

Republic of Yemen

Ministry of Higher Education & Scientific Research

Emirates International University



Faculty of Dentistry

Department of Basic Science

Bachelor of Doctor of Dental Surgery

Course Specification of
Oral Histology & Embryology I

Course No. ()

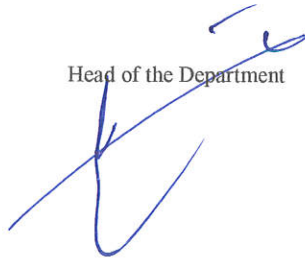


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Review committee:



Head of the Department



Quality Assurance head



Dean of Faculty



I. Course Identification and General Information:

1	Course Title:	Oral Histology& Embryology I			
2	Course Code & Number:				
3	Credit Hours:	Credit Hours	Theory Hours		Lab. Hours
			Lecture	Exercise	
		3	2	--	2
4	Study Level/ Semester at which this Course is offered:	2 nd Level / 1 st Semester			
5	Pre –Requisite (if any):	General Histology& Embryology			
6	Co –Requisite (if any):	None			
7	Program (s) in which the Course is Offered:	Doctor of Dental Surgery			
8	Language of Teaching the Course:	English			
9	Study System:	Semester based System			
10	Mode of Delivery:	Full Time			
11	Location of Teaching the Course:	Faculty of Dentistry			
12	Prepared by:	Prof..Saeed M. Saeed			

II. Course Description:

Oral histology and embryology include the study of surface form of the oral structures and the detailed histological structure and development of hard and soft oral and para-oral structures.

- Oral Histology includes the study of the development and physiology of the oral structures and their associated structures. Knowledge of oral histology is essential to understanding of the pathological changes in structure or function.,

1. The major goal of this course is to provide you with current, basic knowledge of the development, structure and function of the oral tissues.

2. This course deals with the histology of:

- A. The structures in and around the mouth. Our objective is to integrate the histology of the

oral tissues with their functions.

B. The material presented in this course is based upon you having a working knowledge of the general histology of cells and tissues as presented in General Histology.

III. Course Intended Learning Outcomes (CILOs) Upon successful completion of the course, students will be able to:		Referenced PILOs Learning out of program	
A. Knowledge and Understanding:		I, A or E	
a1	Describe the tooth proper and its supporting structures including their primary functions		A1
a2	Describe the 3 stages of intrauterine life, namely, pre-embryonic, embryonic, and fetal period.		A1
a3	Describe the 1st week of development with the 4 main events, namely, fertilization, cleavage, blastocyst formation, and implantation.		A1
a4	Describe Inner cell mass or embryoblast and the formation of bilaminar germ disc and outer cell mass (trophoblast): and formation of cytotrophoblast, and syncytiotrophoblast which erodes maternal tissues		A2
a5	Describe Development of face, nose, tongue and thyroid gland , maxilla and mandible including tooth development		A1
B. Intellectual Skills:			
b1	Name the structures appointed to, mentioning its function and relation to cellular regulation.		B1
b2	Differentiate between decalcification and ground sections of hard tissues and their utilities		B2
C. Professional and Practical Skills:			
c1	Demonstrate proficiency and expertise in the proper use of the light microscope in examining histological specimens on		C2

	glass slides.			
c2	Recognize, identify and describe the characteristic structures of teeth at the light microscope histologic level, and for selected tissues, at the electron microscopic ultrastructural level...		C1	
c3	Draw and label the structures they have seen in electron photomicrographs and under light microscope during practical classes.		C1	
D. Transferable Skills:				
d1	Study independently for continuous self-learning and plan research studies to achieve goals.		D1	
d2	Utilize the resources of biomedical information including the available electronic facilities to update his/her knowledge		D2	
d3	Deal with the instruments and equipment in a responsible manner keeping them intact and clean		D6	

(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 tooth proper and its supporting structures including their primary functions	-Lectures -Seminars	-Quizzes -Midterm Exam -Final Exam
a2	Describe the 3 stages of intrauterine life, namely, pre-embryonic, embryonic, and fetal period.	-Lectures -Seminars	-Quizzes -Midterm Exam -Final Exam
a3	Describe the 1st week of development with the 4 main events, namely, fertilization, cleavage, blastocyst formation, and implantation.	-Lectures -Seminars	-Quizzes -Midterm Exam -Final Exam

a4	Describe Inner cell mass or embryoblast and the formation of bilaminar germ disc and outer cell mass (trophoblast): and formation of cytotrophoblast, and syncytiotrophoblast which erodes maternal tissues	-Lectures -Seminars	-Quizzes -Midterm Exam -Final Exam
a5	Describe Development of face, nose, tongue and thyroid gland , maxilla and mandible including tooth development	-Lectures -Seminars	-Quizzes -Midterm Exam -Final Exam

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

Course Intended Learning Outcomes		Teaching Strategies	Assessment Strategies
b1	Name the structures appointed to, mentioning its function and relation to cellular regulation.	-Lectures -Discussion	-Quizzes -Midterm Exam -Final Exam
b2	Differentiate between decalcification and ground sections of hard tissues and their utilities	-Lectures -Discussion	-Quizzes -Midterm Exam -Final Exam

(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 and expertise in the proper use of the light microscope in examining histological specimens on glass slides.	-Lab Experiments	- Practical Exam -Direct observation
c2	Recognize, identify and describe the characteristic structures of teeth at the light microscope histologic level, and for selected tissues, at the electron microscopic ultrastructural level.	-Lab Experiments	- Practical Exam -Direct observation
c3	Draw and label the structures they have seen in electron photomicrographs and under light microscope during practical classes.	-Lab Experiments	- Practical Exam -Direct observation

(D) Alignment of Course Intended Learning Outcomes (Transferable Skills) to Teaching

Strategies and Assessment Methods:			
Course Intended Learning Outcomes	Teaching Strategies	Assessment Strategies	
d1	Study independently for continuous self-learning and plan research studies to achieve goals.	- Discussion - Self Learning - Presentation - Seminars	Research Homework Group work
d2	Utilize the resources of biomedical information including the available electronic facilities to update his/her knowledge	- Discussion - Self Learning - Presentation - Seminars	Research Homework Group work
d3	Deal with the instruments and equipment in a responsible manner keeping them intact and clean	- Discussion - Self Learning - Presentation - Seminars	Research Homework Group work

IV. Course Contents:

A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	introduction to tooth proper and its associated structures	Regions of the oral cavity brief description of different types of hard tissues, soft tissues and salivary glands	1 st	2	a1, b1
2	introduction to general and oral embryology	The Importance of embryology The 3 Stages of intrauterine life Gametogenesis	2 nd	2	a1, b1
3	First week of development	Fertilization Cleavage Blastocyst formation Beginning of implantation Clinical consideration	3 rd	2	a3
4	The second week of human development and the formation of the bilaminar germ disc	The end of Implantation, outer cell mass (trophoblast) and its derivatives, Inner cell mass and its derivatives	4 th	2	a3, b1
5	The third week of	the formation of trilaminar germ disc gastrulation and neurulation	5 th	2	a3, b1



No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
	human development	derivatives of ectoderm, mesoderm and endoderm			
6	Development of face and oral cavity	development of face, nose, tongue and thyroid gland	6 th -7 th	4	a3, b1
8	Midterm Exam	-MCQs and essay questions	8 th	2	a1,a2, a3 b1
9	Development and growth of teeth	the histological and physiological stages of tooth development the role of induction in tooth formation the causes of anodontia and hyperdontia	9 th	2	a3, b1
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	10 th	2	a3, a5, b1, b2
11	Eruption	Pattern of Tooth Movement Histology of Tooth Movement Mechanism of Tooth Movement Clinical Considerations	11 th	2	a3,5, b1, b2
12	Shedding	Pattern of Shedding Histology of Shedding Mechanism of Resorption and Shedding clinical consideration	12 th	2	a3,5, b1, b2
13	formation of hard tissues	principles of formation of hard tissues formation of organic matrix calcification	13 th -14 th	4	a3, a5, b1, b2
14	Revision	revision of all previous topics	15 th	2	a3, a5, b1, b2
15	Final Exam	-MCQs and essay questions	16 th	2	a1-a5, b1. b2
Number of Weeks /and Units Per Semester			16	32	

B. Case Studies and Practical Aspect:

No.	Tasks/ Experiments	Week Due	Contact Hours	Learning Outcomes (CILOs)
1	first week of human development	1 st	2	c1-c3
2	second week of human development	2 nd	2	c1-c3
3	trilaminar germ disc	3 rd	2	c1-c3
4	karyotyping	4 th	2	c1-c3
5	Stages of tooth development (1) dental lamina, Bud stage,	5 th	2	c1-c3
6	Stages of tooth development (2) Cap stage , Bell stage	6 th	2	c1-c3
7	Stages of tooth development (3) apposition stage	7 th	2	c1-c3
8	sheath of Hertwig	8 th	2	c1-c3
9	Epithelial Diaphragm	9 th	2	c1-c3
10	Successional Teeth	10 th	2	c1-c3
11	Eruption	11 th	2	c1-c3
12	Shedding	12 th	2	c1-c3
13	Review	13 th	2	
14	Practical Exam	14 th	2	c1-c3
Number of Weeks /and Units Per Semester		14	28	

V. Teaching Strategies of the Course:

- Lectures
- Discussion
- Seminars
- Presentation
- Lab Experiments
- Self-Learning

VI. Assessment Methods of the Course:

- Quizzes
- Midterm Exam
- Final Exam
- Practical Exam
- Research
- Homework
- Group work

VII. Assignments:

No.	Assignments	Week Due	Mark	Aligned CILOs (symbols)
1	Laboratory logbooks and reports. Research Homework Group work Discussion	weekly	5	b1, b2, d1, d2, d3
Total			5	

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

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1	Quizzes	5th	5	5%	a1-a5; b1-b2
2	Assignments	weekly	5	5%	b1, b2, d1, d2, d3
3	Midterm Exam	8th	20	20%	a1-a3, b1
4	Final Exam	16th	50	50%	a1-a5, b1. b2
5	Practical Exam	14th	20	20%	c1-c3
Total			100	100%	

IX. Learning Resources:

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

- 1- SMSaedd : Oral histology and embryology. 4 Ed.

2- G S Kumar; Orban's Oral Histology and Embryology. 13 th ed. Elsevier
2- Essential References:
1- B. K. B. Berkovitz, G. R. Holland and B. J. Moxham;, 2009, Oral Anatomy, Histology and Embryology, Fourth Edition, Mosby Elsevier
2- Arthur R. Hand and Marion E. Frank, 2015 Fundamentals of Oral Histology and Physiology, First Edition, Wiley Blackwell
3- Electronic Materials and Web Sites etc.:
https://onlinelibrary.wiley.com/journal/16000714
http://edelweisspublications.com/keyword/30/1194/Oral-Mucosa

X. 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.
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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 Basic Science

Bachelor of Doctor of Dental Surgery

Course Plan (Syllabus) of **Oral Histology and
Embryology I**
Course No. ()

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

II. Course Identification and General Information:

1	Course Title:	Oral Histology & Embryology I			
2	Course Code & Number:				
3	Credit Hours:	Credit Hours	Theory Hours		Lab. Hours
			Lecture	Exercise	
		3	2	--	2
4	Study Level/ Semester at which this Course is offered:	2nd Level / 1st Semester			
5	Pre –Requisite (if any):	General Histology & Embryology			
6	Co –Requisite (if any):	None			
7	Program (s) in which the Course is Offered:	Doctor of Dental Surgery			
8	Language of Teaching the Course:	English			
9	Study System:	Semester based System			
10	Mode of Delivery:	Full Time			
11	Location of Teaching the Course:	Faculty of Dentistry			
12	Prepared by:	Prof..Saeed M. Saeed			

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The major goal of this course is to provide you with current, basic knowledge of the development, structure and function of the oral tissues.

This course deals with the histology of:

The structures in and around the mouth. Our objective is to integrate the histology of the oral tissues

with their functions.

The material presented in this course is based upon you having a working knowledge of the general histology of cells and tissues as presented in General Histology.

IV. Course Intended Learning Outcomes (CILOs) :

Upon successful completion of the Course, student will be able to:

	A. Knowledge and Understanding:
a1	Describe the tooth proper and its supporting structures including their primary functions
a2	Describe the 3 stages of intrauterine life, namely, pre-embryonic, embryonic, and fetal period.
a3	Describe the 1st week of development with the 4 main events, namely, fertilization, cleavage, blastocyst formation, and implantation.
a4	Describe Inner cell mass or embryoblast and the formation of bilaminar germ disc and outer cell mass (trophoblast): and formation of cytotrophoblast, and syncytiotrophoblast which erodes maternal tissues
a5	Describe Development of face, nose, tongue and thyroid gland , maxilla and mandible including tooth development
	B. Intellectual Skills:
b1	Name the structures appointed to, mentioning its function and relation to cellular regulation.
b2	Differentiate between decalcification and ground sections of hard tissues and their utilities
	C. Professional and Practical Skills:
c1	Demonstrate proficiency and expertise in the proper use of the light microscope in examining histological specimens on glass slides.
c2	Recognize, identify and describe the characteristic structures of teeth at the light microscope histologic level, and for selected tissues, at the electron microscopic ultrastructural level...
c3	Draw and label the structures they have seen in electron photomicrographs and under light microscope during practical classes.
	D. Transferable Skills:
d1	Study independently for continuous self-learning and plan research studies to achieve goals.
d2	Utilize the resources of biomedical information including the available electronic facilities to update his/her knowledge
d3	Deal with the instruments and equipment in a responsible manner keeping them intact and clean

V. Course Contents:

A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours
1	introduction to tooth proper and its associated structures	Regions of the oral cavity brief description of different types of hard tissues, soft tissues and salivary glands	1st	2
2	introduction to general and oral embryology	The Importance of embryology The 3 Stages of intrauterine life Gametogenesis	2nd	2
3	First week of development	Fertilization Cleavage Blastocyst formation Beginning of implantation Clinical consideration	3rd	2
4	The second week of human development and the formation of the bilaminar germ disc	The end of Implantation, outer cell mass (trophoblast) and its derivatives, Inner cell mass and its derivatives	4th	2
5	The third week of human development	the formation of trilaminar germ disc gastrulation and neurulation derivatives of ectoderm, mesoderm and endoderm	5th	2
6	Development of face and oral cavity	development of face, nose, tongue and thyroid gland	6th-7th	4
8	Midterm Exam	-MCQs and essay questions	8th	2
9	Development and growth of teeth	the histological and physiological stages of tooth development the role of induction in tooth formation the causes of anodontia and hyperdontia	9th	2
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	10th	2
11	Eruption	Pattern of Tooth Movement Histology of Tooth Movement Mechanism of Tooth Movement Clinical Considerations	11th	2

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours
12	Shedding	Pattern of Shedding Histology of Shedding Mechanism of Resorption and Shedding clinical consideration	12th	2
13	formation of hard tissues	principles of formation of hard tissues formation of organic matrix calcification	13th- 14th	4
14	Revision	revision of all previous topics	15th	2
15	Final Exam	-MCQs and essay questions	16th	2
Number of Weeks /and Units Per Semester			16	32

B. Case Studies and Practical Aspect:				
No.	Tasks/ Experiments	Week Due	Contact Hours	Learning Outcomes (CILOs)
1	first week of human development	1 st	2	c1-c3
2	second week of human development	2 nd	2	c1-c3
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12	Shedding	12 th	2	c1-c3
13	Review	13 th	2	c1-c3
14	Practical Exam	14 th	2	c1-c3
Number of Weeks /and Units Per Semester		14	28	

VI. Teaching Strategies of the Course:

- Lectures
- Discussion
- Seminars
- Presentation
- Lab Experiments
- Self-Learning

VII. Assessment Methods of the Course:

- Quizzes
- Midterm Exam
- Final Exam
- Practical Exam
- Research
- Homework
- Group work

VIII. Assignments:

No.	Assignments	Week Due	Mark
1	Laboratory logbooks and reports. Research Homework Group work Discussion	weekly	5
Total			5

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

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment
1	Quizzes	5th	5	5%
2	Assignments	weekly	5	5%
3	Midterm Exam	8th	20	20%
4	Final Exam	16th	50	50%
5	Practical Exam	14th	20	20%
Total			100	100%

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Exam Attendance/Punctuality:	
3	

	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.
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