Republic of Yemen

Ministry of Education & Scientific Research

Council of Academic Accreditation & Quality Assurance of Higher Education (CAQA)

21 September University of Medical & Applied Sciences

Faculty of Dentistry

Department of Oral Histology

BDS

Course Specification of

Oral Histology 1

Course Code. (09.11.916)

2024/2025

I. General Information:

1.	Course Title:	Oral Histology 1				
2.	Course Code:	09.11.916				
3.	Course Type:	Mandatory				
4.	Credit Hours:	Credit Hours	Theory Contact Hours		Practical Contact Hours	
			Lecture	Tutorial/ Seminar	Lab	Clinical
		2	1	--	2	--
5.	Level/ Semester at which this Course is offered:	Second Year/ First semester				
6.	Pre –Requisite (if any):	General Biology				
7.	Co –Requisite (if any):	None				
8.	Program (s) in which the Course is Offered:	Bachelor of Dentistry (BDS)				
9.	Language of Teaching the Course:	English				
10.	Location of Teaching the Course:	Faculty of Dentistry				
11.	Prepared by:	Prof. Dr. SMSaeed				
12.	Date and Number of Approval by Council:					

II. Course Description:

Oral histology 1 aims to provide students with the basic needed knowledge of formation and structure of oral tissues. The lecture topics cover the relevant orofacial embryology, the different stages of odontogenesis, details of tooth structure and its supporting tissues as well as the oral tissues and adjoining structures. Oral histology 1 has two components, a theoretical and a practical part. During each practical session, students should examine slides of the oral and dental tissues covered in the corresponding lectures.

III. Course Description:

III. Course Intended Learning Outcomes (CILOs) : Upon successful completion of the course, students will be able to:		Referenced PILOs		
A. Knowledge and Understanding:		**I, P or M/A**		
a1	Describe the stages of development of the pharyngeal apparatus and its significance in oral structures.	**I**	**A1**	**Shows knowledge and understanding of concepts, rules and principles related to basic and vital medical sciences, supporting sciences and general culture.**
a2	Identify the embryological origins of the tongue and thyroid gland, explaining their developmental processes.			
a3	Explain the morphological changes involved in the development of the face and palate, including key milestones.			
a4	Outline the growth and development of the mandible and maxilla, detailing their anatomical features and functions.			
B. Intellectual Skills:				
b1	Analyze clinical case studies that illustrate the implications of developmental anomalies in the oral cavity.	**I**	**B3**	Design a suitable treatment plan for various oral and dental diseases and prioritize treatment.
b2	Evaluate the processes of tooth development and eruption, synthesizing information from various sources to draw conclusions.	**M/A**	**B2**	Determines the appropriate and effective way to treat various oral and dental diseases.
C. Professional and Practical Skills:				
c1	Demonstrate proficiency in identifying histological sections of oral tissues, including enamel, dentin, and pulp, under a microscope.	**P**	**C1**	Deals With all the equipment, tools and instruments of different dental materials in a scientifically manner.
c2	Apply knowledge of dental development in clinical scenarios, assessing patient cases to recommend appropriate	**P**	**C3**	Take a comprehensive story for diseases and evaluates the necessary tests to complete the

	interventions.			diagnosis with high efficiency.
	D. Transferable Skills:			
d1	Develop effective communication skills by presenting complex oral biology concepts clearly to peers and faculty.	**M/A**	**D1**	Communicates effectively with others and expresses his ideas clearly and objectively.
d2	Cultivate critical thinking skills through collaborative group projects that require problem-solving in the context of oral health issues.	**M/A**	**D3**	Develop cognitive abilities and professional and evaluate academic and practical performance.
I= Introduced, P=Practiced or M/A= Mastered/Advanced				

IV. Alignment of Course Intended Learning Outcomes

(A) Alignment of Course Intended Learning Outcomes (Knowledge and Understanding) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	Teaching Strategies	Assessment Strategies
a1	Describe the stages of development of the pharyngeal apparatus and its significance in oral structures.	▪ Interactive lectures. ▪ Seminar ▪ Self-learning ▪ Group discussions. ▪ Presentations.	▪ Written examinations. ▪ Assignments. ▪ Presentations. ▪ Quizzes. ▪ Oral assessment.
a2	Identify the embryological origins of the tongue and thyroid gland, explaining their developmental processes.	▪ Interactive lectures. ▪ Seminar ▪ Self-learning ▪ Group discussions. ▪ Presentations.	▪ Written examinations. ▪ Assignments. ▪ Presentations. ▪ Quizzes. ▪ Oral assessment.
a3	Explain the morphological changes involved in the development of the face and palate, including key milestones.	▪ Interactive lectures. ▪ Seminar ▪ Self-learning ▪ Group discussions. ▪ Presentations.	▪ Written examinations. ▪ Assignments. ▪ Presentations. ▪ Quizzes. ▪ Oral assessment.

a4	Outline the growth and development of the mandible and maxilla, detailing their anatomical features and functions.	▪ Interactive lectures. ▪ Seminar ▪ Self-learning ▪ Group discussions. ▪ Presentations.	▪ Written examinations. ▪ Assignments. ▪ Presentations. ▪ Quizzes. ▪ Oral assessment.
(B) Alignment of Course Intended Learning Outcomes (Intellectual Skills) to Teaching Strategies and Assessment Methods:			
	Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**
b1	Analyze clinical case studies that illustrate the implications of developmental anomalies in the oral cavity.	• Problem solving CBL • Problem-based learning scenario PBL • Training ▪ Classroom discussions.	• Written examination • Oral examination • Final Practical Exam. ▪ Home work
b2	Evaluate the processes of tooth development and eruption, synthesizing information from various sources to draw conclusions.	• Problem solving CBL • Problem-based learning scenario PBL • Training ▪ Classroom discussions.	• Written examination • Oral examination • Final Practical Exam. ▪ Home work
(C) Alignment of Course Intended Learning Outcomes (Professional and Practical Skills) to Teaching Strategies and Assessment Methods:			
	Course Intended Learning Outcomes	**Teaching Strategies**	**Assessment Strategies**
c1	Demonstrate proficiency in identifying histological sections of oral tissues, including enamel, dentin, and pulp, under a microscope.	▪ Interactive lectures. ▪ research. ▪ Exercises in labs and clinics. ▪ Seminars. ▪ Presentations. ▪ Discussions in class/lab and clinic ▪ Lab and clinic Training. ▪ Practical sessions.	▪ Assignments. ▪ Presentations. ▪ Oral assessment. ▪ Projects. ▪ Practical lab examination. ▪ Homework assessment.
c2	Apply knowledge of dental development in clinical scenarios, assessing patient	▪ Interactive lectures. ▪ research.	▪ Assignments. ▪ Presentations. ▪ Oral assessment.

	cases to recommend appropriate interventions.	▪ Exercises in labs and clinics. ▪ Seminars. ▪ Presentations. ▪ Discussions in class/lab and clinic ▪ Lab and clinic Training. ▪ Practical sessions.	▪ Projects. ▪ Practical lab examination. ▪ Homework assessment.

(D) Alignment of Course Intended Learning Outcomes (Transferable Skills) to Teaching Strategies and Assessment Methods:

	Course Intended Learning Outcomes	Teaching Strategies	Assessment Strategies
d1	Develop effective communication skills by presenting complex oral biology concepts clearly to peers and faculty.	• Seminar • Self-learning • Presentation • Discussion ▪ Problem solving.	• Homework • Research ▪ Oral Discussion
d2	Cultivate critical thinking skills through collaborative group projects that require problem-solving in the context of oral health issues.	• Seminar • Self-learning • Presentation • Discussion ▪ Problem solving.	• Homework • Research ▪ Oral Discussion

V. Course Contents:

A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	**Development of the Pharyngeal Apparatus**	– Introduction to oral – Embryology. – Development and derivatives of Pharyngeal Arches. – Development and derivatives of Pharyngeal Pouches.	W1	1	a1, d1, d2.

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
		– Development and derivatives of Pharyngeal Clefts.			
2	**Development of tongue and thyroid gland**	– Formation of tongue. – Innervations of tongue. – Intrinsic muscles of the tongue. – Development of the thyroid gland. – Clinical consideration.	W2	1	a2, d1, d2.
3	**Development of the face and palate**	– Frontonasal prominence – Maxillary prominence – Mandibular prominence – Nasal swellings – Nasal placodes – Nasal pits – Lips – Intermaxillary segment – Secondary palate	W3	1	a3, d1, d2.
4	**Development of the Mandible and maxilla**	– Meckel's cartilage. – Intramembranous ossification of the mandible and maxilla.	W4	1	a4, c1, d1, d2.
5	**Clinical Consideration**	– Pharyngeal Fistula – Pharyngeal Cyst – First arch Syndrome – Di George syndrome – Ectopic Thymus, parathyroid, or thyroid tissue – Thyroglossal duct cyst – Ankyloglossia [tongue-tie] – Cleft Palate: anterior, posterior, and anterioposterior. – Cleft lip	W5	1	a1, a2, a3, a4, b1, c1, c2, d1, d2.

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
6	**Introduction to the Oral Cavity**	– Introduction to oral histology. – Anatomical Regions of the oral cavity – Components of the oral cavity. – Hard tissues. – Soft tissues.	W6	1	a2, c2, d1, d2.
7	**Development and growth of teeth 1/2**	– Introduction. – Primary Epithelial Band. – The histological stages of tooth development. – The physiological stages of tooth development. – Functions of the developing tooth structures	W7	1	b2, d1, d2.
8	**Midterm Exam**	– MCQs and essay	W8	1	a1, a2, a3, a4, c1, c2, b1, b2, d1, d2.
9	**Development and growth of teeth 2/2**	– Function and Fate of Dental lamina. – Root formation events. – Formation of multirooted tooth. – Histophysiological Stages. – Developmental disturbances during tooth development.	W9	1	b2, c1, c2, d1, d2.
10	**Root formation**	– The origin, components of Cervical loop – Formation of Hertwig's epithelial root sheath including the Epithelial	W10	1	a4, b2, d1, d2.

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
		diaphragm and multi-rooted teeth – Differences in formation of permanent and deciduous teeth			
11	**Eruption**	– Pattern of Tooth Movement – Histology of Tooth Movement – Mechanism of Tooth Movement – Clinical Considerations	W11	1	b1, b2, c1, c2, d1, d2.
12	**Shedding**	– Pattern of Shedding – Histology of Shedding – Mechanism of Resorption and Shedding – Clinical consideration	W12	1	b1, b2, d1, d2.
13	**Formation of hard tissues**	– Principles of formation of hard tissues – Formation of organic matrix – Calcification	W13	1	b2, d1, d2.
14	**Development of hard tissues**	– General principles. – Formation of enamel – Formation of dentine. – Formation of cementum. – Formation of bone.	W14	1	b2, d1, d2.
15	**Enamel 1/2**	– Concept. – Enamel section study. – Development of enamel (amelogenesis(. – Enamel organ and amelogenesis. – Life cycle of ameloblast and amelogenesis. – Main stages of amelogenesis.	W15	1	b2, c1, c2, d1, d2.

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
		– Physical properties of enamel. – Chemical composition of enamel.			
16	**Final Theoretical Exam**	– MCQs and essay	W16	1	a1, a2, a3, a4, b1, b2, c1, c2, d1, d2.
Number of Weeks /and Units Per Semester			**16**	**16**	

B. Practical Aspect (Lab/Clinical) (if any):

No.	Tasks/ Experiments	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	**Introduction to Oral Histology**	W2	2	c1, c2
2	**Development of the Pharyngeal Apparatus: Labeling diagrams of the pharyngeal apparatus - Step-by-step explanation of the derivatives of each pharyngeal arch.**	W3	2	c1, c2
3	**Development of the Tongue and Thyroid Gland: Tongue anomalies (e.g., ankyloglossia, bifid tongue) – Thyroglossal duct cysts.**	W4	2	c1, c2
4	**Development of the Face and Palate: Diagramming the facial development process – Case studies on cleft palate repair**	W5	2	c1, c2
5	**Development of the Mandible and Maxilla: Histological slides of mandibular development – Growth charts of the maxilla and mandible.**	W6	2	c1, c2
6	**Mid-term Exam**	W7	2	c1, c2

No.	Tasks/ Experiments	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
7	**Introduction to the Oral Cavity and Development of Teeth: Construction of a timeline for tooth development – Identifying the stages of development in histological samples.**	W8	2	c1, c2
8	**Root Formation, Eruption, and Shedding: Case study: Delayed eruption and its management – Hands-on model demonstration of root formation.**	W9	2	c1, c2
9	**Formation and Development of Hard Tissues (Enamel, Dentin, Cementum): Microscopic examination of enamel, dentin, and cementum – Clinical cases: Enamel hypoplasia and dentinogenesis imperfecta**	W10	2	c1, c2
10	**The Pulp, Periodontal Ligament, and Alveolar Bone: Radiographs to assess alveolar bone loss – Case study: Pulpitis and its management**	W11	2	c1, c2
11	**Oral Mucosa and Salivary Glands: Identifying types of oral mucosa under the microscope – Exploring salivary gland pathologies through patient case studies**	W12	2	c1, c2
12	**The Dentogingival Junction and Maxillary Sinus: Radiographic evaluation of maxillary sinus health – Examining gingival biopsies for signs of periodontal disease**	W13	2	c1, c2
13	**The Temporomandibular Joint and Mouth Aging: TMJ palpation and functional assessment techniques – Discussion of prosthetic considerations in aging patients**	W14	2	c1, c2
14	**Final Exam (practical)**	W15	2	c1, c2
Number of Weeks /and Units Per Semester		**15**	**30**	

C. Tutorial Aspect (if any):

No.	Tutorial	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	None			
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
Number of Weeks /and Units Per Semester				

VI. Assignments:

No.	Assignments	Week Due	Mark	Aligned CILOs (symbols)
1	**Assignment 1: Design a mind map that illustrate the development of one of the following: (the Pharyngeal Apparatus – tongue – face – palate).**	W2	2	a1, d1, d2
2	**Assignment 2: Prepare a power point presentation about oral congenital disturbances.**	W5	2	b1, d1, d2
3	**Assignment 3: Draw diagrams that summarize the five morphological stages of**	W7	2	b2, d1, d2

No.	Assignments	Week Due	Mark	Aligned CILOs (symbols)
	the development of tooth including root formation, eruption and shedding.			
4	Assignment 4: Demonstrate a data show about the principle of formation and development of hard tissue including the structural characteristics of cells specialized in the secretion of protein.	W10	2	d1, d2
5	Assignment 5: Preparing hand-written notes of the lectures taken during the term.	W13	2	a1, a2, a3, a4, b1, b2, d1, d2
Total			10	

VII. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1	Tasks and Assignments	during the term	10	10%	a1, a2, a3, a4, b1, b2, d1, d2.
2	Quiz / Oral Examination	W12	10	10%	a1, a2, a3, a4
3	Mid-Term Theoretical Exam	W8	20	20%	a1, a2, a3, a4, b1, b2, d1, d2.
4	Mid-Term Practical Exam	W7	5	5%	c1, c2.
5	Final Practical Exam including Project Presentation & Evaluation	W 15	15	15%	c1, c2.
6	Final Theoretical Exam	W16	40	40%	a1, a2, a3, a4, b1, b2, d1, d2.
Total			100	100%	

VIII. Learning Resources:

- *Written in the following order:* Author, Year of publication, Title, Edition, Place of publication, Publisher.

1- Required Textbook(s) (maximum two):

1- Bhaskar S N. (2011) Orban's Oral Histology and Embryology. 11th ed. Reed Elsevier India Private Limited. India.
2- Chiego D J. (2019) Essentials of oral histology and embryology. 5th ed. Elsevier. USA.

2- Essential References:

1- BenTajeh S M S. (2018) Oral Histology and Embryology. 14th ed. FEMSALE. Yemen.
2- Nancy A. (2025) Ten Cate's Oral Histology: Development, Structure, and Function. 10th ed. Elsevier. USA.

3- Electronic Materials and Web Sites etc.:

Websites:

1- https://www.anatomicum.com/en/?articleid=58
2- https://histologyguide.com/
3- https://histology.medicine.umich.edu/full-slide-list

IX.	Course Policies: (Based on the Uniform Students' By law (2007)
1	**Class Attendance:** Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.
2	**Tardiness:** A student will be considered late if he/she is not in class after 10 minutes of the start time of class.
3	**Exam Attendance/Punctuality:** No student shall be allowed to the exam hall after 30 minutes of the start time, and shall not leave the hall before half of the exam time has passed.
4	**Assignments & Projects:** Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.
5	**Cheating:** Cheating is an act of fraud that results in the cancelation of the student's exam or assignment. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
6	**Forgery and Impersonation:** Forgery/Impersonation is an act of fraud that results in the cancelation of the student's exam, assignment or project. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.

7	**Other policies:** The University official regulations in force will be strictly observed and students shall comply with all rules and regulations of the examination set by the Department, Faculty and University Administration.

Faculty of Dentistry

Department of Oral Histology

Program of Dentistry (BDS)

Course Plan (Syllabus) of Oral Histology 1

Course Code. 09.11.916

I. Information about Faculty Member Responsible for the Course:							
Name of Faculty Member:	Prof. Dr. SMSaeed	Office Hours					
Location& Telephone No.:	771098083	2					
E-mail:	smsmohd35@gmail.com	SAT	SUN	MON	TUE	WED	THU

2025/2026

II. Course Identification and General Information:

	Course Title:	Oral Histology 1				
	Course Code:	09.11.916				
	Course Type:	**Mandatory**				
	Credit Hours:	**Credit Hours**	**Theory Contact Hours**	**Practical Contact Hours**		
			Lecture	Tutorial /Seminar	Lab	**Clinical**
		2	1	--	2	--
	Level/ Semester at which this Course is offered:	Second Year/ First semester				
	Pre –Requisite (if any):	General Biology				
	Co –Requisite (if any):	None				
	Program (s) in which the Course is Offered:	Bachelor of Dentistry (BDS)				
	Language of Teaching the Course:	English				
	Location of Teaching the Course:	Faculty of Dentistry				
	Prepared by:	Prof. Dr. SMSaeed				
	Date and Number of Approval by Council:					

III. Course Description:

Oral histology 1 aims to provide students with the basic needed knowledge of formation and structure of oral tissues. The lecture topics cover the relevant orofacial embryology, the different stages of odontogenesis, details of tooth structure and its supporting tissues as well as the oral tissues and adjoining structures. Oral histology 1 has two components, a theoretical and a practical part. During each practical session, students should examine slides of the oral and dental tissues covered in the corresponding lectures.

IV. Course Intended Learning Outcomes (CILOs) : Upon successful completion of the Course, student will be able to:	
	A. **Knowledge and Understanding:**
a1	Describe the stages of development of the pharyngeal apparatus and its significance in oral structures.
a2	Identify the embryological origins of the tongue and thyroid gland, explaining their developmental processes.
a3	Explain the morphological changes involved in the development of the face and palate, including key milestones.
a4	Outline **the growth and** development of the mandible and maxilla, detailing their anatomical features and functions.
	B. **Intellectual Skills:**
b1	Analyze clinical case studies that illustrate the implications of developmental anomalies in the oral cavity.
b2	Evaluate the processes of tooth development and eruption, synthesizing information from various sources to draw conclusions.
	C. **Professional and Practical Skills:**
c1	Demonstrate proficiency in identifying histological sections of oral tissues, including enamel, dentin, and pulp, under a microscope.
c2	**Apply** knowledge of dental development in clinical scenarios, assessing patient cases to recommend appropriate interventions.
	D. **Transferable Skills:**
d1	Develop **effective communication skills** by presenting complex oral biology concepts clearly to peers and faculty.
d2	Cultivate critical thinking skills through collaborative group projects that require problem-solving in the context of oral health issues.
I= Introduced, P=Practiced or M/A= Mastered/Advanced	

V. Course Contents:
A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours
1	**Development of the Pharyngeal Apparatus**	– Introduction to oral – Embryology. – Development and derivatives of Pharyngeal Arches. – Development and derivatives of Pharyngeal Pouches. – Development and derivatives of Pharyngeal Clefts.	W1	1
2	**Development of tongue and thyroid gland**	– Formation of tongue. – Innervations of tongue. – Intrinsic muscles of the tongue. – Development of the thyroid gland. – Clinical consideration.	W2	1
3	**Development of the face and palate**	– Frontonasal prominence – Maxillary prominence – Mandibular prominence – Nasal swellings – Nasal placodes – Nasal pits – Lips – Intermaxillary segment – Secondary palate	W3	1
4	**Development of the Mandible and maxilla**	– Meckel's cartilage. – Intramembranous ossification of the mandible and maxilla.	W4	1
5	**Clinical Consideration**	– Pharyngeal Fistula – Pharyngeal Cyst – First arch Syndrome – Di George syndrome – Ectopic Thymus, parathyroid, or thyroid tissue – Thyroglossal duct cyst – Ankyloglossia [tongue-tie] – Cleft Palate: anterior, posterior,	W5	1

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours
		and anterioposterior. – Cleft lip		
6	**Introduction to the Oral Cavity**	Introduction to oral histology. – Anatomical Regions of the oral cavity – Components of the oral cavity. – Hard tissues. – Soft tissues.	W6	1
7	**Development and growth of teeth 1/2**	– Introduction. – Primary Epithelial Band. – The histological stages of tooth development. – The physiological stages of tooth development. – Functions of the developing tooth structures	W7	1
8	**Midterm Exam**	– MCQs and essay	W8	1
9	**Development and growth of teeth 2/2**	– Function and Fate of Dental lamina. – Root formation events. – Formation of multirooted tooth. – Histophysiological Stages. – Developmental disturbances during tooth development.	W9	1
10	**Root formation**	– The origin, components of Cervical loop – Formation of Hertwig's epithelial root sheath including the Epithelial diaphragm and multi-rooted teeth – Differences in formation of permanent and deciduous teeth	W10	1
11	**Eruption**	– Pattern of Tooth Movement – Histology of Tooth Movement – Mechanism of Tooth Movement	W11	1

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours
		– Clinical Considerations		
12	**Shedding**	– Pattern of Shedding – Histology of Shedding – Mechanism of Resorption and Shedding – Clinical consideration	W12	1
13	**Formation of hard tissues**	– Principles of formation of hard tissues – Formation of organic matrix – Calcification	W13	1
14	**Development of hard tissues**	– General principles. – Formation of enamel – Formation of dentine. – Formation of cementum. – Formation of bone.	W14	1
15	**Enamel 1/2**	Concept. – Enamel section study. – Development of enamel (amelogenesis(. – Enamel organ and amelogenesis. – Life cycle of ameloblast and amelogenesis. – Main stages of amelogenesis. – Physical properties of enamel. – Chemical composition of enamel.	W15	1
16	**Final Theoretical Exam**	MCQs and essay	W16	1
Number of Weeks /and Units Per Semester			**16**	**16**

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours
1	**Development of the Pharyngeal**	– Introduction to oral – Embryology.	W1	1

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours
	Apparatus	– Development and derivatives of Pharyngeal Arches. – Development and derivatives of Pharyngeal Pouches. – Development and derivatives of Pharyngeal Clefts.		
2	**Development of tongue and thyroid gland**	– Formation of tongue. – Innervations of tongue. – Intrinsic muscles of the tongue. – Development of the thyroid gland. – Clinical consideration.	W2	1
3	**Development of the face and palate**	– Frontonasal prominence – Maxillary prominence – Mandibular prominence – Nasal swellings – Nasal placodes – Nasal pits – Lips – Intermaxillary segment – Secondary palate	W3	1
4	**Development of the Mandible and maxilla**	– Meckel's cartilage. – Intramembranous ossification of the mandible and maxilla.	W4	1
5	**Clinical Consideration**	– Pharyngeal Fistula – Pharyngeal Cyst – First arch Syndrome – Di George syndrome – Ectopic Thymus, parathyroid, or thyroid tissue – Thyroglossal duct cyst – Ankyloglossia [tongue-tie] – Cleft Palate: anterior, posterior, and anterioposterior. – Cleft lip	W5	1
6	**Introduction to the**	– Introduction to oral histology.	W6	1

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours
	Oral Cavity	– Anatomical Regions of the oral cavity – Components of the oral cavity. – Hard tissues. – Soft tissues.		
7	**Development and growth of teeth 1/2**	– Introduction. – Primary Epithelial Band. – The histological stages of tooth development. – The physiological stages of tooth development. – Functions of the developing tooth structures	W7	1
8	**Midterm Exam**	– MCQs and essay	W8	1
9	**Development and growth of teeth 2/2**	– Function and Fate of Dental lamina. – Root formation events. – Formation of multirooted tooth. – Histophysiological Stages. – Developmental disturbances during tooth development.	W9	1
10	**Root formation**	– The origin, components of Cervical loop – Formation of Hertwig's epithelial root sheath including the Epithelial diaphragm and multi-rooted teeth – Differences in formation of permanent and deciduous teeth	W10	1
11	**Eruption**	– Pattern of Tooth Movement – Histology of Tooth Movement – Mechanism of Tooth Movement – Clinical Considerations	W11	1
12	**Shedding**	– Pattern of Shedding – Histology of Shedding	W12	1

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours
		– Mechanism of Resorption and Shedding – Clinical consideration		
13	**Formation of hard tissues**	– Principles of formation of hard tissues – Formation of organic matrix – Calcification	W13	1
14	**Development of hard tissues**	– General principles. – Formation of enamel – Formation of dentine. – Formation of cementum. – Formation of bone.	W14	1
15	**Enamel 1/2**	– Concept. – Enamel section study. – Development of enamel (amelogenesis(. – Enamel organ and amelogenesis. – Life cycle of ameloblast and amelogenesis. – Main stages of amelogenesis. – Physical properties of enamel. – Chemical composition of enamel.	W15	1
16	**Final Theoretical Exam**	– MCQs and essay	W16	1
Number of Weeks /and Units Per Semester			**16**	**16**

B. Case Studies and Practical Aspect:

No.	Tasks/ Experiments	Number of Weeks	Contact Hours
1	**Introduction to Oral Histology**	W2	2
2	**Development of the Pharyngeal Apparatus: Labeling diagrams of the pharyngeal apparatus - Step-by-step explanation of the**	W3	2

No.	Tasks/ Experiments	Number of Weeks	Contact Hours
	derivatives of each pharyngeal arch.		
3	**Development of the Tongue and Thyroid Gland: Tongue anomalies (e.g., ankyloglossia, bifid tongue) – Thyroglossal duct cysts.**	W4	2
4	**Development of the Face and Palate: Diagramming the facial development process – Case studies on cleft palate repair**	W5	2
5	**Development of the Mandible and Maxilla: Histological slides of mandibular development – Growth charts of the maxilla and mandible.**	W6	2
6	**Mid-term Exam**	W7	2
7	**Introduction to the Oral Cavity and Development of Teeth: Construction of a timeline for tooth development – Identifying the stages of development in histological samples.**	W8	2
8	**Root Formation, Eruption, and Shedding: Case study: Delayed eruption and its management – Hands-on model demonstration of root formation.**	W9	2
9	**Formation and Development of Hard Tissues (Enamel, Dentin, Cementum): Microscopic examination of enamel, dentin, and cementum – Clinical cases: Enamel hypoplasia and dentinogenesis imperfecta**	W10	2
10	**The Pulp, Periodontal Ligament, and Alveolar Bone: Radiographs to assess alveolar bone loss – Case study: Pulpitis and its management**	W11	2
11	**Oral Mucosa and Salivary Glands: Identifying types of oral mucosa under the microscope – Exploring salivary gland pathologies through patient case studies**	W12	2
12	**The Dentogingival Junction and Maxillary Sinus: Radiographic evaluation of maxillary sinus health – Examining gingival biopsies for signs of periodontal disease**	W13	2
13	**The Temporomandibular Joint and Mouth Aging: TMJ palpation and functional assessment techniques – Discussion of prosthetic considerations in aging patients**	W14	2

No.	Tasks/ Experiments	Number of Weeks	Contact Hours
14	Final Exam (practical)	W15	2
Number of Weeks /and Units Per Semester		15	30

No.	Tasks/ Experiments	Number of Weeks	Contact Hours
1	Introduction to Oral Histology	W2	2
2	Development of the Pharyngeal Apparatus: Labeling diagrams of the pharyngeal apparatus - Step-by-step explanation of the derivatives of each pharyngeal arch.	W3	2
3	Development of the Tongue and Thyroid Gland: Tongue anomalies (e.g., ankyloglossia, bifid tongue) – Thyroglossal duct cysts.	W4	2
4	Development of the Face and Palate: Diagramming the facial development process – Case studies on cleft palate repair	W5	2
5	Development of the Mandible and Maxilla: Histological slides of mandibular development – Growth charts of the maxilla and mandible.	W6	2
6	Mid-term Exam	W7	2
7	Introduction to the Oral Cavity and Development of Teeth: Construction of a timeline for tooth development – Identifying the stages of development in histological samples.	W8	2
8	Root Formation, Eruption, and Shedding: Case study: Delayed eruption and its management – Hands-on model demonstration of root formation.	W9	2
9	Formation and Development of Hard Tissues (Enamel, Dentin, Cementum): Microscopic examination of enamel, dentin, and cementum – Clinical cases: Enamel hypoplasia and dentinogenesis imperfecta	W10	2
10	The Pulp, Periodontal Ligament, and Alveolar Bone:	W11	2

No.	Tasks/ Experiments	Number of Weeks	Contact Hours
	Radiographs to assess alveolar bone loss – Case study: Pulpitis and its management		
11	**Oral Mucosa and Salivary Glands: Identifying types of oral mucosa under the microscope – Exploring salivary gland pathologies through patient case studies**	W12	2
12	**The Dentogingival Junction and Maxillary Sinus: Radiographic evaluation of maxillary sinus health – Examining gingival biopsies for signs of periodontal disease**	W13	2
13	**The Temporomandibular Joint and Mouth Aging: TMJ palpation and functional assessment techniques – Discussion of prosthetic considerations in aging patients**	W14	2
14	**Final Exam (practical)**	W15	2
Number of Weeks /and Units Per Semester		**15**	**30**

C. Tutorial Aspect:

No.	Tutorial	Number of Weeks	Contact Hours
1	None		
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			

No.	Tutorial			Number of Weeks	Contact Hours
12					
13					
14					
Number of Weeks /and Units Per Semester					

VI. Teaching Strategies of the Course:

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VII. Assessment Methods of the Course:

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VIII. Assignments:

No.	Assignments	Week Due	Mark
1	**Assignment 1:** Design **a mind map that illustrate the development of one of the following: (the Pharyngeal Apparatus – tongue – face – palate).**	W2	2
2	**Assignment 2:** Prepare **a power point presentation about oral congenital disturbances.**	W5	2
3	**Assignment 3:** Draw **diagrams that summarize the five morphological stages of the development of tooth including root formation, eruption and shedding.**	W7	2
4	**Assignment 4: Demonstrate a data show about the principle of formation and development of hard tissue including the structural characteristics of cells specialized in the secretion of protein.**	W10	2
5	**Assignment 5: Preparing hand-written notes of the lectures taken during the term.**	W13	2
Total			**10**

IX. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment
1	Tasks and Assignments	during the term	10	10%
2	Quiz / Oral Examination	W12	10	10%
3	Mid-Term Theoretical Exam	W8	20	20%
4	Mid-Term Practical Exam	W7	5	5%
5	Final Practical Exam including Project Presentation & Evaluation	W 15	15	15%
6	Final Theoretical Exam	W16	40	40%
Total			100	100%

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment
1	Tasks and Assignments	during the term	10	10%
2	Quiz / Oral Examination	W12	10	10%
3	Mid-Term Theoretical Exam	W8	20	20%
4	Mid-Term Practical Exam	W7	5	5%
5	Final Practical Exam including Project Presentation & Evaluation	W 15	15	15%
6	Final Theoretical Exam	W16	40	40%
Total			100	100%

X. Learning Resources:

- *Written in the following order: Author, Year of publication, Title, Edition, Place of publication, Publisher.*

1- Required Textbook(s) (maximum two):

Bhaskar S N. (2011) Orban's Oral Histology and Embryology. 11th ed. Reed Elsevier India Private Limited. India.

Chiego D J. (2019) Essentials of oral histology and embryology. 5th ed. Elsevier. USA.

2- Essential References:

BenTajeh S M S. (2018) Oral Histology and Embryology. 14th ed. FEMSALE. Yemen.

Nancy A. (2025) Ten Cate's Oral Histology: Development, Structure, and Function. 10th ed. Elsevier. USA.

3- Electronic Materials and Web Sites etc.:

Websites:

1- https://www.anatomicum.com/en/?articleid=58
2- https://histologyguide.com/
3- https://histology.medicine.umich.edu/full-slide-list

XI. Course Policies: (Based on the Uniform Students' Bylaw (2007)

1	**Class Attendance:** Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.
2	**Tardiness:** A student will be considered late if he/she is not in class after 10 minutes of the start time of class.
3	**Exam Attendance/Punctuality:** No student shall be allowed to the exam hall after 30 minutes of the start time, and shall not leave the hall before half of the exam time has passed.
4	**Assignments & Projects:** Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.
5	**Cheating:** Cheating is an act of fraud that results in the cancelation of the student's exam or assignment. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
6	**Forgery and Impersonation:** Forgery/Impersonation is an act of fraud that results in the cancelation of the student's exam, assignment or project. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
7	**Other policies:** The University official regulations in force will be strictly observed and students shall comply with all rules and regulations of the examination set by the Department, Faculty and University Administration.