <li>• Practical</li> </ul>

Contents	Learning Objectives	Training Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
10. Processing,		<ul style="list-style-type: none"> <li>Lecture</li> <li>Tutorial</li> </ul>	<ul style="list-style-type: none"> <li>Clinical</li> <li>Demonstration</li> <li>Laboratory</li> </ul>	<ul style="list-style-type: none"> <li>Specimen</li> <li>Model</li> <li>Video tape</li> <li>OHP</li> <li>Epidiascope</li> </ul>	<ul style="list-style-type: none"> <li>1 hrs. lecture</li> <li>3 hrs practical</li> </ul>	<ul style="list-style-type: none"> <li>Written &amp; Oral examination</li> <li>Practical</li> </ul>
11. Remounting,		<ul style="list-style-type: none"> <li>Tutorial</li> </ul>	<ul style="list-style-type: none"> <li>Clinical</li> <li>Demonstration</li> <li>Laboratory</li> </ul>	<ul style="list-style-type: none"> <li>Specimen</li> <li>Model</li> <li>Video tape</li> <li>OHP</li> <li>Epidiascope</li> </ul>	<ul style="list-style-type: none"> <li>1 hrs practical</li> </ul>	<ul style="list-style-type: none"> <li>Written &amp; Oral examination</li> <li>Practical</li> </ul>
12. Polishing and finishing	Student should be able to-determine the presence of any blebs arising from air inclusion.	<ul style="list-style-type: none"> <li>Lecture</li> <li>Tutorial</li> </ul>	<ul style="list-style-type: none"> <li>Clinical</li> <li>Demonstration</li> <li>Laboratory</li> </ul>	<ul style="list-style-type: none"> <li>Specimen</li> <li>Model</li> <li>Video tape</li> <li>OHP</li> <li>Epidiascope</li> </ul>	<ul style="list-style-type: none"> <li>1 hrs. lecture</li> <li>1 hrs practical</li> </ul>	<ul style="list-style-type: none"> <li>Written &amp; Oral examination</li> <li>Practical</li> </ul>
13. Insertion into the mouth	Student should be able to-determine the no blemishes are present which could traumatize the oral tissue.	<ul style="list-style-type: none"> <li>Lecture</li> <li>Tutorial</li> </ul>	<ul style="list-style-type: none"> <li>Clinical</li> <li>Demonstration</li> <li>Laboratory</li> </ul>	<ul style="list-style-type: none"> <li>Specimen</li> <li>Model</li> <li>Video tape</li> <li>OHP</li> <li>Epidiascope</li> </ul>	<ul style="list-style-type: none"> <li>1 hrs. lecture</li> <li>2 hrs practical</li> </ul>	<ul style="list-style-type: none"> <li>Written &amp; Oral examination</li> <li>Practical</li> </ul>
14. Review stage of treatment	Student should be able to identity the discrepancies for correction.	<ul style="list-style-type: none"> <li>Lecture</li> <li>Tutorial</li> </ul>	<ul style="list-style-type: none"> <li>Clinical</li> <li>Demonstration</li> <li>Laboratory</li> </ul>	<ul style="list-style-type: none"> <li>Specimen</li> <li>Model</li> <li>Video tape</li> <li>OHP</li> <li>Epidiascope</li> </ul>	<ul style="list-style-type: none"> <li>1 hrs. lecture</li> <li>2 hrs practical</li> </ul>	<ul style="list-style-type: none"> <li>Written &amp; Oral examination</li> <li>Practical</li> </ul>
<b>To be taught in 3rd year.</b>					<b>Lecture=30</b>	<b>Practical- 50</b>

### 4th year complete denture Final Year

Contents	Learning Objectives	Training Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
1. Introduction of complete denture prosthesis	Student should be able to define- i. Complete denture prosthesis. ii. Describe terminology	<ul style="list-style-type: none"> <li>• Lecture</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>• Specimen</li> <li>• Model</li> <li>• Video tape</li> <li>• OHP</li> <li>• Epidiascope</li> </ul>	<ul style="list-style-type: none"> <li>• 2 hrs lecture</li> </ul>	<ul style="list-style-type: none"> <li>• Written examination</li> <li>• Practical &amp; Oral</li> </ul>
2. Anatomy and physiology of he tissues in the denture bearing areas and related structures.	Student should be able to – i. Enumerate the different anatomical land marks very much related to compete denture prosthesis and describe the denture bearing areas.	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Tutorial</li> </ul>	<ul style="list-style-type: none"> <li>• Chair side teaching</li> <li>• Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>• Specimen</li> <li>• Model</li> <li>• Video tape</li> <li>• OHP</li> <li>• Epidiascope</li> <li>• Black board</li> <li>• Handout</li> </ul>	<ul style="list-style-type: none"> <li>• 4 hrs lecture</li> <li>• 4 hrs practical</li> </ul>	<ul style="list-style-type: none"> <li>• Written examination</li> <li>• Practical &amp; Oral</li> </ul>
3. Principles of retention.	Student should be able to describe the retaining and dislodging forces.	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Tutorial</li> </ul>	<ul style="list-style-type: none"> <li>• Chair side teaching</li> <li>• Clinical</li> <li>• Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>• Specimen</li> <li>• Model</li> <li>• Video tape</li> <li>• OHP</li> <li>• Epidiascope</li> </ul>	<ul style="list-style-type: none"> <li>• 3 hrs lecture</li> </ul>	<ul style="list-style-type: none"> <li>• Written examination</li> <li>• Oral</li> </ul>
4. History, Clinical examination & diagnosis.	Student should be able to- i. Record the history and perform clinical examination to identify the potential problem areas & correct to improve the treatment prognosis & reduce the post insertion adjustment & manage a patient successfully.	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Tutorial</li> </ul>	<ul style="list-style-type: none"> <li>• Chair side teaching</li> <li>• Clinical</li> <li>• Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>• Specimen</li> <li>• Model</li> <li>• Video tape</li> <li>• OHP</li> <li>• Epidiascope</li> </ul>	<ul style="list-style-type: none"> <li>• 5 hrs lecture</li> <li>• 8 hrs practical</li> </ul>	<ul style="list-style-type: none"> <li>• Written examination</li> <li>• Practical &amp; Oral</li> </ul>
5. Impression procedure	Student should be able to – i. Record primary & final impression ii. Determine the common faults in the impression. iii. Overcome the problem.	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Tutorial</li> </ul>	<ul style="list-style-type: none"> <li>• Chair side teaching</li> <li>• Clinical</li> <li>• Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>• Specimen</li> <li>• Model</li> <li>• Video tape</li> <li>• OHP</li> <li>• Epidiascope</li> </ul>	<ul style="list-style-type: none"> <li>• 8 hrs lecture</li> <li>• 20 practical</li> </ul>	<ul style="list-style-type: none"> <li>• Written examination</li> <li>• Practical &amp; Oral</li> </ul>
<b>Subject : complete denture</b>		<b>To be taught in 4<sup>th</sup> year.</b>				



## Final Year : Complete denture

Contents	Learning Objectives	Training Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
6. Registration of the jaw relationship	Student should be able to define- i. Trim the wax rim for recording vertical height. ii. Procedure of deterring the vertical height. iii. Describe the effects of discrepancies of vertical height.	<ul style="list-style-type: none"> <li>Lecture</li> <li>Tutorial</li> </ul>	<ul style="list-style-type: none"> <li>Chair Side teaching</li> <li>Clinical</li> <li>Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>Specimen</li> <li>Model</li> <li>Video tape</li> <li>OHP</li> <li>Epidiascope</li> </ul>	<ul style="list-style-type: none"> <li>5 hrs lecture</li> <li>8 hrs practical</li> </ul>	<ul style="list-style-type: none"> <li>Written examination</li> <li>Practical &amp; Oral</li> </ul>
7. Mounting or articulator		<ul style="list-style-type: none"> <li>Lecture</li> <li>Tutorial</li> </ul>	<ul style="list-style-type: none"> <li>Laboratory works</li> </ul>	<ul style="list-style-type: none"> <li>Specimen</li> <li>Model</li> <li>Video tape</li> <li>OHP</li> <li>Epidiascope</li> </ul>	<ul style="list-style-type: none"> <li>6 hrs lecture</li> <li>8 hrs practical</li> </ul>	<ul style="list-style-type: none"> <li>Written examination</li> <li>Practical &amp; Oral</li> </ul>
8. Selection & alignment of teeth.	Student should be able to – i. Select the teeth for individual mouth ii. List out the point during selection of teeth. iii. Describe the main guidelines during alignment of teeth.	<ul style="list-style-type: none"> <li>Lecture</li> <li>Tutorial</li> </ul>	<ul style="list-style-type: none"> <li>Clinical</li> <li>Laboratory works</li> </ul>	<ul style="list-style-type: none"> <li>Specimen</li> <li>Model</li> <li>Video tape</li> <li>OHP</li> <li>Epidiascope</li> </ul>	<ul style="list-style-type: none"> <li>3 hrs lecture</li> <li>2 hrs practical</li> </ul>	<ul style="list-style-type: none"> <li>Written examination</li> <li>Practical &amp; Oral</li> </ul>
9. Trial of complete denture	Student should be able to – Check upper/lower denture for retention, support, stability and occlusion & correct it if there is any discrepancies.	<ul style="list-style-type: none"> <li>Lecture</li> <li>Tutorial</li> </ul>	<ul style="list-style-type: none"> <li>Chair Side teaching</li> <li>Clinical</li> <li>Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>Specimen</li> <li>Model</li> <li>Video tape</li> <li>OHP</li> <li>Epidiascope</li> </ul>	<ul style="list-style-type: none"> <li>4 hrs lecture</li> <li>6 hrs practical</li> </ul>	<ul style="list-style-type: none"> <li>Written examination</li> <li>Practical &amp; Oral</li> </ul>

Contents	Learning Objectives	Training Learning experiences			Expected hours/days	Assessment	
		Class-room	Practical/visit	Aids			
10. Remounting on articulator.	Student should be able to- i. Process and finish the dentures and check it on the articulator. ii. Insert the dentures into the mouth, correct the occlusion and describe the instructions to the patients. iii. Correct the complaints of the patients.	<ul style="list-style-type: none"> <li>Lecture</li> <li>Tutorial</li> </ul>	<ul style="list-style-type: none"> <li>Chair Side teaching</li> <li>Clinical</li> <li>Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>Specimen</li> <li>Model</li> <li>Video tape</li> <li>OHP</li> <li>Epidiascope</li> </ul>	<ul style="list-style-type: none"> <li>2 hrs lecture</li> <li>3 hrs practical</li> </ul>	<ul style="list-style-type: none"> <li>Written examination</li> <li>Practical &amp; Oral</li> </ul>	
11. Delivering finished denture	Student should be able to – instruct the patient about the use & care of the denture.	<ul style="list-style-type: none"> <li>Lecture</li> <li>Tutorial</li> </ul>	<ul style="list-style-type: none"> <li>Chair Side teaching</li> <li>Clinical</li> <li>Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>Specimen</li> <li>Model</li> <li>Video tape</li> <li>OHP</li> <li>Epidiascope</li> </ul>	<ul style="list-style-type: none"> <li>2 hrs lecture</li> <li>3 hrs practical</li> </ul>	<ul style="list-style-type: none"> <li>Written examination</li> <li>Practical &amp; Oral</li> </ul>	
12. Complaints of the complete denture	Student should be able to – describe the cause of all problems revealed by history and examination procedure.	<ul style="list-style-type: none"> <li>Lecture</li> <li>Tutorial</li> </ul>	<ul style="list-style-type: none"> <li>Chair Side teaching</li> <li>Clinical</li> <li>Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>Specimen</li> <li>Model</li> <li>Video tape</li> <li>OHP</li> <li>Epidiascope</li> </ul>	<ul style="list-style-type: none"> <li>5 hrs lecture</li> <li>8 hrs practical</li> </ul>	<ul style="list-style-type: none"> <li>Written examination</li> <li>Practical &amp; Oral</li> </ul>	
13. Relining, Rebasing & Repairing.	Student should be able to – Describe the technique of Relining, Rebasing & Repairing	<ul style="list-style-type: none"> <li>Lecture</li> <li>Tutorial</li> </ul>	<ul style="list-style-type: none"> <li>Chair Side teaching</li> <li>Clinical</li> <li>Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>Specimen</li> <li>Model</li> <li>Video tape</li> <li>OHP</li> <li>Epidiascope</li> </ul>	<ul style="list-style-type: none"> <li>5 hrs lecture</li> <li>10 hrs practical</li> </ul>	<ul style="list-style-type: none"> <li>Written examination</li> <li>Practical &amp; Oral</li> </ul>	
14. Immediate denture	Student should be able to – Construct the denture immediately before the extraction of teeth.	<ul style="list-style-type: none"> <li>Lecture</li> <li>Tutorial</li> </ul>	<ul style="list-style-type: none"> <li>Chair Side teaching</li> <li>Clinical</li> <li>Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>Specimen</li> <li>Model</li> <li>Video tape</li> <li>OHP</li> <li>Epidiascope</li> </ul>	<ul style="list-style-type: none"> <li>4 hrs lecture</li> <li>6 hrs practical</li> </ul>	<ul style="list-style-type: none"> <li>Written examination</li> <li>Practical &amp; Oral</li> </ul>	
<b>Subject : complete denture</b>					<b>To be taught in 4<sup>th</sup> year.</b>	<b>Lecture =70</b>	<b>Practical= 85</b>

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
<b>Fixed Prosthesis:</b> 01. Introduction & terminology Indication, contraindication of crown and bridge prosthesis 02. Examination diagnosis & treatment planning 03. Bridge prosthesis. Treatment planning design of pontic, general principles of retainments support occlusion, complete oral rehabilitation, 04. Cleft palate & oro-facial prosthesis. a) Classification of cleft palate b) Construction of acrylic plate/obtruator	Student should be able to- i Define crown, inlay, ontay bridge,	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Bed side/chair side teaching</li> <li>▪ Clinical</li> <li>▪ Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>▪ Specimen</li> <li>▪ Model</li> <li>▪ Video tape</li> <li>▪ OHP</li> <li>▪ Epidiascope</li> </ul>	<ul style="list-style-type: none"> <li>▪ 1 hrs lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Written &amp; Oral examination</li> </ul>
	Student should be able to- i Examine a patient for fixed prosthesis. ii. Enumerate the caries, periodontal status & crown-root ratio for treatment planing.	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Bed side/chair side teaching</li> <li>▪ Clinical</li> <li>▪ Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>▪ Specimen</li> <li>▪ Model</li> <li>▪ Video tape</li> <li>▪ OHP</li> <li>▪ Epidiascope</li> </ul>	<ul style="list-style-type: none"> <li>▪ 2 hrs lecture</li> <li>▪ 5 hrs practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ Written &amp; Oral examination</li> <li>▪ Practical</li> </ul>
	Student should be able to- i. Define bridge prosthesis, ii. Describe the principles of reiteration & support of the abutment teeth. iii. Design Prepare the pontics of a bridge.	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Bed side/chair side teaching</li> <li>▪ Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>▪ Specimen</li> <li>▪ Model</li> <li>▪ Video tape</li> <li>▪ OHP</li> <li>▪ Epidiascope</li> </ul>	<ul style="list-style-type: none"> <li>▪ 10 hrs lecture</li> <li>▪ 15 hrs practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ Written &amp; Oral examination</li> <li>▪ Practical</li> </ul>
	Student should be able to- i Describe the development defects & classification of cleft palate. ii Describe the technique of construction of acrylic plate/obtruator.	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Bed side/chair side teaching</li> <li>▪ Clinical</li> <li>▪ Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>▪ Specimen</li> <li>▪ Model</li> <li>▪ Video tape</li> <li>▪ OHP</li> <li>▪ Epidiascope</li> </ul>	<ul style="list-style-type: none"> <li>▪ 4 hrs lecture</li> <li>▪ 8 hrs Practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ Written &amp; Oral examination</li> <li>▪ Practical</li> </ul>

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
05. Dental implants	Student should be able to- i. Enumerate the different dental implants and the uses of it.	Lecture	<ul style="list-style-type: none"> <li>▪ Bed side/chair side teaching</li> <li>▪ Clinical Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>▪ Specimen</li> <li>▪ Model</li> <li>▪ Video tape</li> <li>▪ OHP</li> </ul> Epidiascope	<ul style="list-style-type: none"> <li>▪ 3 hrs lecture</li> <li>6 hrs Practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ Written &amp; Oral examination</li> <li>Practical</li> </ul>
6. Indication, contraindication, advantages, disadvantages for preparation of abutments for full & partial veneer crown	Student should be able to- i. Describe the indication, contra indication, advantages, disadvantages for preparation of abutments for full/partial veneer crown. ii. Select a tooth for full/partial veneer crown	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Chair side teaching</li> <li>▪ Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>▪ Specimen</li> <li>▪ Model</li> <li>▪ Video tape</li> <li>▪ OHP</li> <li>▪ Epidiascope</li> </ul>	<ul style="list-style-type: none"> <li>▪ 14 hrs lecture</li> <li>▪ practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ Written &amp; Oral examination</li> </ul>
7. Impression technique, model preparation Laboratory procedure for porcelain crown	Student should be able to- i. Describe technique of impression ii. Preparation the cast	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Chair side teaching</li> <li>▪ Clinical Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>▪ Specimen</li> <li>▪ Model</li> <li>▪ Video tape</li> <li>▪ OHP</li> <li>▪ Epidiascope</li> </ul>	<ul style="list-style-type: none"> <li>▪ 3 hrs lecture</li> <li>▪ 2 hrs practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ Written &amp; Oral examination</li> <li>▪ Practical</li> </ul>
8. Construction of Acrylic/porcelain jacket crown/3acrylic/porcelain veneer crown.	Student should be able to- i. Describe the procedure of the construction of restorations. ii. Facings of the metal restoration with acrylic/porcelain.	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Chair side teaching</li> <li>▪ Clinical Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>▪ Specimen</li> <li>▪ Model</li> <li>▪ Video tape</li> <li>▪ OHP</li> <li>▪ Epidiascope</li> </ul>	<ul style="list-style-type: none"> <li>▪ 15 hrs lecture</li> <li>▪ 15 hrs practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ Written &amp; Oral examination</li> <li>▪ Practical</li> </ul>

## **Topic : Orthodontics**

Recommendation teaching hours for 3rd year BDS

Lecturer-50 hours

Practical & Clinical- 30 hours

Lecture-50 (26 lecturers & 24 Pemorshation)

From Curriculum 1-7 contents for 3rd year BDS

Practical & Clinical -24 hours, per batch

From orthodontics practical 2 clinical evaluation card

Item no 1-5 should be completed in 3rd year

Topics: 1) Orthodontics 2) Children, Community and Preventive Dentistry

Recommendation on Teaching Method for Final Year ( Subject Orthodontics)

<ul style="list-style-type: none"> <li>▪ Lectures –80 hrs alright</li> </ul>	<ul style="list-style-type: none"> <li>▪ Practical &amp; Clinical 150hrs. Relocation                             <ul style="list-style-type: none"> <li>❖ Clinical Demonstration 50 hrs</li> <li>❖ Practical 60 hrs</li> <li>❖ Seminar 5 hrs</li> <li>❖ Table Clinics 5 hrs</li> <li>❖ Case Note Preparation 30 hrs</li> </ul> </li> </ul>
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**Recommendation on Assessment total Marks: 300**

Written 100 Marks	Oral and Practical 200 Marks		
	Practical 100 Marks		
		Oral 100 Marks	
<ul style="list-style-type: none"> <li>❖ MCQ 50 Marks SAQ (Short Answer Questions ) 50 Marks.</li> </ul>	<p><b>In Course Exam 50</b></p> <ul style="list-style-type: none"> <li>❖ In course 3 exam add 20 marks ( Wire Construction Articulation, Bite Registration, Model Analysis, Retainer Construction, Appliance Preparation etc.) Or Clinical Job exam during Department Duty Time)</li> <li>❖ Test Exam add 20 Marks</li> <li>❖ Seminar &amp; Table Clinical Group Presentation 10 Marks</li> </ul>	<p><b>Practical during Professional Exam.</b></p> <p>50 Marks</p> <ul style="list-style-type: none"> <li>❖ Wire Construction/Clinical Job</li> <li>❖ Design/Clinical job</li> <li>❖ Model Analysis/Clinical Job.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Structured Oral Viva-50</li> <li>➤ Oral Clinical-50 OSCE (Fixed before Exam)</li> <li>❖ Patient Examination</li> <li>❖ Diagnosis</li> <li>❖ Treatment planning</li> <li>❖ Behavior</li> <li>❖ Regularity</li> </ul>

**Subject : Orthodontics practical and clinical evaluation card**

Name of the Student:	3rd year Roll No :
Batch No :	4th year Roll No:

Sl No	Items	Hrs	Full Marks	Marks given	Signature	Teachers
<b>3rd Year</b>						
01	Impression taking ( All types)	6 hrs	8			
02	Bite Registration ( All types)	6 hrs	5			
03	Preparation of study model & Labeling	6 hrs	8			
04	Articulation (All types)	6 hrs	5			
05	Study model analysis (self)	6 hrs	8			
<b>Final Year</b>						
06	General wire bending exercise	8 hrs	4			
07	Construction of Adam's Crib	5 hrs	4			
08	Construction of Labial-Bow	4 hrs	4			
09	Construction of Palatal Finger Spring	3 hrs	4			
10	Construction of "Z" Spring	3 hrs	4			
11	Construction of self-supporting Buccal Spring	4 hrs	4			
12	Construction of Begg's/ Hawley Retainer	6 hrs	8			
13	Intra-Oral X-ray film study	3 hrs	4			
14	Cephalometric analysis	6 hrs	8			
15	Hospital case work-1 (New)	20 hrs	25			

## Subject : Orthodontics practical and clinical evaluation card

Name of the Student: Batch No :	3rd year Roll No : 4th year Roll No:
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Sl No	Items	Hrs	Full Marks	Marks given	Signature	Teachers
<b>Final Year</b>						
16	Hospital case work-2 (New)	20 hrs	25			
17	Hospital case work-3 (New)	20 hrs	25			
18	Hospital case work-4 (New)	20 hrs	25			
19	Hospital case work-4 (Old)	20 hrs	22			
20	1st Term Examination date	4 hrs	100			
21	2nd Term Examination date	4 hrs	100			
22	Total marks		400			

Item no 1-5 should be completed in 3rd year and Item no. 6-19 should be completed in Final year. Students must pass all items separately. They will need to use separate forms to complete the different items as and when instructed by the concern teacher.

The different works should be completed by the teaching staff as noted against each items and student must get marks an signed by the concerned teacher after completion of the items.

**This care must be submitted to the Head of the Department immediately after completion of the course.**

General Remarks:

Date :

Dead of the Department

**Signature**



## Sub: Orthodontics

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/vi sit	Aids		
1. Introduction	At the end of the class student should be able to- ❖ Define Orthodontics ❖ Background of Orthodontics ❖ Aims, objectives and scope of Orthodontics: Facial Aesthetics, Normal function, Stability. ❖ Consideration of Orthodontic patients Gr:1-Treatment is urgently necessary Gr:2- Treatment is necessary Gr:3- Treatment is desirable Gr:4- Treatment is still justified Gr:5- Treatment is refused	❖ Lecture ❖ Tutorial	–	❖ SP ❖ OHP Board	L=3 hours	Written /Oral
2. Growth & Development of dentition, jaws & face.	❖ Define primary, mixed & permanent dentition. ❖ Dimensional changes in the dental arches during different dentition period. ❖ Describe the normal growth of jaw, teeth & face. ❖ Explain normal occlusion. ❖ Diagnose face form and profile. ❖ Describe changes at face form & profile. ❖ Psychological & Social impact of abnormal growth & malocclusion	❖ Lecture ❖ Tutorial	–  Self Model Analysis Mixed dentition model	❖ SP ❖ OHP Board  ❖ Model ❖ Manique	L=4 hours P=2 hours D=2 hours	Written/Oral  Written/Oral/Practical
3. Epidemiology	❖ Describe epidemiology of malocclusion including incidence prevalence.	❖ Lecture	–	❖ SP ❖ OHP	L=1 hour	Written/Oral
4. Soft tissue Morphology and behaviors	❖ Describe-competent & incompetent lip & its influence on occlusion. ❖ Explain anatomy & behavior of tongue. ❖ Swallowing behaviors ❖ Describe the effects of Adenoids, Breathing, and Speech.	❖ Lecture ❖ Practical	❖ Chair side ❖ Demons trative ❖ Group discuss	❖ SP ❖ OHP	L=3 hours D=3 hours GD=1 hour	Written/Oral/Practical

## Sub: Orthodontics

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/vi sit	Aids		
5. Malocclusion	<ul style="list-style-type: none"> <li>❖ Define normal &amp; abnormal occlusion.</li> <li>❖ Ideal occlusion-introduction, definition &amp; Andrews 6 keys to normal occlusion.</li> <li>❖ Classify Malocclusion (Angles)</li> <li>❖ Describe different type of Malposition.</li> <li>❖ State the Etiology-(General &amp; local factors)</li> <li>❖ Describe untoward effect</li> </ul>	<ul style="list-style-type: none"> <li>❖ Lecture</li> <li>❖ Practical</li> </ul>	<ul style="list-style-type: none"> <li>❖ Chair side</li> <li>❖ Group discuss</li> <li>❖ Session</li> </ul>	<ul style="list-style-type: none"> <li>❖ SP</li> <li>❖ OHP</li> <li>❖ Model</li> </ul>	L=4 hours P=5 hours D=4 hours GD=1 hour	Written/Oral/Practical
6. Diagnosis of Malocclusion	<ul style="list-style-type: none"> <li>❖ Obtain comprehensive history</li> <li>❖ Extraoral &amp; and intra-oral examination</li> <li>❖ Classification of malocclusion</li> <li>❖ Examination of teeth</li> <li>❖ Appraisal of soft tissue</li> <li>❖ Functional analysis</li> <li>❖ Plan the necessary investigation</li> <li>❖ Maintain appropriate diagnosis record</li> <li>❖ Analyse &amp; interpret the records.</li> <li>❖ Outline the management protocol</li> </ul> <p>Communicate with the patient awaring the probable prognosis &amp; financial involvement.</p>	<ul style="list-style-type: none"> <li>❖ Lecturer</li> <li>❖ Tutorial</li> </ul>	Chair Slide P=10 D=3 GD=2	<ul style="list-style-type: none"> <li>❖ OHP</li> <li>❖ SP</li> <li>❖ Model</li> <li>❖ Patient</li> </ul>	L=4 hours Chair Slide=10 hr D=3 hours GD=2 hours Seminar - 1hr Table Clinical-1hrs	Written/Oral/Practical  Long Case Short Case Lab Work

## Sub: Orthodontics

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
7. Diagnostic Techniques	<ul style="list-style-type: none"> <li>❖ Obtain impression &amp; plaster model.</li> <li>❖ Technical procedure for impression &amp; plaster model</li> <li>❖ Analysis of the study model to assess tooth-jaw discrepancy: arch perimeter, arch length, arch width etc.</li> <li>❖ Intra-oral radiograph</li> <li>❖ Intraoral &amp; Facial photograph.</li> <li>❖ Define cephalometry</li> <li>❖ Anthropological sources &amp; development of cephalometrics</li> <li>❖ Objectives of cephalometric tracings</li> <li>❖ Cephalometric landmarks –Cranial, Maxillary &amp; Mandibular</li> <li>❖ Cephalometric Analysis-Dental, Skeletal, &amp; Skeletal-Dental analysis</li> <li>❖ Orthopantomogram X-ray &amp; importance of it in orthodontic treatment..</li> </ul>	<ul style="list-style-type: none"> <li>❖ Lecturer</li> <li>❖ Tutorial</li> </ul>	<ul style="list-style-type: none"> <li>P=7</li> <li>D=3</li> <li>GD=2</li> </ul>	<ul style="list-style-type: none"> <li>❖ OHP</li> <li>❖ SP</li> <li>❖ Model</li> <li>❖ Patient</li> <li>❖ Tracings</li> </ul>	<ul style="list-style-type: none"> <li>L=2 hrs</li> <li>Chair</li> <li>Slide=5 hrs</li> <li>D=3 hrs</li> <li>GD=2 hrs</li> <li>Seminar-1hrs</li> <li>Table</li> <li>Clinical-1hr</li> </ul>	<ul style="list-style-type: none"> <li>Written/Oral/Practical</li> <li>Lab work</li> </ul>
8. Tissue Changes & Tooth movement	<ul style="list-style-type: none"> <li>❖ Describe different Tissue change</li> <li>❖ Difference between physiologic movement and orthodontic movement.</li> <li>❖ Describe Patho-physiological change of tissue.</li> <li>❖ Histopathological changes at the pressure &amp; tension area.</li> <li>❖ List types of tooth movement.</li> <li>❖ Explain effect of normal and excessive force</li> <li>❖ Explain the tissue changes with different type of appliance including myo-functional appliance.</li> <li>❖ Explain Biological basis of Orthodontics Therapy.</li> <li>❖ State favorable and unfavorable incidence of tooth movement.</li> </ul>	<ul style="list-style-type: none"> <li>❖ Lecturer</li> </ul>	<ul style="list-style-type: none"> <li>❖ 2 hrs Practical</li> </ul>	<ul style="list-style-type: none"> <li>❖ OHP</li> <li>❖ SP</li> <li>❖ Lab work</li> <li>❖ Histological slides</li> </ul>	<ul style="list-style-type: none"> <li>L=6 hrs</li> <li>Lab works</li> </ul>	<ul style="list-style-type: none"> <li>Written/Oral/Practical</li> <li>Lab work</li> </ul>

## Sub: Orthodontics

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/vi sit	Aids		
9. Preventive & Interceptive Orthodontics	<ul style="list-style-type: none"> <li>❖ Explain preventive Orthodontics &amp; Methods.</li> <li>❖ Describe interceptive Orthodontics &amp; Methods.</li> <li>❖ Explain serial extraction, space maintainer tongue guard &amp; habit breaking appliance.</li> <li>❖ State Growth regulatory appliance.</li> </ul>	<ul style="list-style-type: none"> <li>❖ Lecture</li> <li>❖ Tutorial</li> </ul>	<ul style="list-style-type: none"> <li>❖ Practical</li> <li>❖ Lab work</li> </ul>	<ul style="list-style-type: none"> <li>❖ SP</li> <li>❖ OHP</li> <li>❖ Model</li> <li>❖ Patient</li> </ul>	L= 6 hrs Lab works =3 hrs	Written/Oral/Practical  Lab work
10. Treatment of Malocclusion & Appliance selection	<ul style="list-style-type: none"> <li>❖ Diagnosis, planning &amp; treatment of simple &amp; complex malocclusion using a range of Removable, Functional &amp; Fixed appliance</li> <li>❖ Describe method of treatment</li> <li>❖ Types of orthodontic appliance</li> <li>❖ State Tooth-jaw discrepancy</li> <li>❖ State extraction &amp; non-extraction planning</li> <li>❖ A criterion &amp; choice of teeth for extraction</li> <li>❖ Contraindication for extraction</li> <li>❖ Extration without orthodontic treatment</li> <li>❖ Mechanism of action of Removable, Functional &amp; Fixed appliance</li> <li>❖ Treatment of class I, II &amp; III malocclusion with certain aims &amp; objects.</li> </ul>	<ul style="list-style-type: none"> <li>❖ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>❖ Practical</li> <li>❖ Lab work</li> <li>❖ Seminar</li> <li>❖ Table Clinical</li> </ul>	<ul style="list-style-type: none"> <li>❖ OHP</li> <li>❖ SP</li> <li>❖ Model</li> </ul>	L= 7 hrs D= 3hrs GD= 3 hrs Lab=2 hrs Seminar =1hr T.C. = 1hrs	Written/Oral/Practical

## Sub: Orthodontics

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/vi sit	Aids		
11. Materials, instruments & techniques used in orthodontics	<ul style="list-style-type: none"> <li>❖ Specify different materials &amp; instruments &amp; techniques used in orthodontics</li> <li>❖ Properties of S,S wire &amp; recently developed Ni-Ti alloy</li> <li>❖ Principle &amp; method of wire bending exercise</li> <li>❖ Soldering- Introduction,definition</li> <li>❖ Composition &amp; properties of silver Solder &amp; Fluxes</li> <li>❖ Soldering flame</li> <li>❖ Soldering method &amp; procedure</li> <li>❖ Welding-Definition, Principle &amp; mechanism of spot welding</li> <li>❖ Heat treatment procedure</li> </ul>	<ul style="list-style-type: none"> <li>❖ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>P =1</li> <li>D=1</li> </ul>	<ul style="list-style-type: none"> <li>❖ OHP</li> <li>❖ SP</li> </ul>	<ul style="list-style-type: none"> <li>L=3 hrs</li> <li>D=1 hr</li> </ul>	Written/Oral/Practical
12. Orthodontics appliance a) Removable appliance- Technique & training.	<ul style="list-style-type: none"> <li>❖ Definition</li> <li>❖ Basic requirement for an orthodontic appliance</li> <li>❖ General wire bending exercise</li> <li>❖ Design &amp; construction of different spring &amp; clasp</li> <li>❖ Component of removable appliance</li> <li>❖ Describe general principle of design and fabrication of removable appliance</li> <li>❖ State type of appliance for different tooth movement, eg, labiolingual, expansion &amp; contraction of arches</li> <li>❖ Construction of Hawley, Begg retainer &amp; Bite planes</li> <li>❖ Trimming &amp; polishing</li> <li>❖ Insertion &amp; advise for patients</li> <li>❖ Follow up &amp; adjustments</li> <li>❖ Care during treatment</li> <li>❖ Selective case presentation</li> </ul>	<ul style="list-style-type: none"> <li>❖ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>❖ Practical</li> <li>❖ Clinical</li> </ul>	<ul style="list-style-type: none"> <li>OHP</li> <li>SP</li> <li>Model</li> <li>Instrument</li> </ul>	<ul style="list-style-type: none"> <li>L=6 hrs</li> <li>D=5 hrs</li> <li>GD= 1hr</li> </ul>	Written/Oral/Practical

## Sub: Orthodontics

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/ visit	Aids		
b) Functional appliance & dento-facial orthopedics	<ul style="list-style-type: none"> <li>❖ Describe Orthopedic force &amp; its Principles</li> <li>❖ Narrate myo-functional appliance &amp; describe its indication &amp; contraindication</li> <li>❖ Technique &amp; training for construction of Myo-functional appliance</li> <li>❖ Clinical &amp; laboratory steps in construction of Class-II &amp; Class-III activator (Anderson /Mono block type)</li> <li>❖ Adjustment of activator after insertion in the oral cavity</li> <li>❖ Care during treatment</li> <li>❖ Selective case presentation</li> </ul>	Lecture	Practical Clinical	OHP SP Model Instrument	L=4 hrs D=2 hrs GD= 1hr	Written/Oral/ Practical
c. Fixed Appliance- Technique & training Elementary knowledge	<ul style="list-style-type: none"> <li>❖ Describe Principles, identify parts and appliance system currently used.</li> <li>❖ List the advantages and disadvantages</li> <li>❖ Technique &amp; training of Fixed appliance</li> <li>❖ General wire bending exercise</li> <li>❖ Use of multiple loop used in Fixed appliance</li> <li>❖ Upper &amp; Lower ideal arch formation</li> <li>❖ Offset &amp; inset bend, 1<sup>st</sup>, 2<sup>nd</sup>, &amp; 3<sup>rd</sup> order bend, Toe in &amp; Tip back bend etc.</li> <li>❖ Molar Band formation &amp; welding of molar tube in the band with ideal position</li> <li>❖ Cementing of the band</li> <li>❖ Weldable bracket positioning</li> <li>❖ Direct bonding technique of mesh bracket</li> <li>❖ Adjustment of arch wire &amp; follow up</li> </ul>	Lecture	Practical Clinical	OHP SP Model Instrument Bench side Typodonto Exercise	L=3 hrs D=2 hrs GD= 1hr	Written/Oral/ Practical

## Sub: Orthodontics

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/ visit	Aids		
Fixed Appliance- Technique & training Elementary knowledge	<ul style="list-style-type: none"> <li>❖ Stages of treatment progression by Fixed appliance: Anchorage planning , Leveling, Canine retraction, Arch / Anterior contraction, both arch coordination &amp; retention.</li> <li>❖ Care during treatment</li> <li>❖ Selective case presentation</li> </ul>	Do	Do	Do	Do	Do
13. Anchorage	<ul style="list-style-type: none"> <li>❖ State types.</li> <li>❖ Preparation and assessment of anchorage planning</li> <li>❖ Anchorage planning according to need- Mild, Moderate &amp; Maximum</li> <li>❖ Increase anchorage value- Uses of head gear, Chin cap &amp; other Extra-oral /Intra-oral anchorage</li> </ul>	<ul style="list-style-type: none"> <li>❖ Lecture-1</li> </ul>	<ul style="list-style-type: none"> <li>❖ Practical -2</li> </ul>	<ul style="list-style-type: none"> <li>❖ OHP</li> <li>❖ SP</li> <li>❖ Lab</li> </ul>	L=2 P=1 GD=1	Written/Oral/Practical  Lab work
14. Dental Mechanics	<ul style="list-style-type: none"> <li>❖ Describe principles of Orthodontics force control</li> <li>❖ Properties of wire &amp; necessity of heat treatment techniques.</li> <li>❖ Incorporation of loops in the main arch wire</li> </ul>	<ul style="list-style-type: none"> <li>❖ Lecturer</li> <li>❖ Tutorial</li> </ul>	<ul style="list-style-type: none"> <li>❖ Practical</li> </ul>	<ul style="list-style-type: none"> <li>❖ OHP</li> <li>❖ SP</li> <li>❖ Lab</li> </ul>	L=2 P=1	Written/Oral/Practical  Lab work
15. Retention and relapse	<ul style="list-style-type: none"> <li>❖ Describe retention</li> <li>❖ Evaluate relapse after Orthodontics treatment</li> <li>❖ State different type of retainer.</li> </ul>	<ul style="list-style-type: none"> <li>❖ Lecturer</li> <li>❖ Tutorial</li> </ul>	<ul style="list-style-type: none"> <li>❖ Practical</li> </ul>	<ul style="list-style-type: none"> <li>❖ OHP</li> <li>❖ SP</li> <li>❖ Lab.</li> </ul>	L=3 hrs P=1hr GD= 1hr	Written/Oral/Practical

## Sub: Orthodontics

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/vi sit	Aids		
16. Orthodontic; Multi-disciplinary approach	<ul style="list-style-type: none"> <li>❖ Multi-disciplinary treatment procedures</li> <li>❖ Cleft Palate management</li> <li>❖ Pre-surgical Oral-orthopedic &amp; Orthodontic procedure , Post- surgical orthodontic procedure</li> <li>❖ Pre-restorative Orthodontics procedure</li> <li>❖ Describe preventive Periodontics.</li> <li>❖ Selective case presentation</li> </ul>	<ul style="list-style-type: none"> <li>❖ Lecturer</li> <li>❖ Tutorial</li> </ul>	<ul style="list-style-type: none"> <li>❖ Practical</li> </ul>	<ul style="list-style-type: none"> <li>❖ OHP</li> <li>❖ SP</li> </ul>	L= 3 hrs P= 1 hrs Seminar=1 hrs	Written/Oral/Practical
17. Adult Orthodontics	<ul style="list-style-type: none"> <li>❖ Describe adult orthodontics</li> <li>❖ State appliance and Technique for adult orthodontics</li> <li>❖ Selective Case presentation</li> </ul>	<ul style="list-style-type: none"> <li>❖ Lecturer</li> <li>❖ Tutorial</li> </ul>	<ul style="list-style-type: none"> <li>❖ Practical</li> </ul>	<ul style="list-style-type: none"> <li>❖ OHP</li> <li>❖ SP</li> </ul>	L= 1 hrs P= 1 hrs	Written/Oral/Practical



## Subject : Pediatric Dentistry

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
1. Scope & importance of pedodontics.	Student should be able to- v. State the Historical background. vi. Describe the importance of use of primary & secondary dentition.	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>		<ul style="list-style-type: none"> <li>▪ Specimen</li> <li>▪ Model</li> <li>▪ Video tape</li> <li>▪ OHP</li> <li>▪ Epidiascope</li> </ul>	<ul style="list-style-type: none"> <li>▪ 1 hrs lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Written examination</li> <li>▪ Viva</li> </ul>
2. Face Development, Chronology & Morphology of primary & permanent teeth.	Student should be able to- iv. Describe Face Development v. Identify a primary/permanent tooth. vi. State the chronology of teeth(shedding eruption & calcification)	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ Specimen</li> <li>▪ Model</li> <li>▪ Video tape</li> <li>▪ OHP</li> <li>▪ Epidiascope</li> </ul>	<ul style="list-style-type: none"> <li>▪ L-5 hrs</li> <li>▪ P-1 hr</li> <li>▪ T-6</li> </ul>	<ul style="list-style-type: none"> <li>▪ Written examination</li> <li>▪ Viva</li> <li>▪ Practical</li> </ul>
3. History, diagnosis & treatment planning for child patient	Student should be able to- i Take history, clinical examination ii Diagnose disease iii Make treatment plan	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ Patient</li> <li>▪ Video</li> <li>▪ Film</li> <li>▪ Slide</li> </ul>	<ul style="list-style-type: none"> <li>▪ L-5 hrs</li> <li>▪ P-10 hrs</li> <li>▪ T-5 hrs</li> </ul>	<ul style="list-style-type: none"> <li>▪ Written examination</li> <li>▪ Viva</li> <li>▪ Practical</li> </ul>
4. Periodontal disease in children	Student should be able to- Define, etiology, pathology, classification and management of different periodontal & gingival diseases in primary and secondary dentition.	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ patient</li> <li>▪ Video</li> <li>▪ Film</li> <li>▪ Slide</li> </ul>	<ul style="list-style-type: none"> <li>L= 4hr</li> <li>P= 4hr</li> <li>T= 4hr</li> </ul>	<ul style="list-style-type: none"> <li>▪ Written examination</li> <li>▪ Viva</li> <li>▪ Practical</li> </ul>
5. Disease of oral mucous membrane, soft tissues, & other supporting structure	Student should be able to- Define, classify and management	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ patient</li> <li>▪ Video</li> <li>▪ Film</li> <li>▪ Slide</li> </ul>	<ul style="list-style-type: none"> <li>L= 5hr</li> <li>P= 1hr</li> <li>T= 5hr</li> </ul>	<ul style="list-style-type: none"> <li>▪ Written examination</li> <li>▪ Viva</li> <li>▪ Practical</li> </ul>

## Subject : Pediatric Dentistry

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
6. Hereditary, Nutritional, Chromosomal & hormonal factors & communicative disorders in children.	Student should be able to- i Define, classify, diagnose and management of the conditions.	▪ Lecture	▪ Practical	▪ OHP ▪ patient ▪ Video ▪ Film ▪ Slide	L= 7hr P= 2hr T= 4hr	▪ Written examination ▪ Viva ▪ Practical
7. a) Child psychology & Management. b) Pain & anxiety control of children. c) Parent Counseling.	Student should be able to- i Counsel parent & child ii Motivate & management child	▪ Lecture	▪ Practical	▪ OHP ▪ patient ▪ Video ▪ Film ▪ Slide	L= 3hr P= 3hr T= 2hr	▪ Written examination ▪ Viva ▪ Practical
8. a. Occlusal development of primary & secondary dentition b. Preventive & interceptive orthodontics	Student should be able to- i. Identify the abnormalities /irregularities of primary & mixed dentition & their management ii Identify & manage Oral habits. iii. Use space maintainer & others appliances.	▪ Lecture	▪ Practical	▪ OHP ▪ patient ▪ Video ▪ Film ▪ Slide	L= 7hr P= 5hr T-8 hrs	▪ Written examination ▪ Viva Practical
9. The care of injuries to the anterior teeth of children.	Student should be able to- i. Etiology, Examination take measure for prevention ii Diagnose & Immediate Manage.	▪ Lecture	▪ Practical	▪ OHP ▪ patient ▪ Video ▪ Film ▪ Slide	L= 7hr T= 8hr P= 2hr	▪ Written examination ▪ Viva ▪ Practical
10. a) Operative dentistry in children. b) Pulpal treatment in children.	Student should be able to- i. Define, classify, diagnose & manage I-V cavity. ii. Aesthetic restorative dentistry iii. Diagnose & manage pulp pathology.(various types of pulpal treatment) iv. Bleaching of the non vital v. Different types of restorative materials	▪ Lecture	▪ Practical	▪ OHP ▪ patient ▪ Video ▪ Film ▪ Slide	L= 15hrs T= 16 hrs P= 16hrs	▪ Written examination ▪ Viva ▪ Practical

## Subject : Pediatric Dentistry

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
11. Oral surgery in children.	Student should be able to- i. Describe & apply local anaesthetic. ii. Describe & perform extraction of primary & permanent teeth. iii. Describe & perform minor oral surgery iv. Use of antibiotics & other common drugs v. Management of Emergency children patient	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ patient</li> <li>▪ Video</li> <li>▪ Film</li> <li>▪ Slide</li> </ul>	<b>L= 8hrs</b> T= 8hrs P= 8 hrs	<ul style="list-style-type: none"> <li>▪ Written examination</li> <li>▪ Viva</li> <li>▪ Practical</li> </ul>
12. Removable partial denture for the children	Definition, scope and general concept and management	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ patient</li> <li>▪ Video</li> <li>▪ Film</li> <li>▪ Slide</li> </ul>	L=2 hrs T=2 hrs P=2 hrs	<ul style="list-style-type: none"> <li>▪ Written examination</li> <li>▪ Viva</li> <li>▪ Practical</li> </ul>
13. a) Oral habits in children.	Prevention & management	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ patient</li> <li>▪ Video</li> <li>▪ Film</li> <li>▪ Slide</li> </ul>	L=2 hrs T=2 hrs P=4 hrs	<ul style="list-style-type: none"> <li>▪ Written examination</li> <li>▪ Viva</li> <li>▪ Practical</li> </ul>
14. Management of handicapped children	Student should be able to- i. Describe diagnose & manage of the disabled /handicapped/ medically compromised children ii. Risk factors for dental problems	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ patient</li> <li>▪ Video</li> <li>▪ Film</li> <li>▪ Slide</li> </ul>	L= 4hrs T= 2hrs P= 2hrs	<ul style="list-style-type: none"> <li>▪ Written examination</li> <li>▪ Viva</li> <li>▪ Practical</li> </ul>

## Subject : Pediatric Dentistry

Contents	Learning Objectives	Training/Learning experiences			Expected hours/days	Assessment
		Class-room	Practical/visit	Aids		
15. Radiology in children	Student should be able to- i. Indication different techniques, Interpretation of normal & abnormal finding of the Intra and extra oral Radiograph, Radiation hazard and protection .	<ul style="list-style-type: none"> <li>▪ Lecture</li> </ul>	<ul style="list-style-type: none"> <li>▪ Practical</li> </ul>	<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ Patient</li> </ul>	L= 5hrs T= 4hrs P= 2hrs	<ul style="list-style-type: none"> <li>▪ Written examination</li> <li>▪ Viva</li> <li>▪ Practical</li> </ul>
16. Dental caries & it's clinical prevention in Pediatric Dentistry	Student should be able to- i. Describe etiology, classification & pathology of dental caries. ii. Describe, Classify prevention . iii. Prophylactic odontotomy reshaping of fissure describe apply pits & fissure sealant iv. Describe & apply A.R.T (Atraumatic Restorative Treatment)	<ul style="list-style-type: none"> <li>● Lecture</li> </ul>	Practical	<ul style="list-style-type: none"> <li>▪ OHP</li> <li>▪ patient</li> <li>▪ Video</li> <li>▪ Film</li> <li>▪ Slide</li> </ul>	L=10 T=6 P=8	Written , Viva , Practical