



**ALTAMASH INSTITUTE OF DENTAL MEDICINE  
(JINNAH SINDH MEDICAL UNIVERSITY)**

**BDS Third Year  
Oral Pathology  
Study Guide**

**Introduction:**

“According to the American Dental Association: “Oral pathology is the specialty of dentistry and discipline of pathology that deals with the nature, identification, and management of diseases affecting the oral and maxillofacial regions.”

In other words, oral pathology is the science that understands the causes and effects of these diseases. Common practices include clinical examinations, lab testing, and taking the whole body health and chemistry into consideration.”

Oral Pathology is important because it provides the dental clinician with the underlying basis of the condition so as to develop a focused management plan.

This course will provide the students the basic understanding of pathologies of the oro-facial region and enhance their clinical diagnostic skill based on the pathological information.

**Outcome:**

By the end of the course, students will be able to

1. Diagnose common dental conditions based on pathological information
2. Demonstrate basic knowledge on the pathological processes of various oral diseases involving both oral and para-oral structures.
3. Formulate diagnosis and draw comparison based on clinical, radiographic and histopathological findings of various oral diseases and pathologies.
4. Identify and comprehend the microscopic slides of various oral diseases/lesions.
5. Explicate the ability in formulating a differential diagnosis and investigation plan of common oro-facial disorders.

**Teaching and learning:**

1. Flipped Classroom (FC)
2. Interactive lectures (IL)
3. Lab Demonstrations (LD)
4. Tutorials
  - a. Cased Based Learning (CBL)
  - b. Small Group Discussion (SGD)



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**Assessment tools:**

1. Multiple Choice Questions: ( MCQs )
  - One Correct Type
  - One Best Type
2. Observed structured practical examination (OSPE)

s.n o.	Topic	Course Objectives: By the end of the course, 3 <sup>rd</sup> year students will be able to:	Teaching method	Assessment Tool
1	Disturbances In Number And Size Of Teeth	<b>Discuss</b> the clinical, radiographic features and syndromes associated with Anodontia, Hyperdontia, Hypodontia, Macrodonia and Microdonia	IL SGD	MCQ
2	Disturbances In Form Of Teeth	<b>Define</b> Gemination, Fusion, Concrescence, Dens invaginatus, Dens evaginatus, Enamel pearls, Taurodontism, Dilaceration, Supernumerary roots	IL SGD	MCQ
3	Disturbances In Structure Of Teeth	<b>Discuss</b> the etiology, types and clinical, radiological and histological features of Amelogenesis Imperfecta, Dentinogenesis Imperfecta, Dentine dysplasia, Hypercementosis, Pulp calcifications and Internal and external resorptions	IL SGD	MCQ
4	Discoloration Of Teeth	<b>Explain</b> the etiology and clinical features of exogenous and endogenous discolorations of teeth.	IL SGD	MCQ
5	Non Bacterial Loss Of Tooth Substances	<b>Discuss</b> the etiological and clinical features of Attrition, Abrasion and Erosion <b>Discuss</b> the clinical and histological features of internal and external resorption.	SGD	MCQ
6	Disorders Of Eruption And Shedding Of Teeth	<b>Describe</b> the Premature eruption, Premature loss, Retarded eruption, Persistence of deciduous teeth and Impaction of teeth	SGD	MCQ
7	Dental Caries	<b>Discuss</b> the role of dental plaque, microorganisms, carbohydrates and other variables in the development of dental	IL SGD	MCQ



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		<p>caries.  <b>Classify</b> dental caries on the basis of site and rate of attack  <b>Describe</b> the course and histopathogenesis of dental caries</p>		
<b>8</b>	Pulpitis	<p><b>Describe</b> etiology of pulpitis.  <b>Classify</b> different types of pulpitis on the basis of clinical, histological and radiographic findings.  <b>Discuss</b> Chronic hyperplastic pulpitis, Pulp Calcification and Pulp Necrosis</p>	IL CBL	MCQ
<b>9</b>	Spread Of Infections	<p><b>Discuss</b> the spread of infection, pathogenesis, and clinical, histopathological and radiographic features of the following disorders/conditions:</p> <ul style="list-style-type: none"> <li>• Acute and chronic periapical periodontitis</li> <li>• Periapical abscess</li> <li>• Periapical granuloma</li> <li>• Periapical cyst</li> <li>• Osteomyelitis</li> <li>• Cellulitis and Ludwig's angina</li> </ul>	IL CBL	MCQ
<b>10</b>	Cysts Of The Jaws	<p><b>Classify</b> Odontogenic and non odontogenic cysts of the jaws.  <b>Describe</b> the origin of odontogenic and non-odontogenic cyst of the jaws</p> <p><b><u>Odontogenic Cysts</u></b>  <b>Compare</b> the clinical, radiographic and histological features, and pathogenesis of the following odontogenic cysts:</p> <ul style="list-style-type: none"> <li>• Periapical (radicular)</li> <li>• Dentigerous and eruption</li> <li>• Odontogenic keratocyst;</li> <li>• Gingival</li> <li>• Lateral periodontal</li> <li>• Calcifying odontogenic</li> <li>• Glandular odontogenic</li> </ul> <p><b><u>Non Odontogenic Cysts</u></b>  <b>Compare</b> the clinical, radiographic and</p>	IL CBL	MCQ



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		<p>histological features, and pathogenesis of the following non-odontogenic cysts:</p> <ul style="list-style-type: none"> <li>• Nasopalatine</li> <li>• Nasolabial</li> <li>• Median</li> <li>• Globulomaxillary</li> </ul> <p><b><u>Non Epithelial/Pseudocysts</u></b>  <b>Discuss</b> the clinical, radiographic and histological features of Traumatic bone cyst, Stafne’s bone cavity and Aneurysmal bone cyst</p>		
<b>11</b>	Odontomes, Odontogenic & Non-Odontogenic Tumors	<p><b>Classify</b> odontomes and odontogenic tumors.  <b>Describe</b> the etiology, pathogenesis, clinical, histological and radiographic features of the following odontogenic tumors:</p> <ul style="list-style-type: none"> <li>• Ameloblastoma</li> <li>• Squamous odontogenic tumors</li> <li>• Calcifying epithelial odontogenic tumor</li> <li>• Adenomatoid odontogenic tumor</li> <li>• Ameloblastic fibroma</li> <li>• Ameloblastic fibro odontome</li> <li>• Odontoma</li> <li>• Odontogenic fibroma;</li> <li>• Odontogenic myxoma;</li> <li>• Cementoblastoma</li> </ul>	IL CBL	MCQ
<b>12</b>	Bacterial Infections	<p><b>Describe</b> the etiology, clinical and histopathological features of following bacterial infections:</p> <ul style="list-style-type: none"> <li>• Necrotizing ulcerative gingivitis</li> <li>• Acute Necrotizing Ulcerative Gingivitis</li> <li>• Noma</li> <li>• Actinomycosis</li> <li>• Syphilis</li> <li>• Leprosy</li> <li>• Tuberculosis</li> <li>• Gonorrhoea</li> </ul>	IL SGD	MCQ



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<b>13</b>	Viral Infections	<p><b>Describe</b> the etiology, clinical and histopathological features of following Viral infections:</p> <ul style="list-style-type: none"> <li>• Herpetiic stomatitis</li> <li>• Chickenpox and Herpes Zoster</li> <li>• Herpangina</li> <li>• Hand, foot and mouth disease</li> <li>• Infectious mononucleosis</li> <li>• Measles</li> <li>• Cytomegalovirus</li> </ul>	FC	MCQ
<b>14</b>	Fungal Infections	<p><b>Classify</b> fungal infections <b>Describe</b> the etiology, clinical and histopathological features of following fungal infections:</p> <ul style="list-style-type: none"> <li>• Candida species and opportunistic infections</li> <li>• Pseudomembranous candidosis</li> <li>• Erythematous candidosis</li> <li>• Chronic hyperplastic candidosis</li> <li>• Candida-associated denture stomatitis</li> <li>• Candida- associated and other forms of angular cheilitis</li> <li>• Median rhomboid glossitis</li> <li>• Chronic mucocutaneous candidoses and oral manifestations of deep visceral mycoses</li> </ul>	IL CBL	MCQ
<b>15</b>	Conditions	<p><b><u>Ulcerative Conditions</u></b> <b>Classify</b> oral ulcerations <b>Describe</b> the clinical and histopathological features of aphthous ulcers and behcet's syndrome.</p> <p><b><u>Vesiculobullous Conditions</u></b> <b>Classify</b> vesiculobullous diseases <b>Discuss</b> the clinical, histopathological features of following vesiculobullous diseases:</p> <ul style="list-style-type: none"> <li>• Pemphigus vulgaris;</li> <li>• Mucous membrane pemphigoid;</li> <li>• Pemphigoid.</li> <li>• Erythema multiforme.</li> </ul>	IL FC	MCQ



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		<ul style="list-style-type: none"> <li>• Dermatitis Herpetiformis</li> <li>• Linear IgA disease</li> <li>• Epidermolysis bullosa</li> <li>• Epidermolysis bullosa acquisita</li> <li>• Angina bullosa haemorrhagica</li> </ul>		
<b>16</b>	Lesions	<p><b><u>Hereditary Whites Lesions</u></b>  <b>Classify</b> white lesion of oral mucosa according to their etiology.  <b>Explain</b> the following hereditary white lesions:</p> <ul style="list-style-type: none"> <li>• Oral epithelial nevus</li> <li>• Leukoedema</li> <li>• Hereditary benign intraepithelial dyskeratosis</li> <li>• Follicular keratosis</li> </ul> <p><b><u>Reactive White Lesions</u></b>  <b>Describe</b> Frictional hyperkeratosis, Nicotine stomatitis, Hairy leukoplakia and Hairy tongue.</p> <p><b><u>Pre-neoplastic White Lesions</u></b>  <b>Discuss</b> the etiology, pathogenesis, clinical features, histopathology and prognosis of the following lesions:</p> <ul style="list-style-type: none"> <li>• Leukoplakia;</li> <li>• Oral Submucous fibrosis;</li> <li>• Lichen planus;</li> <li>• Lupus erythematosus;</li> <li>• Actinic cheilitis.</li> </ul> <p><b><u>Neoplastic Lesions</u></b>  <b>Define</b> Carcinoma in situ  <b>Discuss</b> the etiology, epidemiology, pathogenesis, clinical features, histopathology and prognosis of squamous cell carcinoma.  <b>Describe</b> staging and grading of squamous cell carcinoma  <b>Describe</b> the etiology, pathogenesis, clinical features, and histopathology of basal cell carcinoma.</p> <p><b><u>Vascular Lesions</u></b>  <b>Describe</b> the etiology, pathogenesis, clinical</p>	IL CBL	MCQ



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		<p>features, and histopathology of congenital haemangioma.</p> <p><b><u>Reactive Lesions</u></b>  <b>Discuss</b> the etiology, pathogenesis, clinical features, and histopathology of the following reactive lesions:</p> <ul style="list-style-type: none"> <li>• Pyogenic granuloma</li> <li>• Peripheral giant cell granuloma</li> <li>• Peripheral Fibroma</li> <li>• Generalized Gingival Hyperplasia</li> <li>• Denture Induced Fibrous Hyperplasia</li> </ul>		
17	Miscellaneous	<p><b><u>Fordyce's Granules</u></b>  <b>Define</b> Fordyce's Granules  <b>List</b> clinical features of Fordyce's granules</p> <p><b><u>Sublingual Varices</u></b>  <b>Define</b> Sublingual varices</p> <p><b><u>Geographic Tongue</u></b>  <b>Define</b> Geographic tongue  <b>Describe</b> clinical, pathogenesis, and histological features of geographic tongue</p> <p><b><u>Crohn's Disease</u></b>  <b>Define</b> Crohn's Disease  <b>Describe</b> clinical, pathogenesis, and histological features of Crohn's disease</p> <p><b><u>Sarcoidosis</u></b>  <b>Define</b> Sarcoidosis  <b>Describe</b> clinical, pathogenesis, and histological features of Sarcoidosis</p> <p><b><u>Wegener's Granulomatosis</u></b>  <b>Define</b> Wegener's Granulomatosis  <b>Describe</b> clinical, pathogenesis, and histological features of Wegener's Granulomatosis</p> <p><b><u>Amyloidosis</u></b>  <b>Define</b> Amyloidosis  <b>Describe</b> clinical features of Amyloidosis</p>	IL	MCQ
18	Oral Pigmentation	<p><b>Classify</b> oral pigmentation  <b>Describe</b> the clinical and histological features of oral lesions caused by exogenous and endogenous pigmentation.</p>	SGD	MCQ
19	Salivary	<b><u>Reactive Lesions Of Salivary Gland</u></b>	IL	



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	Gland	<p><b>Discuss</b> the etiology, pathogenesis, clinical features and histopathology of the Mucous extravasation phenomenon, Mucus retention cyst and Necrotizing sialometaplasia.</p> <p><b><u>Bacterial And Viral Infections Of Salivary Gland</u></b></p> <p><b>Discuss</b> the pathogenesis, clinical and diagnostic features of the following infections/condition of salivary glands:</p> <ul style="list-style-type: none"> <li>• Mumps</li> <li>• Bacterial sialadenitis</li> <li>• Sarcoidosis</li> <li>• Sjogren's syndrome</li> <li>• Xerostomia</li> <li>• Cytomegaloviral sialadenitis</li> </ul> <p><b><u>Salivary Gland Tumors</u></b></p> <p><b>Classify</b> salivary gland tumors</p> <p><b>Discuss</b> the pathogenesis and clinical and diagnostic features of the following salivary gland tumors:</p> <ul style="list-style-type: none"> <li>• Pleomorphic adenoma;</li> <li>• Warthin tumor;</li> <li>• Basal cell adenoma;</li> <li>• Oncocytoma;</li> <li>• Canalicular adenoma;</li> <li>• Mucoepidermoid carcinoma;</li> <li>• Acinic cell carcinoma;</li> <li>• Adenoid cystic carcinoma.</li> </ul>	CBL	MCQ
20	Bone	<p><b><u>Inherited And Developmental Disorders Of Bone</u></b></p> <p><b>Classify</b> disorders of bone</p> <p><b>Discuss</b> the etiology, clinical features and radiographic features of Cherubism, Osteopetrosis and Cleidocranial dysplasia.</p> <p><b><u>Fibro-Osseous Lesions</u></b></p> <p><b>Classify</b> fibro-osseous lesions</p> <p><b>Describe</b> the etiology, clinical features, pathogenesis and histological behavior of various fibro-osseous lesions.</p> <p><b><u>Metabolic And Endocrinal Disorders Of Bone</u></b></p>	IL CBL	MCQ





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		<p><b>Discuss</b> the etiology, pathogenesis, clinical, radiographic, and histological features of following metabolic conditions/disorders:</p> <ul style="list-style-type: none"> <li>• Paget's disease</li> <li>• Hyperparathyroidism</li> <li>• Hypothyroidism</li> <li>• Hyperthyroidism</li> <li>• Hypophosphatasia</li> </ul> <p><b><u>Central Giant Cell Granuloma</u></b>  <b>Discuss</b> the etiology, pathogenesis, clinical, radiographic, and histological features of central giant cell granuloma</p> <p><b><u>Tumors Of Bone</u></b>  <b>Classify</b> bone tumors  <b>Discuss</b> the etiology, pathogenesis, clinical and diagnostic features of the following bone tumors:</p> <ul style="list-style-type: none"> <li>• Osteoma and osteoblastoma;</li> <li>• Osteosarcoma;</li> <li>• Ossifying fibroma.</li> </ul> <p><b><u>Osteoarthritis</u></b>  <b>Explain</b> the etiology and clinical features of osteoarthritis</p>		
21	TMJ Disorders	<p><b><u>Developmental Disorders</u></b>  <b>Discuss</b> Aplasia, Hyperplasia and Hypoplasia of mandibular condyle</p> <p><b><u>Inflammatory Disorders</u></b>  <b>Describe</b> Traumatic arthritis, Infective arthritis and rheumatoid arthritis</p> <p><b><u>Functional Disorders</u></b>  <b>Discuss</b> the etiology and clinical features of myofascial pain dysfunction syndrome and disc displacement.</p>	IL	MCQ
	<b>Practical</b>			
22	Histopathology	<p><b>Identify</b> the slide of:</p> <ul style="list-style-type: none"> <li>• histopathology of pulpitis, specific and non-specific infections</li> <li>• histopathology of tuberculosis, syphilis, actinomycosis and Pericoronitis</li> <li>• histological features of odontogenic and non-odontogenic cyst</li> </ul>	LD	<b>OSPE</b>



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		<ul style="list-style-type: none"><li>• tumors of odontogenic and non-odontogenic epithelium</li><li>• histological features of reactive white lesion, oral candidiasis , various reactive/infectious papillary lesions ,squamous cell carcinoma along with differentiating various epithelial tumors, salivary gland tumors, fibro-osseous lesions and various tumors of bone</li></ul>		
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**Reading Sources:**

**Text Book:**

Soames and Southam (Latest Edition)

**Oral Pathology Lab:** Microscopes and histological slides are available to study histopathological features of oral diseases and infections

**Internet resources:** With easy excess to digital library students will use internet resources with added time flexibility to enrich and update their knowledge and its application.

**Library:** It provides wealth of resources, space to study alone or in a group. It also provide world of books to discover and borrow.

**Assessment Criteria :**

**Knowledge:**

- MCQs (Multiple Choice Questions) are used to asses objectives covered in each module.
- A MCQ has a statement or clinical scenario followed by four options (likely answer).
- Students after reading the statement/scenario select ONE, the most appropriate response from the given list of options.
- Correct answer carries one mark, and incorrect ‘zero mark’. There is no negative marking.



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- Students mark their responses on an answer sheet provided by examination department.

**Skills:**

- OSPE: Objective Structured Practical Examination:
- Each student will be assessed on the same content and have same time to complete the task.
- Comprise of 12-25 stations.
- Each station may assess a practical tasks include practical skills and application of knowledge
- Stations are observed, interactive, application of knowledge based and rest.
- In Observed and Interactive Stations these will be assessed by internal or external examiners through structured viva or a task.
- Application of knowledge Stations: it will be static stations in which there will be pictures, clinical scenarios with related questions for students to answer on the provided answer copy.
- Rests: It is a station where there is no task given and in this time student can organize his/her thoughts.

**AIDM Internal Assessment Policy**

Students will be assessed to determine achievement of learning objectives through the following:

- Midterm Examination will be scheduled on completion of half of the course  
Mock Examination will be scheduled on completion of whole
- The method of examination comprises theory exam which includes MCQs, and practical examination by OSPE (Objective Structured Practical Examination).
- Student's behaviors and attitudes will be observed during all academic activities.



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**Annual Examination:**

- Marks of both internal assessments will constitute 20% weightage as per JSMU policy.
- University Annual examination will be based on MCQs and OSPE.

**Attempts:**

There are 2 attempts in the third professional examination only. 2<sup>nd</sup> attempt is the supplementary examination which if not passed student has to repeat the year.

**Course Evaluation:**

- Pass/fail ratio of continuous and summative assessments will be evaluated.
- 75% attendance is mandatory to be eligible for annual professional examination
- Feedback will be taken
  - Regarding course from students and faculty
  - Student feedback regarding faculty
  - Faculty feedback of students

**Course Faculty:**

Dr.Naureen : Assistant Professor

Dr. Seeme Nigar: Assistant Professor [dr.seeme.nigar@gmail.com](mailto:dr.seeme.nigar@gmail.com)

Dr. Zainab Khalid: Demonstrator [zainabkhalidd1@gmail.com](mailto:zainabkhalidd1@gmail.com)

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