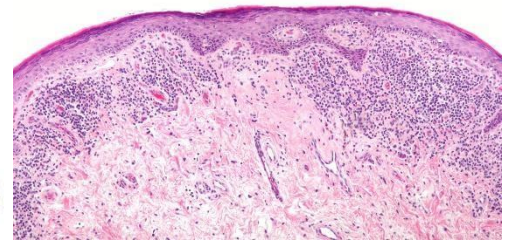
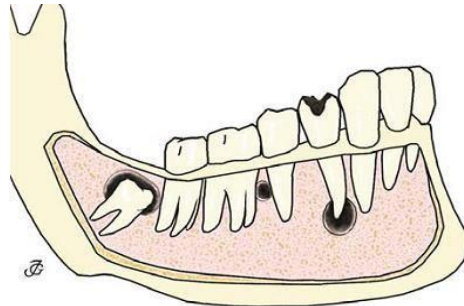




# Study Guide OF ORAL PATHOLOGY

## For BDS



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## **MESSAGE FROM THE PRINCIPAL**

### **AVICENNA DENTAL COLLEGE**



**Prof.Dr.Sohail Abbas Khan**

**{MDS, Dip Op (Hons) BDS}**

It is a matter of immense honour and privilege as the first Principal of Avicenna Dental College to welcome you to prospectively one of the finest dental institutes in the private sector of Pakistan. Avicenna Dental College is a private dental college, which aims to provide the finest dental education to dental undergraduate student in accordance with the latest trends in Medical Education, and to develop them to practice dentistry in the 21<sup>st</sup> century.

While educating dental students to become licensed, empathetic and competent professionals, Avicenna Dental College endeavours to educate students in a supportive environment in which they provide dental care for a diverse populace. In the times to come, we wish to transform our graduates into unfeigned teachers, researchers and consultants by starting post-graduation programs as well.

Avicenna Dental College aims to achieve an enterprising curriculum integrating the basic sciences with clinical experience while utilizing modern technological modalities.

In addition to the production of outstanding oral health professionals, we at Avicenna Dental College recognize our responsibility as a private dental institution to the citizens of the country in making the provision of oral the provision of oral health care available to those who are deprived of ready access.

I feel proud to lead this dental establishment such an inspiring time and hope all of you at Avicenna Dental College will share this pride and play your respective roles in materializing the dream of making this institution the premier dental educator in Pakistan.

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**MESSAGE FROM HOD, GENERAL PATHOLOGY**

**AVICENNA DENTAL COLLEGE**



**DR. SYED SHAUKAT ALI SHAH (M.B.B.S.,M.C.P.S.,M.PHIL)**

Pathology is a branch of medicine that bridges the clinical and non-clinical subjects. Pathologists are called upon to diagnose and confirm many ailments. The department has 3 labs; a Histopathology and Haematology lab, a Microbiology and Chemical pathology lab & a Clinical lab. The Clinical lab works in full coordination with the Avicenna Hospital. The labs are being supervised by professors, experienced in the related specialties. The department has a well-designed museum displaying neatly mounted specimens and several detailed and highly informative charts/ graphs. Highly qualified professors with national & international experience are supervising the pathology labs

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# WHAT IS A STUDY GUIDE?



It is an aid to:

- ❖ Inform students how student learning program has been organized according to their learning objectives.
- ❖ Help students organize and manage their studies throughout the course.
- ❖ Guide students on assessment methods, rules and regulations

## **THE STUDY GUIDE:**

- ❖ Communicates information on organization and management of the course. This will help the student to contact the right person in case of any difficulty.
- ❖ Defines the objectives which are expected to be achieved at the end of the course.
- ❖ Identifies the learning strategies such as lectures, small group teachings, clinical skills, demonstration, tutorial and case-based learning that will be implemented to achieve the course objectives.
- ❖ Provides a list of learning resources such as books, computer assisted learning programs, web- links, journals, for students to consult in order to maximize their learning.

## **STUDENT'S OVERALL PERFORMANCE:**

- ❖ Includes information on the assessment methods that will be held to determine every student's

## **ACHIEVEMENT OF OBJECTIVES:**

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❖ Focuses on information pertaining to examination policy, rules and regulations.

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# APPROVAL FOR THE COURSE

This course has been reviewed, revised and approved by

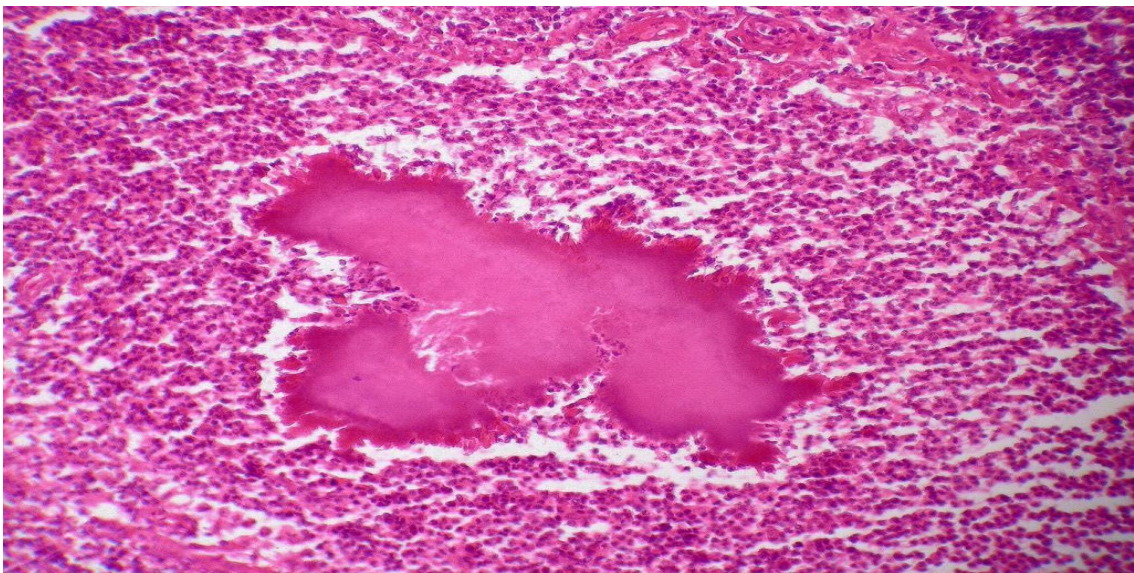
- Pakistan Medical and Dental Council
- University of Health Sciences
- College Curriculum Committee





# GENERAL COURSE INFORMATION

<b>Course Title</b>	ORAL PATHOLOGY		
<b>Course Components</b>	Theory Marks:100	Practical Marks:100	
<b>PRE-REQUISTES</b>	General Anatomy	Human Physiology	General Pathology
<b>REQUISTES</b>	Oral Medicine		
<b>YEAR</b>	3 <sup>RD</sup> Year BDS		



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# COURSE DESCRIPTION

Oral Pathology is one of the basic science subjects in dentistry deals with the nature, identification, and management of diseases affecting the oral and maxillofacial regions (the mouth and jaw areas).

The discipline of Oral Pathology links the training in basic sciences with its applications in clinical dentistry. It covers the diverse spectrum of disease processes affecting oral structures and tissues.

The mission of the specialty of oral pathology deals with the nature, causative factors, clinical and radiographic features, histopathological features of the diseases, identification, effects of diseases affecting the oral and maxillofacial region. Understanding the oral pathology is necessary for diagnosis and for the development of rational treatment and preventive programs as a dental professional. It is considered a specialty of dentistry and pathology.

One of the most important purposes of oral pathology is to give the student the ability to correctly diagnose oral lesions and develop differential diagnosis. There are more than 200 different types of diseases that affect the oral cavity, & many of these can only be diagnosed through microscopic examination.

The department of oral Pathology has educational goals for the 3rd year BDS students and provide quality education including the pathogenesis, clinical, radiographic, histopathology, presentation of oral diseases and training by creating, preservation, integration and utilization of knowledge in the diagnosis of oral pathological diseases. The study of microscope, tissue processing, diagnostic tests and advanced techniques are also including in the goals of Oral Pathology.

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# COURSE OBJECTIVES



To produce graduates who have demonstrated that they have:

- Provide knowledge in oral pathology to undergraduate students.
- The skills and knowledge for a productive, competent, and compassionate practice of oral pathology.
- To familiarize the students with the foundational knowledge necessary for critical thinking, problem solving and diagnosis of oral diseases.
- The skills to clearly communicate their knowledge as needed.
- To familiarize students with multiple diagnostic techniques applicable in every condition.
- Recognize the limitations of routine light microscopy and recognize the indications for additional studies, such as biopsy and special stains and be able to perform appropriate tests and able to interpret their results.
- Read, interpret and critically evaluate the oral pathology literature.
- Demonstrate basic teaching skills.

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# ORAL PATHOLOGY COURSE OUTLINE

The purpose of this course is for the students to understand and know how to apply and identify oral and maxillo-facial diseases and how these diseases to be studied. The pattern of study should be as follow:

- ❖ Definition of the diseases
- ❖ Pathogenesis/etiology of the diseases
- ❖ Clinical Characteristics of the diseases:
  - Prevalence
  - Age
  - Gender
  - Site
  - Color
  - Texture
  - Chief Complaints
- ❖ Radiographic Features:
  - Radiolucent/Radio-opaque/Mixed
  - Borders of lesion
  - Effect on surrounding structure
  - Root resorption
  - Root divergence
  - Characteristic radiographic appearance.

- 
- ❖ Histopathological Features:
    - Capsule
    - Patterns
    - Epithelium lining
    - Connective tissue
    - Characteristic Features of the lesion
  - ❖ Diagnostic aids used in diagnosis.
  - ❖ How to make differential diagnosis
  - ❖ Prognosis of the lesion
  - ❖ Treatment of the lesion

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# UHS COURSE CONTENTS



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# TABLE OF SPECIFICATION



***SYLLABI & TABLE OF SPECIFICATIONS (TOS):***

According to the syllabi & TOS of UHS, LHR are as follows:

**BDS THIRD PROFESSIONAL TABLE OF SPECIFICATIONS (TOS)**

**ORAL PATHOLOGY**

<b>TOPICS</b>	<b>MCQS</b>	<b>%</b>	<b>SEQ</b>	<b>%</b>	<b>TOTAL %</b>
<b>DEVELOPMENTAL DISTURBANCES OF ORAL AND PARA-ORAL STRUCTURES</b>	3	6.6	2	13	9.8
<b>EPITHELIAL PATHOLOGY</b>	4	9	2	13	11
<b>SOFT TISSUE PATHOLOGY</b>	3	6.6	0.5	3.3	4.95
<b>BONE PATHOLOGY</b>	3	6.6	1	6.6	6.6
<b>SALIVARY GLAND PATHOLOGY</b>	3	6.6	1	6.6	6.6
<b>CYST OF ODONTOGENIC ORIGIN</b>	2	4.4	½	3.3	4.95
<b>TUMOR OF ODONTOGENIC ORIGIN</b>	2	4.4	1	6.6	5.5
<b>INFECTIONS</b>	7	16	1	6.6	11.3
<b>DENTAL CARIES</b>	2	4.4	1.5	10	7.2
<b>DISEASES OF PULP AND PERI-APICAL TISSUE</b>	1	2.2	0.5	3.3	2.75
<b>SPREAD OF ORAL INFECTIONS</b>	1	2.2	0	0	1



<b>TOPICS</b>	<b>MCQS</b>	<b>%</b>	<b>SEQ</b>	<b>%</b>	<b>TOTAL %</b>
<b>PHYSICAL AND CHEMICAL INJURY</b>	2	4.4	1.5	10	7
<b>ALLERGIES AND IMMUNO-LOGICAL ORDERS</b>	4	8.8	1	6.6	7.7
<b>HEALING OF WOUNDS</b>	1	2.2	0	0	1
<b>DISEASES OF BLOOD AND BLOOD FORMING ORGANS</b>	2	4.4	1	6.6	5.5
<b>ORAL ASPECTS OF METABOLIC DISEASES</b>	1	2.2	0.5	3.3	2.75
<b>DISEASES OF SKIN</b>	3	6.6	0.5	3.3	4.95
<b>FACIAL AND NEURO-MUSCULAR PATHOLOGY</b>	1	2.2	0	0	1

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**ORAL PATHOLOGY LECTURES WITH  
LEARNING OUTCOME**



TOPICS	LEARNING OUTCOME  (The student should be able to)
1) Developmental disturbances in size of teeth	<ul style="list-style-type: none"> <li>• Describe the types of anomalies associated with the teeth sizes.</li> <li>• Describe the most common site for these teeth.</li> <li>• Describe the syndromes associated with these disturbances</li> </ul>
2) Developmental disturbances in number of teeth	<ul style="list-style-type: none"> <li>• Classify the disturbances associated with the number of teeth.</li> <li>• Explain the etiological factors associated with these anomalies.</li> <li>• Describe the clinical features of these anomalies.</li> </ul>
3) Disturbances in eruption of teeth	<ul style="list-style-type: none"> <li>• Classify the disturbances associated with the eruption of teeth.</li> <li>• Describe the most common teeth associated with these types.</li> <li>• Describe the etiological factors associated with these teeth.</li> <li>• Explain the complications of delayed eruption.</li> <li>• Understand the eruption sequestrum and its etiology.</li> </ul>
4) Disturbances in Shape of teeth	<ul style="list-style-type: none"> <li>• Enlist the disturbances associated with the shape of teeth.</li> <li>• Illustrate the most common teeth involved in each anomaly.</li> <li>• Know the syndromes associated in each anomaly.</li> <li>• Understand the treatment and complications linked with each anomaly.</li> </ul>
5) Enamel Defects	<ul style="list-style-type: none"> <li>• Differentiate among the acquired and hereditary enamel defects.</li> <li>• Enlist the etiological factors involved in acquired enamel defects.</li> <li>• Classify the amelogenesis imperfecta (Witkop classification)</li> <li>• Explain their clinical features i.e. appearance, severity and color of involved teeth</li> <li>• Classify the fluorosis.</li> </ul>
6) Dentine Defects	<ul style="list-style-type: none"> <li>• Classify the dentine defects.</li> <li>• Classify the Dentinogenesis imperfecta and dentine dysplasia</li> <li>• Categorized Dentinogenesis imperfecta and dentine dysplasia.</li> <li>• Know the clinical features, radiographic features and histopathological features of dentine defects.</li> <li>• Know how to differentiate among these lesions on the basis of clinical, radiographic and histopathological features.</li> </ul>
7) Soft Tissue Anomalies	<ul style="list-style-type: none"> <li>• Distinguish the different soft tissue disturbances.</li> <li>• Recognize the etiological agents for the development of soft tissue disturbances.</li> <li>• Understand the clinical feature and histopathological features of each anomalies.</li> <li>• Differentiate among the similar anomalies on the basis of clinical and histopathological features.</li> <li>• Create differential diagnosis of soft tissue disturbances.</li> </ul>
8) Syndromes	<ul style="list-style-type: none"> <li>• Learn the mutation involved in each syndrome along with their gene maps.</li> <li>• Learn the clinical features of syndromes.</li> <li>• Sub-classify the syndromes.</li> <li>• Describe the oral manifestation involved in each syndrome.</li> </ul>
<b>ORAL CYST</b>	
1) Oral Cyst	<ul style="list-style-type: none"> <li>• Define cyst.</li> <li>• Know the difference among true and pseudo-cysts.</li> <li>• Know the inflammatory and non-inflammatory cyst.</li> <li>• Classify the odontogenic and non-odontogenic cysts of oral cavity.</li> <li>• Know the general features of oral cyst.</li> </ul>

2) Cyst Arises from rest of Malassez	<ul style="list-style-type: none"> <li>• Classify the cyst arises from Rest of Malassez.</li> <li>• Understand the pathogenesis of these cyst</li> <li>• Learn the clinical features, radiographic features and histopathological features of these cysts.</li> <li>• Create differential diagnosis.</li> <li>• Draw the histopathological features of cyst in their practical note book.</li> </ul>
3) Cyst Arises from reduced enamel epithelium	<ul style="list-style-type: none"> <li>• Classify the cyst arises from reduced enamel epithelium.</li> <li>• Understand the pathogenesis of these cyst</li> <li>• Distinguish the clinical features, radiographic features and histopathological features of these cysts.</li> <li>• Know the complications associated with these cysts.</li> <li>• Create differential diagnosis.</li> <li>• Draw the histopathological features of cyst in their practical note book.</li> </ul>
4) Cyst Arises from Dental Lamina	<ul style="list-style-type: none"> <li>• Classify the cyst arises from dental Lamina.</li> <li>• Understand the pathogenesis of these cyst.</li> <li>• Learn the clinical features, radiographic features and histopathological features of these cysts.</li> <li>• Know the syndromes associated with OKC.</li> <li>• Recognize the reason of recurrence of OKC.</li> <li>• Learn the complications associated with these cysts.</li> <li>• Create differential diagnosis.</li> <li>• Draw the histopathological features of cyst in their practical note book.</li> </ul>
5) Cyst Arises from vestigial tract	<ul style="list-style-type: none"> <li>• Classify these cysts.</li> <li>• Understand the pathogenesis of these cysts</li> <li>• Know the clinical features, radiographic features and histo-pathological features of these cyst.</li> </ul>
6) Treatment of Cyst	<ul style="list-style-type: none"> <li>• Treatment protocol of oral cyst.</li> <li>• Identify the indications and contra-indications of enucleation.</li> <li>• Identify the indications and contra-indications of marsupialization.</li> <li>• Understand and perform the technique of FNAC</li> </ul>
<b>BONE LESIONS</b>	
1) Fibrous-osseous Lesions of Jaw	<ul style="list-style-type: none"> <li>• Classify the fibrous-osseous lesions of jaw.</li> <li>• Understand the clinical features of the fibrous-osseous lesions.</li> <li>• Classify and know the radiographic features according to stage of lesion and key radiographic features of each lesion.</li> <li>• Draw and learn the histopathological features of the lesion</li> <li>• Differentiate between fibrous-osseous lesion on the basis of radiographic and histopathological features.</li> </ul>
2) Metabolic Conditions of Bone	<ul style="list-style-type: none"> <li>• Classify the metabolic conditions of jaw.</li> <li>• Understand the Pathogenesis of the metabolic conditions of bone.</li> <li>• Understand the clinical and radiographic features of conditions.</li> <li>• Learn and know the histopathological features of these conditions.</li> <li>• Know the complications associated with these conditions</li> <li>• Make differential diagnosis of conditions.</li> <li>• Differentiate the metabolic conditions on the basis of clinical, radiographic and histopathological features.</li> </ul>

3) Benign Tumors of Bone	<ul style="list-style-type: none"> <li>Classify the benign tumors of bone.</li> <li>Know the etiological factors involved in each benign tumor.</li> <li>Understand the clinical, radiographic and histopathological features of benign tumors of bone.</li> <li>Differentiate among these benign tumours of the bone on the basis of their clinical and radiographic features.</li> </ul>
4) Giant Cell Lesions of Bone	<ul style="list-style-type: none"> <li>Classify the giant cell lesions.</li> <li>Understand the clinical, radiographic and histopathological features.</li> <li>Draw the histopathological features of Giant cell lesions.</li> <li>Differentiate it from its other mimicking lesions.</li> </ul>
5) Cyst of Bone	<ul style="list-style-type: none"> <li>Understand the pathogenesis involved in the formation of bone cyst.</li> <li>Know the clinical and radiographic features of the bone cyst.</li> <li>Learn and draw the histopathological features of these cyst.</li> <li>Create differential diagnosis on the basis of their clinical, radiographic and histopathological features</li> </ul>
6) Malignant Tumours of Bone	<ul style="list-style-type: none"> <li>Classify the malignant tumours of bone.</li> <li>Understand the pathogenesis involved in these tumours.</li> <li>Classify each and every tumor on the basis of their clinical and histopathological features.</li> <li>Learn the radiographic features of the tumor along with their distinctive radiographic features.</li> <li>Learn and draw the histopathological features.</li> </ul>
<b>ODONTOGENIC TUMORS</b>	
1) Odontogenic tumor arises from Epithelium	<ul style="list-style-type: none"> <li>Classify odontogenic tumours according to their origin.</li> <li>Understand the clinical features of Ameloblastoma, CEOT, AOT, CEC and Squamous odontogenic tumor.</li> <li>Learn the radiographic features of epithelial origin odontogenic tumors</li> <li>Know and able to draw the histopathological features.</li> <li>Differentiate these tumours from each other on the basis of clinical, radiographic and histopathological features.</li> <li>Create differential diagnosis.</li> </ul>
2) Connective tissue origin odontogenic tumor	<ul style="list-style-type: none"> <li>Learn the clinical, radiographic and histopathological features of these tumours.</li> <li>Understand distinctive radiographic and histopathological features of these tumours.</li> </ul>
3) Epithelium and connective tissue origin odontogenic tumor	<ul style="list-style-type: none"> <li>Learn the clinical, radiographic and histopathological features of these tumours.</li> <li>Understand distinctive radiographic and histopathological features of these tumours.</li> <li>Create differentiating points between similar lesions.</li> </ul>
4) Malignant odontogenic tumors	<ul style="list-style-type: none"> <li>Learn the difference between malignant odontogenic tumours</li> <li>Learn the clinical features and histopathological features of these tumours.</li> </ul>
<b>EPITHELIAL LESION</b>	
1) Squamous Papilloma 2) Keratoacanthoma	<ul style="list-style-type: none"> <li>Know the pathogenesis of these lesions.</li> <li>Understand the clinical features.</li> <li>Identify, label and able to draw the histopathological features</li> </ul>

3) Benign Pigmented lesion	<ul style="list-style-type: none"> <li>• Classify the benign pigmented lesions.</li> <li>• Understand the differences on the basis of clinical features i.e. site, size and age.</li> <li>• Know the pathogenesis involved in these lesions.</li> <li>• Draw and perceive histopathological the knowledge of these lesions.</li> <li>• Know the syndromes associated with these lesions.</li> </ul>
4) Leukoplakia 5) Epithelial hyperplasia	<ul style="list-style-type: none"> <li>• Classify the lesions on their clinical and histopathological features.</li> <li>• Define the major terminologies used in epithelial hyperplasia.</li> <li>• Understands the etiological factors involved in Leukoplakia.</li> <li>• Know the clinical features of variants of leukoplakia.</li> <li>• Differentiate between pre-malignant and malignant lesions.</li> <li>• Distinguish among pre-malignant lesion and pre-malignant conditions.</li> <li>• Learn and identify the histopathological points of the lesions.</li> <li>• Create differential diagnosis.</li> </ul>
6) Epithelial atrophy 7) (Oral sub-mucous fibrosis)	<ul style="list-style-type: none"> <li>• Understand the pathogenesis involved in the progression of the lesion.</li> <li>• Understand the clinical features of the lesions.</li> <li>• Learn the histo-pathological features of the lesion.</li> </ul>
8) Epithelial Dysplasia	<ul style="list-style-type: none"> <li>• Define epithelial dysplasia.</li> <li>• Classify/ grade epithelial dysplasia on the histo-pathological basis.</li> <li>• Learn the architectural and cytological alterations observed in epithelial dysplasia.</li> <li>• Differentiate epithelial dysplasia from Carcinoma-in-situ.</li> <li>• Differentiate carcinoma-in-situ from Carcinoma.</li> </ul>
9) Erythroplakia	<ul style="list-style-type: none"> <li>• Define the erythroplakia.</li> <li>• Understand the pathogenesis involved in and progression of lesion.</li> <li>• Know the histopathological features of the lesions.</li> <li>• Understand the logical points for the color of lesion.</li> <li>• Know how to differentiate it from its other similar lesions</li> <li>• Create differential diagnosis.</li> </ul>
10) Malignant epithelial neoplasms	<ul style="list-style-type: none"> <li>• Define malignant epithelial tumours.</li> <li>• Define Squamous cell carcinoma.</li> <li>• Understand the pathogenesis involved in the Squamous cell carcinoma.</li> <li>• Know the risk factors involved in the Squamous cell carcinoma of the oral cavity.</li> <li>• Learn the clinical features of OSCC according to the site of tumor i.e. tongue, lip, buccal mucosa, hard palate and soft palate.</li> <li>• Understand and able to draw the histopathological features of OSCC.</li> <li>• Know the grading of the OSCC.</li> <li>• Learn the TNM staging of the OSCC.</li> <li>• Know the most common sites for metastasis of OSCC.</li> <li>• Learn the treatment protocol of OSCC.</li> <li>• Classify the SCC into its clinical variants.</li> <li>• Understand the clinical features and histopathological features of each and every variants of SCC.</li> </ul>
11) Melanoma	<ul style="list-style-type: none"> <li>• Define melanoma.</li> <li>• Understand the pathogenesis involved in the development and progression of melanoma.</li> <li>• Understand the vertical and nodular growth pattern of melanoma.</li> <li>• Learn the clinical features of melanoma.</li> <li>• Classify melanoma.</li> <li>• Understand the clinical and histopathological features of each type of melanoma.</li> <li>• Knows how to differentiate it from Nevus or its benign counterpart.</li> </ul>

	<ul style="list-style-type: none"> <li>• Knows the Clarks classification of the melanoma.</li> <li>• Understand the prognosis and the factors associated with it.</li> <li>• Learn the treatment protocol of melanoma.</li> </ul>
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## CARIES AND PULPAL INFECTIONS

1) Dental caries	<ul style="list-style-type: none"> <li>• To describe the dental caries</li> <li>• Classify dental caries</li> <li>• Describe the enamel and dentin caries</li> <li>• Explain the clinical and histopathological features of enamel and dentin caries</li> </ul>
2) Pulpitis	<ul style="list-style-type: none"> <li>• Able to explain and distinguish various clinical types of pulpitis</li> <li>• Explain different etiological agents associated with pulpitis</li> <li>• Describe reversible and irreversible pulpitis.</li> <li>• Differentiate between reversible and irreversible pulpitis</li> <li>• Explain pulp necrosis</li> <li>• Understand different diagnostic techniques to assess the vitality of symptomatic tooth and pulp</li> <li>• Describe the histopathological features and management of acute, chronic and hyperplastic pulpitis</li> </ul>
3) Periapical lesions	<ul style="list-style-type: none"> <li>• Describe and identify the factors leading to acute and chronic periapical lesions.</li> <li>• Differentiate and explain chronic apical (periapical granuloma &amp; cyst) and acute apical (periapical abscess) periodontitis.</li> <li>• Explain the complications and management of acute and chronic periapical periodontitis</li> </ul>
4) Osteomyelitis	<ul style="list-style-type: none"> <li>• Understand and classify osteomyelitis.</li> <li>• Describe the clinical, radiographic and histopathological features of acute and chronic osteomyelitis</li> <li>• Illustrate features and complications of cellulitis and Ludwig's angina.</li> <li>• Explain the Garre's osteomyelitis</li> </ul>

## SALIVARY GLAND LESION

1) Reactive lesions of salivary glands	<ul style="list-style-type: none"> <li>• Explain mucocele</li> <li>• Differentiate between mucocele and mucus retention cyst</li> <li>• Understand sialolithiasis and clinical &amp; histopathological features of the affected gland</li> <li>• Discuss aetiology, clinical and histopathological features of chronic sclerosing sialadenitis</li> <li>• Understand necrotizing sialometaplasia, its pathophysiology, clinical and histopathological features</li> <li>• Create differential diagnosis of necrotizing sialometaplasia</li> </ul>
2) Salivary gland infections	<ul style="list-style-type: none"> <li>• Understand features of acute and chronic sialadenitis</li> <li>• Explain viral and bacterial sialadenitis.</li> </ul>
3) Immune-mediated diseases	<ul style="list-style-type: none"> <li>• Know about immune mediated diseases</li> <li>• Describe Sjogren's syndrome and understand its primary and secondary types</li> <li>• Understand the clinical and laboratory detection of Sjogren's syndrome</li> <li>• Explain diagnostic criteria, histopathological features and management of Sjogren's syndrome</li> </ul>
4) Salivary gland tumours (Benign)	<ul style="list-style-type: none"> <li>• Classify salivary gland tumours</li> <li>• Understand distinguishing features of benign and malignant tumours</li> <li>• Distinguish the clinical features, radiographic features and histopathological features of benign tumours (pleomorphic adenoma, monomorphic adenomas, oncocytoma &amp; Warthin tumor).</li> </ul>

	<ul style="list-style-type: none"> <li>• Know the reason for higher recurrence rate of pleomorphic adenoma</li> <li>• Create differential diagnosis of these tumours.</li> </ul>
5) Malignant salivary gland tumors	<ul style="list-style-type: none"> <li>• Discuss clinical, histopathological features and grading criteria of mucoepidermoid carcinoma.</li> <li>• Learn the clinical and distinguishing histopathological features of adenoid cystic carcinoma.</li> <li>• Know the variants of adenoid cystic carcinoma.</li> <li>• Recognize the reason for post-surgical recurrence of adenoid cystic carcinoma.</li> <li>• Learn the clinical and histopathological features of acinic cell carcinoma.</li> <li>• Understand clinical and histopathological features of Polymorphous low-grade carcinoma</li> <li>• Know the treatment protocol of these malignant tumours</li> <li>• Create differential diagnosis.</li> </ul>
<b>CONNECTIVE TISSUE LESIONS</b>	
1) Fibrous tissue	<ul style="list-style-type: none"> <li>• Distinguish between fibrous hyperplasia, benign and malignant fibrous tumors</li> <li>• Able to describe clinical, histopathological features and differential diagnosis of fibrous hyperplasia's.</li> <li>• Explain clinical, radiographic, histopathological and differential diagnosis of benign fibrous lesions</li> <li>• Describe the clinical, radiographic and histopathological features as well as differential diagnosis of malignant fibrous lesions</li> </ul>
2) Neural tissue	<ul style="list-style-type: none"> <li>• Know hyperplasia's of neural tissue. Clinical, histopathological findings and differential diagnosis of neural hyperplasia's</li> <li>• Know the features, mutated genes &amp; diagnostic criteria of syndrome (multiple endocrine neoplasia) associated with neural hyperplasia (palisaded encapsulated neuroma)</li> <li>• Distinguish the clinical, histopathological &amp; differential diagnosis of benign neural tumors</li> <li>• Understand &amp; explain multiple neurofibromatosis</li> <li>• Describe clinical, radiographic, histopathological &amp; differential diagnosis of malignant neural tumor</li> <li>• Know clinical, histopathological and differential diagnosis of benign and malignant muscle tumours.</li> </ul>
3) Adipose tissue	<ul style="list-style-type: none"> <li>• Describe the clinical histopathological features and differentials of benign as well as malignant adipose tissue tumor</li> <li>• Distinguish between vascular proliferations in both soft and bony tissues</li> <li>• Know clinical, histopathological features &amp; differential diagnosis of benign vascular proliferations</li> <li>• Distinguish between hamartomas &amp; tumours of vascular tissues</li> <li>• Elaborate the various forms of vascular hamartomas, clinical, histopathological features &amp; differential diagnosis</li> <li>• Explain the related syndromes</li> <li>• Describe malignant vascular tumours in terms of clinical, histopathological features, and immunomarkers</li> </ul>
4) Vascular Tissue	<ul style="list-style-type: none"> <li>• Distinguish between vascular proliferations in both soft and bony tissues</li> <li>• Know clinical, histopathological features &amp; differential diagnosis of benign vascular proliferations</li> <li>• Distinguish between hamartomas &amp; tumours of vascular tissues</li> <li>• Elaborate the various forms of vascular hamartomas, clinical, histopathological features &amp; differential diagnosis</li> <li>• Explain the related syndromes</li> <li>• Describe malignant vascular tumours in terms of clinical, histopathological features, and immunomarkers</li> </ul>
5) Osseous and cartilaginous tissue	<ul style="list-style-type: none"> <li>• Define Cchoristomas and explain clinical &amp; histopathological features of osseous and cartilaginous Cchoristomas</li> <li>• Explain clinical and histopathological features of soft tissue osteomas</li> </ul>



	<ul style="list-style-type: none"> <li>Describe myositis ossificans, its clinical, radiographic, histopathological features and differential diagnosis.</li> </ul>
<b>IMMUNE MEDIATE DISORDERS</b>	
1) Recurrent Aphthous Stomatitis	<ul style="list-style-type: none"> <li>Define RAS</li> <li>Describe its types</li> <li>Describe the systemic conditions associated with RAS</li> <li>Describe the syndromes associated with RAS</li> </ul>
2) Mucosal And Skin Conditions	<ul style="list-style-type: none"> <li>Classify immune mediated disorder.</li> <li>Explain the pathogenesis of these immune mediated disorders.</li> <li>Describe the clinical features of these conditions along with histopathology</li> <li>Describe the concept of immunofluorescence</li> <li>Draw the histopathological features of these disorders in their practical note book.</li> <li>Create differential diagnosis.</li> </ul>
3) Allergic Reactions	<ul style="list-style-type: none"> <li>Define allergic reactions</li> <li>Describe its types</li> <li>Describe the etiological factors associated with types of allergic reaction along with its clinical presentation.</li> </ul>
4) Granulomatous Condition of Oral Cavity	<ul style="list-style-type: none"> <li>Enlist the different granulomatous condition of oral cavity</li> <li>Explain their clinical features</li> </ul>
<b>PHYSICAL AND CHEMICAL INJURIES</b>	
1) Physical Injuries	<ul style="list-style-type: none"> <li>Describe physical injuries associated with teeth</li> <li>Differentiate clinically, Attrition Abrasion and Erosion.</li> <li>Describe concept of resorption and differentiate between its types.</li> </ul>
2) Physical Injuries Related to Gingiva & Tongue	<ul style="list-style-type: none"> <li>Classify physical injuries related to gingiva.</li> <li>Describe lesions associated with tongue like traumatic atrophic glossitis, benign migratory glossitis, hairy tongue, fissured tongue</li> <li>Create differential diagnosis.</li> </ul>
3) Mucosal Tissue Injuries	<ul style="list-style-type: none"> <li>Describe mucosal tissue injuries like Factitious Injuries, Denture Injuries, Electrical Burns, Thermal Burns</li> <li>Distinguish the clinical features of these injuries</li> <li>Create differential diagnosis.</li> </ul>
4) Radiation Injuries	<ul style="list-style-type: none"> <li>Describe mucosal tissue injuries like Radiation Mucositis, Xerostomia, Radiation Caries, Osteoradionecrosis and Soft Tissue Radiation Injuries</li> <li>Distinguish the clinical features of these injuries</li> <li>Create differential diagnosis.</li> </ul>
5) Chemical Injuries	<ul style="list-style-type: none"> <li>Describe chemical injuries associated with teeth, gingiva and oral mucosa</li> <li>Distinguish the clinical features of these injuries</li> <li>Create differential diagnosis.</li> </ul>
<b>BLOOD DISORDERS</b>	
1) Red Blood Cells	<ul style="list-style-type: none"> <li>Describe diseases associated with RBCs like anaemia, Thalassemia etc</li> <li>Explain its types, their clinical features along with its oral manifestation</li> </ul>

2) White Blood Cells	<ul style="list-style-type: none"> <li>• Describe diseases associated with WBCs like Leukopenia, Agranulocytosis, Cyclic Neutropenia etc.</li> <li>• Explain its types, their clinical features along with its oral manifestation</li> </ul>
3) Neoplasms	<ul style="list-style-type: none"> <li>• Describe neoplasm related to blood cells like leukemia, Lymphomas, multiple myeloma.</li> <li>• Understand the etiological factors associated with these blood disorders</li> <li>• Explain its types, their clinical features along with its oral manifestation</li> </ul>
4) Bleeding Disorders	<ul style="list-style-type: none"> <li>• Describe bleeding disorder like Thrombocytopenia, Scurvy, Haemophilia etc</li> <li>• Describe its types, their clinical features along with its oral manifestation</li> </ul>
5) Viral Infections	<ul style="list-style-type: none"> <li>• Describe common viral infections occurring in the oral cavity.</li> <li>• Learn the structure and pathogenesis of the viruses.</li> <li>• Mention oral manifestation of viral diseases.</li> <li>• Explain histopathology and laboratory diagnosis of common viral diseases of oral cavity</li> </ul>
6) Bacterial Infections	<ul style="list-style-type: none"> <li>• Describe common bacterial infections occurring in the oral cavity.</li> <li>• Mention oral manifestation of bacterial diseases.</li> <li>• Explain histopathology and laboratory diagnosis of common bacterial diseases of oral cavity</li> </ul>
7) Fungal Infections	<ul style="list-style-type: none"> <li>• Describe common fungal infections occurring in the oral cavity</li> <li>• Learn the etiological factors involved in the acquisition of fungal infections.</li> <li>• Mention oral manifestation of fungal diseases</li> <li>• Explain histopathology and laboratory diagnosis of common fungal diseases of oral cavity</li> </ul>

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# **STUDENT ADDITIONAL PRIVATE STUDY HOURS PER WEEK & STUDENT SUPPORT:**

In Additional to the lectures in the college hours the student is expected to put in 5 hours of private study/learning hours per week.

(This is an average for the course).

The students are encouraged to interact with the tutors of the course

for any additional help required during the course. The staff members are instructed to inform the students regarding the office hours when they can approach the faculty for their help.

After each class the faculty member allocates a few minutes to clear the doubts of the students if needed.

Group of ten students are allotted to head of department, who is their mentor, the students can even approach their respective mentors if they have any additional problems with the subject.



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**TEACHING AND LEARNING RESOURCES**

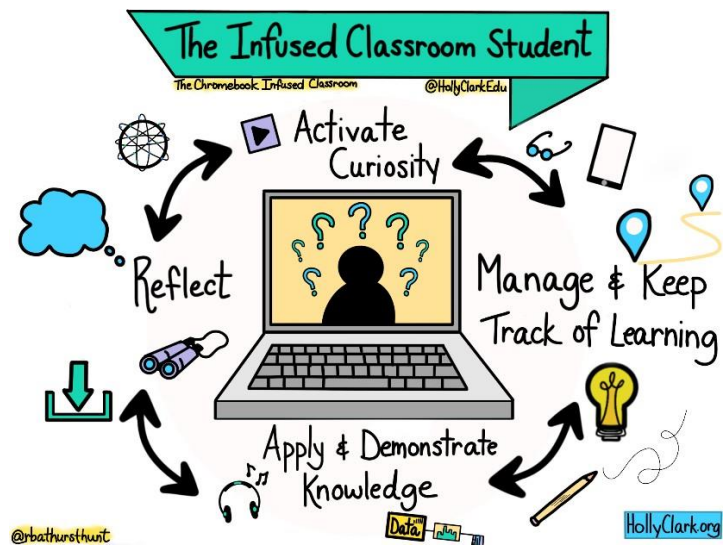


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# TEACHING AND LEARNING RESOURCES:

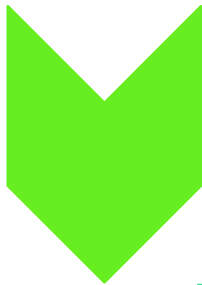
- Power point presentations
- Quizzes
- Tell and show
- Poster competition
- Discussion on last year UQS
- Discussion of important questions during class would also aid in developing cognitive skills.
- Design assignments in such a way that the students would have to correlate the various topics and information given to them.
- The students will be asked oral questions after every session, group discussions, group tasks will be designed so that the students learn to interact with their batch mates.
- In addition, project work i.e. review article will be assigned to small groups so that they learn to take up the responsibility and complete it.
- Summer Vacations Homework.
- ❖ During the practical's students will be shown microscopic slides to give them in depth knowledge and understanding of the subject.

# STUDENTS ROLES



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# STUDENTS ROLES



- Listen carefully to what a professor or other students are saying
- Mark or make notes of the points you wish to **answer** or **discuss** or **question**.
- Introduce your contribution with a quick summary of the discussion or point... "As I understand it..."
- Be certain it is clear to the class and professor when you are summarizing and when you are giving your opinion
- After you have spoken, it is appropriate to ask for feedback. if others understand what you have said if others agree/disagree with you. Demonstrate openness and dialogue: you should score points with your professor!

- 
- **You can develop your own note taking system and study strategy** with the five "R's" of note-taking:

- **Record \* Reduce \* Recite \* Reflect \* Review**
- **Get a good loose-leaf notebook:**  
This will enable you to add, delete, and re-sequence pages and materials.
- Begin each session's notes with a cover page for later summaries and test preparation.

- **Use comparison charts to highlight the differences in key concepts.**
- You could also make use of comparison charts when you're studying mimicking lesions, setting up different characters in a novel in different columns, with attributes or other information in each rows.



STUDY  
MULTIPLE  
STUDY GUIDES

- Create a study guide in a combination of formats, using the main concepts and supporting information you pulled from your study materials. You may draft the guides on paper, by hand, or use internet.



# TAKING NOTES IN CLASSROOM LECTURES

You can develop your own note taking system and study strategy

with the five "R's" of note-taking:

**Record \* Reduce \* Recite \* Reflect \* Review**

**Get a good loose-leaf notebook:**

This will enable you to add, delete, and re-sequence pages and materials.

Begin each session's notes with a cover page for later summaries and test preparation.



## A TYPICAL NOTES PAGE:

<ul style="list-style-type: none"> <li>❖ Heading:</li> <li>❖ Date:</li> <li>❖ Subject:</li> </ul>	<ul style="list-style-type: none"> <li>❖ Lecture taught</li> <li>❖ Teacher name</li> <li>❖ Fellow student contribution</li> </ul>
<p><b>2. Reduce:</b></p> <p><i>After the class</i>  <i>Summarize:</i></p> <ul style="list-style-type: none"> <li>❖ <b>Key/cue words</b></li> <li>❖ <b>Questions</b></li> <li>❖ Link to information from your textbook, Websites or other sources that helps you understand or study the material</li> </ul>	<p><i>Record/take notes in class here:</i></p> <ul style="list-style-type: none"> <li>❖ <b>Identify</b> the main points</li> <li>❖ <b>Capture</b> the main ideas</li> <li>❖ Use outlines or concept maps</li> <li>❖ Use words and pictures and graphs or whatever it takes to get the information down quickly.</li> <li>❖ Avoid quoting unless it is very necessary.</li> </ul>

# MAKE COMPARISON CHARTS/DIFFERENCES

A comparison chart allows you to organize information visually so that you can see relationships among categories or characteristics. It is a very effective format when you need to be able to understand the differences or similarities among facts, theories, theorists, processes, etc.



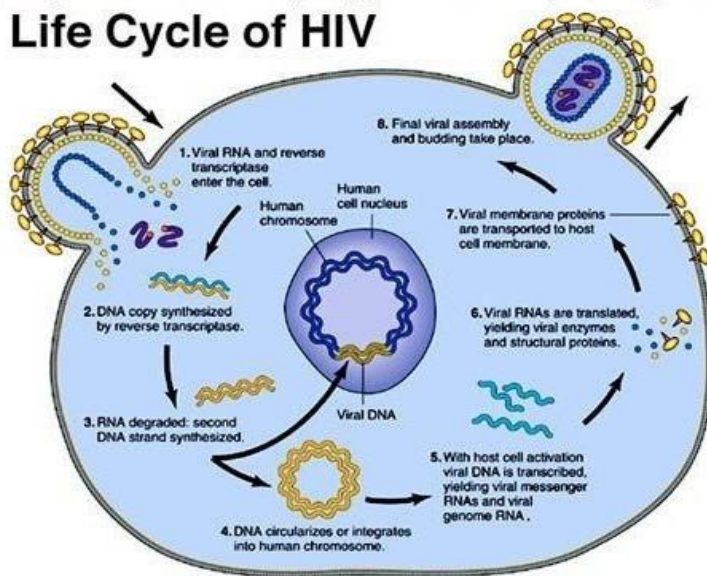
LESIONS YOU ARE COMPARING	CHARACTERISTICS YOUR ARE COMPARING				
	AGE	GENDER	SITE	RADIOGRAPHIC FEATURES	HISTOPATHOLOGICAL FEATURES
ODONTOGENIC KERATOCYST					
DENTIGEROUS CYST					

# DRAW FLOW CHARTS & DIAGRAMS

Diagrams & Flow chart allow you to visually represent dynamic information such as a process, procedure, stages, and steps. For example, in a oral pathology class, you could create a diagram to describe how HIV virus enter in the host cell.

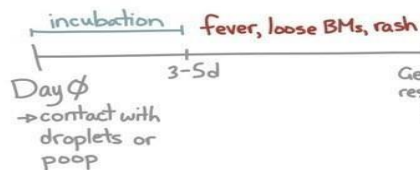
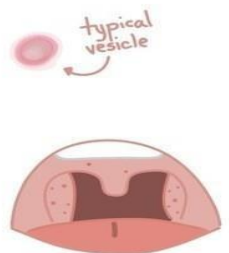
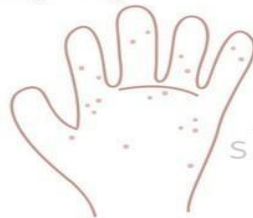
Byer/Shainberg/Galliano Dimensions Of Human Sexuality, 5e. Copyright © 1999. The McGraw-Hill Companies, Inc. All Rights Reserved.

## Life Cycle of HIV



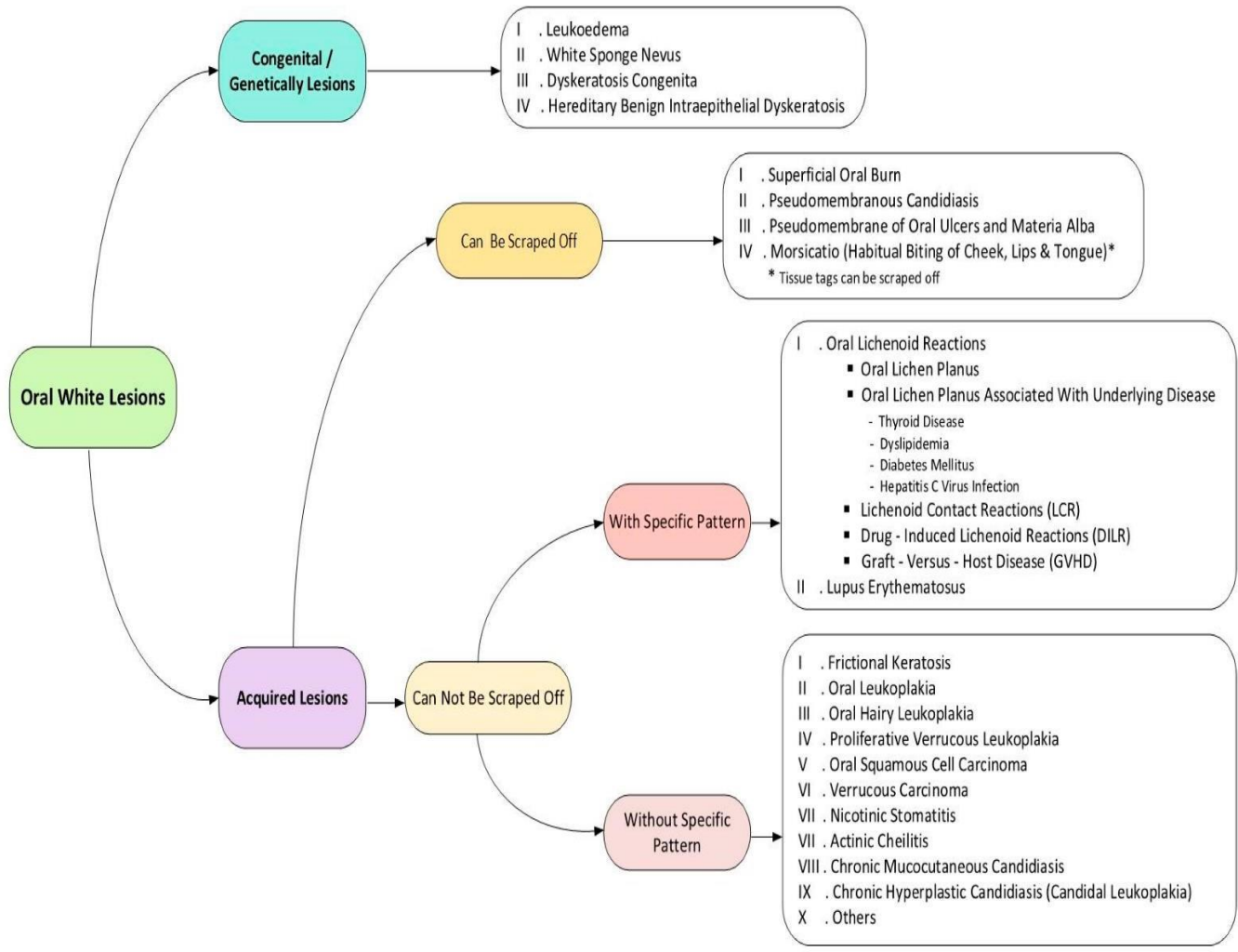
## HAND, FOOT AND MOUTH

Coxsackie Virus  
Daycare-age kids



but virus can remain in poo for weeks (and be contagious)

Watch out for:  
 - Viral meningitis  
 - Myocarditis (older kids/adults)



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# CONCEPT CARD

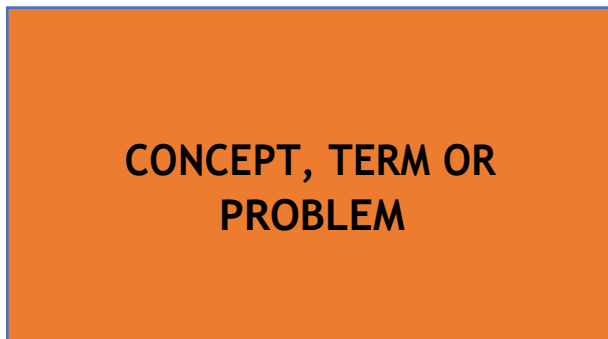
Concept cards are flash cards you create them using index cards that are 3x5 or larger.

On the **FRONT OF THE CARD**, you write the:

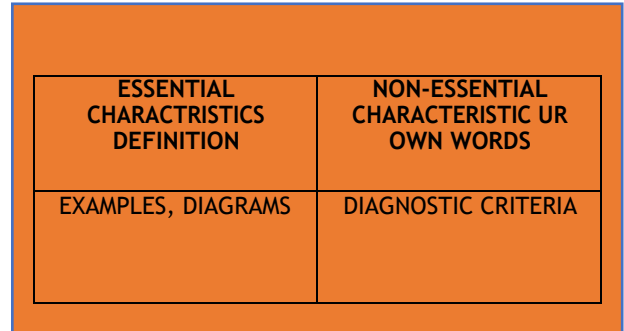
1. Key idea or concept you want to learn
2. Organizing term or phrase (upper right-hand corner). This is the category or term that allows you to see how your key ideas or concepts are organized.
3. Source of the information (textbook page, date of lecture, etc.)

On the **BACK OF THE CARD**, you write what is most important to know and learn about the concept, in your own words.

1. To ensure you do more than just memorize the information, include examples, summaries, and synthesis of main points as well as definitions.
2. Include diagrams, time lines, or other visuals that will help you understand the information at the level your professor expects.



**FRONT OF CARD**



**BACK OF CARD**

# PLANNING YOUR DAILY SCHEDULE



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# MAKING YOUR DAILY SCHEDULE

Review how you spend your time in order to help you prioritize your goals and objectives.

Determine how you spend a "typical" 24-hour day:

Enter the hours or parts of hours for each activity, the total is 24 hours!

Don't be discouraged if you have to go back and change time spent on each activity.

<i>Classes:</i>	<i>Studying:</i>	<i>Family commitments:</i>
<i>Sleeping:</i>	<i>Personal care/ grooming:</i>	<i>Meal preparation/ eating/clean-up:</i>
<i>Exercise/sports:</i>	<i>Socializing/entertainment (with friends):</i>	<i>Relaxing/TV/ video games, etc. (alone):</i>
<i>Transportation (College, work, etc):</i>	<i>Work/internship:</i>	<i>Other:</i>

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# RECOMMENDED BOOKS



1. Contemporary Oral and Maxillofacial Pathology

Authors: J. Philip Sapp, Lewis Roy Eversole and George W. Wysocki.

Publisher: Mosby

Edition: 3<sup>rd</sup>

2. Oral and Maxillofacial Pathology

Authors: Neville, Allan, Damn and Bouquot

Publisher: SAUNDERS

Edition: 3<sup>rd</sup>

3. Textbook: Oral Pathology: Clinical -Pathologic Correlations Author(s): Joseph A. Regezi,

James J. Sciubba and Richard C. K. Jordan

Publisher: ELSEVIER

Year: 2011

Edition: Third Edition

4. Cawson's Essentials of Oral Pathology and Oral Medicine

Authors: R.A. COWSON and E.W. Odell

Publisher: Churchill living stone

Edition: 7<sup>th</sup>



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# **FACILITIES PROVIDED**

## **LECTURES:**

- ❖ A class room with a seating capacity of 70 students, equipped with a projector and white board.

## **PRACTICAL:**

- ❖ A well-equipped laboratory with microscopes, calorimeter, ESR rods, autoclave, hemoglobinometer and centrifuge machines for conduction of practicals.
- ❖ As well as oral pathology laboratory have staining area for Hematoxylin and Papanicolaou stain.
- ❖ Different culture medias are available for culture.

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# ASSESSMENT CRITERIA



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## **POLICY OF INTERNAL ASSESSMENT OF ORAL PATHOLOGY**

- 1) Continuous internal assessment consists of appropriate evaluation at the end of each assignment, term, major/monthly test or course of the curriculum. Proper records of internal evaluations should be maintained and the scores obtained in these tests should contribute 10% to the final total score of the candidates.; that 10% may include class tests, monthly test, sand-up, assignment, reviews which all have specific marks allocation.
- 2) Final university examination of each subject should contribute 90% to the total score, and the students should secure passing marks on the aggregate of the total marks.
- 3) 10% marks of internal evaluation will be added in theory of semester exam. Students should know what is expected of them. They should be able to identify the characteristics of a satisfactory answer and understand the relative importance of those characteristics. This can be achieved in many ways; you can provide feedback on assignments, describe your expectations in class, or post model solutions.
- 4) No grace marks should be allowed in any examination.
- 5) Written examinations consist of MCQ's, short structured essays, (according to curriculum) questions.
- 6) During the course, students will be assessed to determine achievement of course objectives. The test will be scheduled on completion of each chapter. The method of examination comprises of theory exam which includes SEQS, MCQS, practical (Objective Structured Practical Examination) and viva voce.

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# STUDENT ASSESSMENT CRITERIA

<b>SEMESTER EXAMINATION MARKS</b>	<b>INTERNAL EVALUATION (Class tests + Journals + Assignments + Modular Exam</b>	<b>TOTAL THEORY</b>
<b>90%</b>	<b>10%</b>	<b>100%</b>

## INTERNAL ASSESSMENT

The internal assessment will be based on the overall performance in the following:

- 33% lectures and laboratory attendance assessments
- 33% test records both theory and practical's
- 33% sendup results
- If the student score 80% in overall internal assessment the he/she will be giving complete 10% of internal assessment.
- Maintaining a record of all tests and attendance of each student in the form of specially designed personal proforma.

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# INTERNAL ASSESSMENT OF 3<sup>RD</sup> YEAR

The internal assessment of 3<sup>rd</sup> year consist of the following pattern:

SR.NO	MARKS DISTRIBUTION
CLASS TEST	0.25
MAJOR TEST	1
OSPE	0.5
VIVAS	1
REVIEW	2
ASSIGNMENTS	0.5
TERMS	2
SANDUP	3