Ministry of Higher Education and Scientific Research Scientific Supervision and Scientific Evaluation Apparatus Directorate of Quality Assurance and Academic Accreditation Accreditation Department



# Academic Program and Course Description Guide

### **Academic Program Description Form**

**University Name: Al-Muthanna University** 

**Faculty/Institute: College of Dentistry** 

**Academic or Professional Program Name: Bachelor of Dentistry** 

Final Certificate Name: Bachelor's degree in Oral and Dental Medicine

**Academic System: yearly** 

**Description Preparation Date: 2025-2024** 

File Completion Date: 2025-2024

**Signature:** 

Scientific Associate Name: Lecturer Ghassan Kazem Ghayyad

Date:23/10/2024

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

**Assist. Lecturer Shams Karim Mohammed** 

Date:23/10/2024

**Signature:** 



Approval of the Dean

#### 1. Program Vision

Preparing a dentist who keeps pace with current developments and is able to keep pace with the labor market.

#### 2. Program Mission

Providing a distinguished and comprehensive education for our students, with the aim of qualifying them to become outstanding dentists committed to the highest standards of medical and professional ethics.

#### 3. Program Objectives

- **1-** Preparing students for clinical practice: The programs aim to provide the necessary education and training for students
- **2-** Developing scientific knowledge in the field of dentistry, including understanding the anatomy and functions of the mouth and teeth, and diagnosing and treating various diseases and conditions related to the mouth and teeth.
- **3-** Developing clinical skills, including examining the mouth and teeth, performing basic and cosmetic treatments, managing pain and infections, organizing teeth, and installing cavities and prosthetics.
- **4-** The program aims to increase awareness of the importance of oral health and prevention of oral diseases, and to enhance awareness of the importance of daily oral hygiene and periodic visits to the dentist.
- **5-** The program aims to enhance community contribution and service by providing opportunities for students to participate in oral health care programs for local communities and communities with special needs.

# 4. Program Accreditation

We did not obtain program accreditation

#### 5. Other external influences

Ministry of Higher Education and Scientific Research

6. Program Struct	ure			
Program Structure	Number of	Credit hours	Percentage	Reviews*
	Courses			
Institution	4	180	3.77	
Requirements				
College Requirements	10	1080	22.64	
Department	29	3510	73.59	
Requirements				
Summer Training				
Other				

<sup>\*</sup> This can include notes whether the course is basic or optional.

7. Program De	scription								
Year/Level	Course Code	Course Name	Credit Hours						
First			Theoretical	Practical					
			hr/year	hr/year					
	107PS	Medical Physics	60	60					
	106CH	Medical Chemistry	60	60					
	108BL	Medical Biology	60	60					
	104DA	Dental Anatomy	60	60					
	101AN	General Anatomy	30	60					
	103CS	Computer	30	60					
	102AL	Arabic languish	30	0					
	109EL	Medical Terminology	30	0					
	105HR	Human Right	30	0					
Second	201AN	General Anatomy	30	60					
	209DM	Dental Material	30	60					

	210PR	Prosthodontic	30	120
	212BC	Biochemistry	60	60
	214PH	General Physiology	60	60
	213GH	General Histology	60	60
	211EL	Embryology and Oral	60	60
	215OH	Histology		
	-	Baath crimes	30	0
Third				
	316MB	Medical Microbiology	60	60
	318CM	Community Dentistry	30	60
	-	Medical Ethics	30	0
	320RL	Dental Radiology	30	60
	321PA	General Pathology	60	60
	310PR	Prosthodontic	30	60
	322OS	Oral surgery	30	60
	317PC	pharmacology	60	60
	319CV	Restorative Dentistry	60	120
Fourth	423GM	General Medicine	30	0
	424GS	General Surgery	30	0
	425OP	Oral Pathology	60	60
	422OS	Oral Surgery	30	120
	426OD	Orthodontic	30	120
	428PT	Periodontics	30	90
	410PR	prosthodontic	30	90
	419CV	Restorative Dentistry	30	180
	427PE	Pediatric Dentistry	30	60
Fifth	522OS	Oral surgery	30	180
	526OD	Orthodontic	30	120
	528PT	Periodontics	30	90
	510PR	prosthodontic	30	180
	519CV	Restorative Dentistry	30	120
	529OM	Oral Medicine	30	120
	530PAPD	Pediatric Dentistry	30	90
	531PD		30	90
	-	Research Project	30	0

# 8. Expected learning outcomes of the program

#### Knowledge

1- Scientific knowledge

2- Understand the concepts of oral biology, including knowledge of the form and function of teeth and their associated structures in health and disease.

Diagnosis and development of a treatment plan

3- Research skills	
Skills	
Clinical skills	Health awareness skill for dental and oral health
Ability to continuously learn	
Graduates should demonstrate a high level of ability to collect, analyse and integrate theoretical information in order to provide appropriate oral health care procedures.  Students acquire problem solving and critical thinking skills.	
Ethics	
Good communication and interaction	Professional development
The skill of making the right decision for the benefit of the patient, based on logical thinking.	

#### 9. Teaching and Learning Strategies

- 1- Lectures
- 2- Problem-based learning and case methods
- 3- Practical and laboratory lessons
- 4- Demonstration
- 5- Collaboration
- 6- Classroom discussion
- 7- Debriefing is a conversation session about examining information after a specific event
- 8- Classroom action research
- 9- Computer-assisted learning
- 10-Self-learning

# 10. Evaluation methods

- 1- Theoretical and practical exams
- 2- Short exams
- 3- Reports
- 4- Clinical evaluation

1	•	F	ac	:ul	lty	

Faculty Member	T				Number of the					
Academic Rank	Specialization		Special Require /Skills applica	ements (if	Number of teaching s					
	General	Special			Staff	Lecturer				
1. Professor	bachelor of dentistry	Orthodontic			1					
2. Professor	Biology	physiology			1					
3.Proffesor	bachelor of dentistry	Oral and Maxillofacial Surgery			1					
4. Lecturer	bachelor of dentistry	Oral and Maxillofacial Surgery			2					
5. Assistant Professor	bachelor of dentistry	Oral and Maxillofacial Surgery			1					
6.Assistant Professor	bachelor of dentistry	Pediatric Dentistry			1					
7. Assistant Professor	Biology	Immunovirology			1					
8. Assistant Professor	Physics Science	Applied physics			1					

9. Assistant	business	marketing	1	
Professor	management			
10. Lecturer	political science	Political thought	1	
11. Lecturer	Chemistry Science	organic chemistry	1	
12.Lecturer	computer Sciences	computer Sciences	1	
13. Lecturer	Medical physics	Medical physics	1	
14. Lecturer	Medical microbiology	Medical microbiology	1	
15. Lecturer	bachelor of dentistry	Preventive Dentistry	1	
16. Lecturer	bachelor of dentistry	Periodontics	1	
17.Assisstant lecturer	Biology	Microbiology	1	
18. Lecturer	bachelor of dentistry	Oral Pathology	1	
19. Assistant lecturer	bachelor of dentistry	prosthodontic	1	
20. Assistant lecturer	Medical microbiology	Medical microbiology	1	
21. Assistant lecturer	bachelor of dentistry	Dental Radiology	1	
22. Assistant lecturer	Biology	Biology	2	
23. Assistant lecturer	Biology	physiology	1	
24. Assistant	Veterinary	Veterinary pathology	1	

lecturer	medicine				
25. Assistant	Engineering	Chemical		1	
lecturer		engineering			

#### **Professional Development**

#### Mentoring new faculty members

- 1- Introducing the institution and the department: New members, visitors, full-time and part-time members who will join it are oriented. It provides them with an overview of the vision and mission of the institution, the goals of the department, and the specializations available.
- 2- Definition of the organizational structure: The organizational structure of the institution and department is explained, including the administrative structure and academic structure. The roles of different members and the functional relationships between them are clarified.
- 3- Policies and Procedures: New, visiting, full-time and part-time members are oriented to the policies and procedures related to the institution and the department. The academic, administrative, financial, human resources and other policies to which they must adhere are made clear.
- 4- Resources and Services: New, visiting, full-time and part-time members are oriented to the resources and services available in the institution and department. Library services, research facilities, technology, additional academic support etc. that can help them in discharging their duties effectively are explained.
- 5- Academic and Career Guidance: New, visiting, full-time and part-time members are guided by the academic and career guidance available to them. Opportunities for training and professional development, participation in research and publication, and academic mentoring are explained to students if they are responsible for their own teaching.

#### Professional development of faculty members

- 1. Needs Analysis: A comprehensive analysis of the academic and professional development needs of faculty members in the College of Dentistry is conducted. Current skills and knowledge are assessed and areas where they need to be developed and improved are identified, such as innovative teaching and learning strategies and techniques to enhance engagement and communication with students.
- 2. Design and implementation of workshops and training: Targeted workshops and training are designed and implemented to enhance the teaching and learning skills of faculty members. This includes providing training in the use of advanced educational technology and modern methods of performance assessment, problem diagnosis, and curriculum planning.
- 3. Participation in seminars and workshops: Faculty members are encouraged to participate in local and international seminars and workshops related to the development of university education in the field of dentistry. These events provide opportunities to exchange knowledge and experiences and learn from industry preferences.
- 4. Academic guidance and monitoring: Continuous academic guidance is provided to faculty

members by supervisors and experts in the college. Their performance is monitored and appropriate feedback is provided to improve their performance.

5. Evaluation of performance and learning: The performance of faculty members and the extent to which the set goals for academic and professional development are achieved are evaluated. This includes assessing learning outcomes for students and ensuring that academic and professional standards are achieved.

#### 12. Acceptance Criterion

According to the instructions and controls of the Ministry of Higher Education and Scientific Research in central admission

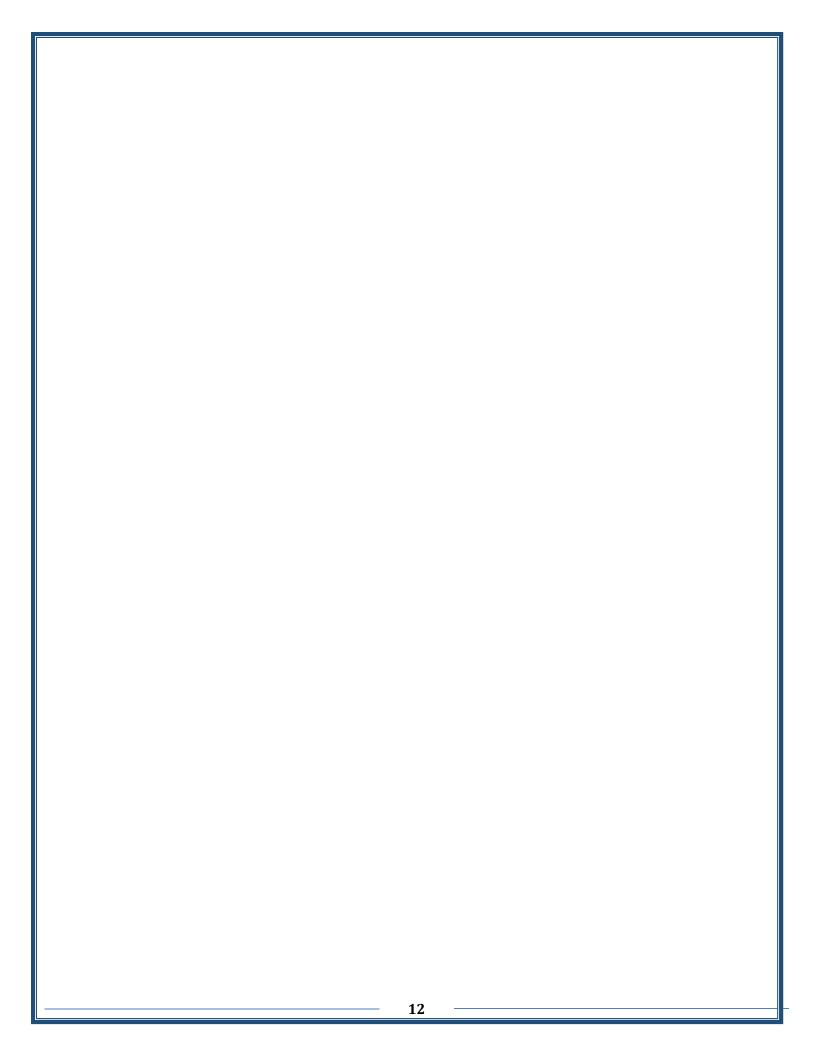
#### 13. The most important sources of information about the program

- 1. Books and scientific resources available at the college
- **2.** The College website
- 3. The internet

#### 14. Program Development Plan

- 1. Improving the curriculum:
- Re-evaluate current study methods and make necessary modifications to improve them. The program included a modern and comprehensive methodology to cover all aspects of dentistry including diagnosis and treatment of diseases and new technologies.
- 2. Promoting the use of educational technology:
- Implement educational technology into the program, such as the use of multimedia, virtual simulation, and distance learning. This helps in enhancing student interaction and engagement and providing a stimulating learning environment.
- 3. Developing cooperative relationships:
- Strengthen cooperation with hospitals and other medical institutions to provide clinical training and education opportunities for students. Research partnerships can also be expanded to enhance scientific research in the field of dentistry.
- 4. Program evaluation and monitoring:
- Implement a monitoring and evaluation system for the program and student learning outcomes. Analyze data and provide feedback for continuous improvement.

- 5. Professional development for faculty members:
- Provide professional development opportunities for faculty members through workshops, training courses, and participation in conferences. They can develop teaching and learning skills and follow the latest developments in the field of dentistry.
- 6. Follow-up of graduates:
- Track alumni performance after graduation and evaluate success and improvements that can be made to the program based on alumni feedback.
- 7. Listening to students' feedback:
- Include a mechanism to collect student feedback on the program and improve it. Listen to their needs and suggestions and adopt them into the development process.
- 8. Sustainability and continuous improvement:
- Create a mechanism for continuous improvement and ensure program continuity. Conduct periodic evaluation and updates to keep up with recent developments in the field of dentistry.



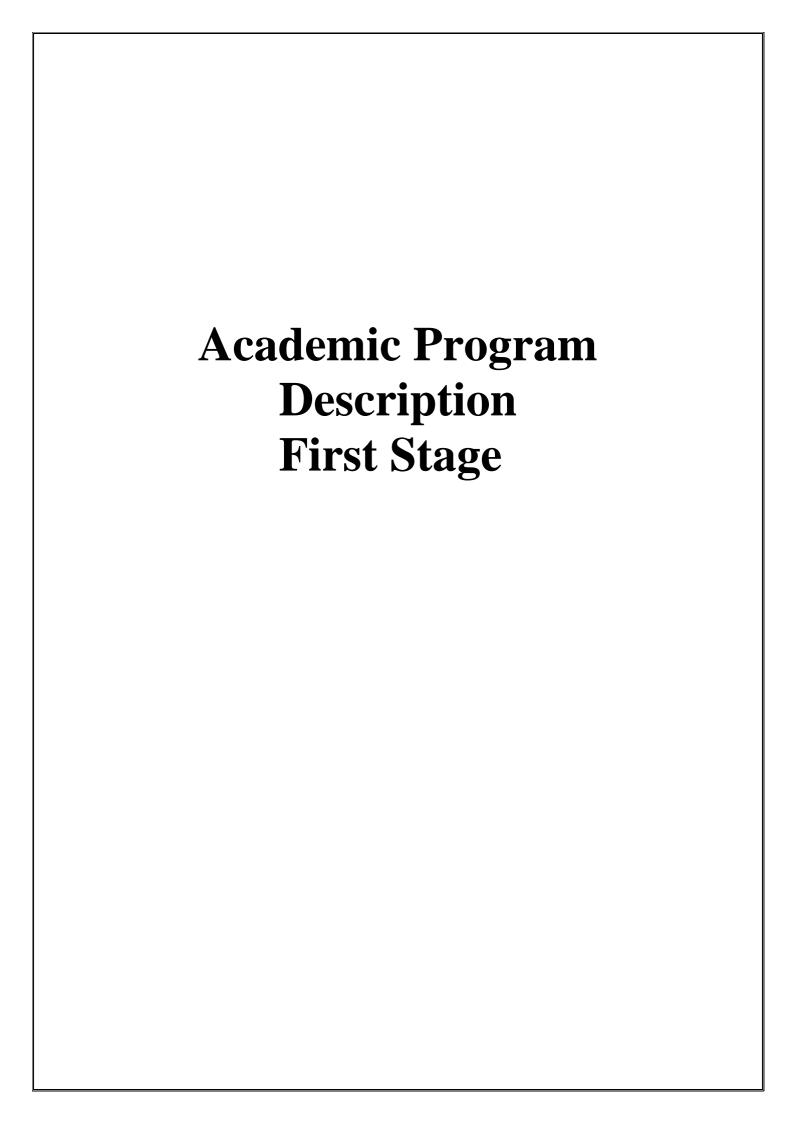
			Pro	ogram	Skills	Outl	ine								
				Required program Learning outcomes											
Year/Level	Course Code	Course Name	Basic or	Knowledge				Skills				Ethics	Ethics		
			optional	A1	A2	<b>A3</b>	<b>A4</b>	B1	<b>B2</b>	В3	B4	C1	<b>C2</b>	C3	<b>C4</b>
First	107PS	Medical Physics	Basic	V	V	1	1	1	1	1	V	1	V	V	$\sqrt{}$
	106CH	Medical Chemistry	Basic	V	V	1	1	1	1	1	V	1	V	V	$\sqrt{}$
	108BL	Medical Biology	Basic	1	1	1	1	1	1	1	1		V	V	$\sqrt{}$
	104DA	Dental Anatomy	Basic	V	V	1	1	1	1	1	V		V	V	$\sqrt{}$
	101AN	Anatomy	Basic		V	$\sqrt{}$	$\sqrt{}$			$\sqrt{}$	$\sqrt{}$	1			
	103CS	Computer	Basic	1	V	1	$\sqrt{}$	V	V	$\sqrt{}$	1	1		V	
	102AL	Arabic Languish	Basic	V	V	1		1	1		V	1	V	V	$\sqrt{}$
	109EL	English Languish	Basic	V	V	<b>V</b>	1	1	1	1	V		V	V	$\sqrt{}$
	105HR	Human Right	Basic	1	$\sqrt{}$	V		1	1		$\sqrt{}$	V	1	V	V

Second				1	<b>√</b>	1	V	1	1		<b>√</b>	V	V	1	V
	201AN	Anatomy	Basic	<b>V</b>	1	1	1	1	1		<b>V</b>	V	<b>V</b>	<b>V</b>	1
	209DM	Dental Material	Basic		1	1	V	1	1	1	1	1	1	1	V
	210PR	Prosthodontic	Basic	1	1	1	V	1				V	V	1	1
	212BC	Biochemistry	Basic	<b>V</b>	<b>√</b>	1	1	1	1		<b>√</b>	V	1	1	1
	214PH	General Physiology	Basic		1	1	V	<b>√</b>	1	1	1	1	1	1	V
	213GH	General Histology	Basic		1	V	V		1	1	V	1	V	V	V
	211EL	Embryology and Oral Histology	Basic	V	V	<b>V</b>	V	1	1	1	V	<b>V</b>	V	V	V
	-	Baath crimes	Basic	$\sqrt{}$	1	1	1	1			1	V	V	1	1
Third	316MB	Medical Microbiology	Basic		1	V	V	1	1	1	V	1	1	V	1
	318CM	Community Dentistry	Basic		1	V	V		1	1	V	1	V	V	V
	-	Medical Ethics	Basic		1	$\sqrt{}$	V				1	V	1	1	V

	320RL	Dental Radiology	Basic	1	1	1	√	1	1	1	1	1	<b>√</b>	\ \	1
	321PA	General Pathology	Basic	1	1		1	1	1	1	1	V	V	V	V
	310PR	Prosthodontic	Basic	1				1	1						
	322OS	Oral surgery	Basic	V	1	1	1	1	1		1		V	V	V
	317PC	pharmacology	Basic	1	1	1	V	1	1	V	√	1	1	1	1
	319CV	Restorative Dentistry	Basic	1	1		1	V	V	1	1	1	V	1	1
Fourth	423GM	General Medicine	Basic	1	1		1	1	1	1	1	V	V	1	V
	424GS	General Surgery	Basic	1	1		1	1	1	1	1	V	V	V	V
	425OP	Oral Pathology	Basic	1			1	1	1		1	1		1	
	422OS	Oral Surgery	Basic	V	1	1	1	1	1		1		V	V	V
	426OD	Orthodontic	Basic	1	1	1	1	1	1	1	<b>√</b>	1	V	V	V
	428PT	Periodontics	Basic	1	1	V	V	V	V	V	<b>√</b>	1	V	V	V

	410PR	prosthodontic	Basic	V	V	V	V	1	1	1	1	1	<b>√</b>	V	V
	419CV	Restorative Dentistry	Basic	V	1	1	V	<b>√</b>	1	1	V	1	1	V	1
	427PE	Pediatric Dentistry	Basic	1		1	V	1	1	1	1	V	1	V	V
Fifth	522OS	Oral surgery	Basic										1		
	526OD	Orthodontic	Basic	1	V	V	1	1	V	V	<b>√</b>	V	1	<b>V</b>	V
	528PT	Periodontics	Basic	1	$\sqrt{}$	V	1	V	V	1	<b>√</b>	1	1	<b>V</b>	V
	510PR	prosthodontic	Basic	1	$\sqrt{}$	V	1	V	V	1	<b>√</b>	1	1	<b>V</b>	V
	519CV	Restorative Dentistry	Basic	1	1	1	V	1	1	1	1	1	1	1	1
	529OM	Oral Medicine	Basic	1			1				1	1	1		√
	530PAPD	Pediatric Dentistry	Basic	1	1	1	V	1	1	1	1	1	1	1	1
	531PD	Preventive Dentistry	Basic		$\sqrt{}$	$\sqrt{}$	V			1	1	V	1		V

• Please tick the boxes corresponding to the individual program learning outcomes under evaluation.



#### 1. Course Name:

General Human Anatomy

#### 2. Course Code:

101AN

#### 3. Semester / Year:

2 semester/ first year

#### 4. Description Preparation Date:

2024-2025

#### 5. Available Attendance Forms:

Theoretical lectures and Laboratory sessions

#### 6. Number of Credit Hours (Total) / Number of Units (Total)

90 hours "30 hours' theory & 60 hours practical" with 4 credits "2 for the theory and 2 for the practical.

#### 7. Course administrator's name (mention all, if more than one name)

Name: Assistant lecturer Zahraa Mohammed Abdel Aziz

Email: Zahraaallwzy@gmail.com

#### 8. Course Objectives

# Course Objectives:

- Preparation of the student scientifically with regard to human anatomy, especially what concerns the anatomy of the head and neck and its relationship to his precise specialty as a dentist.
- Phenomenological knowledge of the natural human body structure.
- Diagnosing body parts, systems and organs, with a focus on the hea and neck.

#### 9. Teaching and Learning Strategies

#### **Strategy**

- The primary mission of the laboratory is to educate dental students to enable them to describe basic primary functions.
- For the general anatomical structure and recognition of anatomical relationships and clinical significance.
- Using anatomical models, radiographs, video clips and images from the communications network(Internet) to expand students' awareness.

10. Course structure							
Week	Hours	Required Learning	Unit or subject name	Learning	Evaluation		
		Outcomes		method	method		
1.	1	<ul> <li>Understanding</li> </ul>	Introduction to Human	- Theoretical	- Quizzes		
		and assimilating	Anatomy Descriptive	lectures	- Seminars		
		the scientific	Anatomic Terms	- Illustrating	- Tutorial		
2.		data.	Basic Structures: Skin,	images and	Free		
	1	Possibility of	Fasciae, Muscle, Joints,	movies.	questi		
		inference and	Ligament, Bursae	- X- rays	on		
3.			Basic Structures: Bone,	- Problem-	- Daily		
	1	access to any	Cartilage, Blood Vessels,		•		
		part of the body	Lymphatic System	based	following		
4.		strictly and	Basic Structures: Bone,	learning,	activity		
	1	•	Cartilage, Blood Vessels,	collaboration			

		easily.	Lymphatic System	, discussion,	
5.		,	Basic Structures: Nervous	debriefing,	
	1		System, Mucous Membranes,	information	
			Serous Membranes Skeletal	review,	
6.	1		Skeletal system of the body: Skull:Cranial Bones	practical	
7.	-		Skeletal system of the body:	research,	
	1		Skull :Cranial Bones	computer-	
8.	1		Skeletal system of the body:	based learning.	
			Skull: Facial Bones	icarining.	
9.	1		<b>Skeletal system of the body:</b> Skull: Facial Bones		
10.	1		External Views of the Skull		
11.			External Views of the Skull		
	1				
12.			<ul><li> The Cranial Cavity</li><li> Major Foramina and</li></ul>		
	1		Fissures locations and		
	_		structures pass through		
			Neonatal Skull		
13.			The Cranial Cavity		
			Major Foramina and		
	1		Fissures locations and		
			structures pass through  • Neonatal Skull		
14.			• Skeleton of the Orbital		
			Region, Openings into the Orbital Cavity		
			• Skeleton of the External		
	1		Nose, nasal cavity, Paranasal		
			Sinuses		
			Auditory ossicles Hyoid		
1.5			bone		
15.			• Skeleton of the Orbital Region, Openings into the		
			Orbital Cavity		
	1		• Skeleton of the External		
	1		Nose, nasal cavity, Paranasal		
			Sinuses		
			Auditory ossicles Hyoid bone		
16.	1		The Vertebral Column		
17.			The Vertebral Column		
	1				
18.			• Structure of the Thoracic Wall		
			• Joints of the Chest Wall		
	1		Suprapleural Membrane		
			Diaphragm		
			Surface Anatomy		
19.			• Structure of the Thoracic		
			<ul><li>Wall</li><li>Joints of the Chest Wall</li></ul>		
	1		<ul><li>Joints of the Chest Wall</li><li>Suprapleural Membrane</li></ul>		
			Suprapieural Memorane     Diaphragm		
			• Surface Anatomy		
20.	1		Thoracic cavity:		
	<u> </u>				

21.	1
22.	1
23.	1
24.	1
25.	1
26.	1
27.	1
28.	1
29.	1
30.	1

Mediastinum, Pleurae,	
Trachea, Bronchi, Lungs	
Thoracic cavity: Mediastinum, Pleurae,	
Trachea, Bronchi, Lungs	
Pericardium, Heart, Large arteries, veins and nerves of	
thorax	
Pericardium, Heart, Large arteries, veins and nerves of	
thorax	
Pericardium, Heart, Large arteries, veins and nerves of	
thorax	
Bones of the Shoulder	
(Pectoral girdle) girdles  • Bones of the Upper	
extremities	
Bones of the Shoulder	
(Pectoral girdle) girdles  • Bones of the Upper extremities	
• Bones of the Pelvic girdle • Bones of the Lower	
extremities	
• Bones of the Pelvic girdle • Bones of the Lower extremities	
Abdominal cavity and organs	
Abdominal cavity and organs	

Lab number	Study unit title			
1	Introduction to anatomy			
2	Basic structures part 1 (Skin, Fasciae, Muscle, Joints, Ligament, Bursae)			
3	Basic structures part 2 (bone, Cartilage, Blood Vessels, Lymphatic System) and classification of human skeleton			
4	Basic structures part 3(Nervous System, Mucous Membranes, Serous Membranes)			
5	Frontal Bone, Parietal bones			
6	6 Occipital bone			
7	Temporal bones			
8	Sphenoid bone			
9	Ethmoid bone			
10	Zygomatic bones,Maxillae			
11	Nasal bones ,Lacrimal bones, Vomer,Palatine bones,Inferior conchae			
12	Mandible			
13	External Views of the Skull			
14	Cranial cavity			

15	Major Foramina and Fissures locations and structures pass through the skull
16	Orbit
17	nasal cavity
18	Auditory ossicles, Hyoid bone
19	General Characteristics of a Vertebra
20	Vertebral column
21	Structure of the Thoracic cage (Sternum ,Ribs, Costal Cartilages)
22	Thoracic cavity (Mediastinum, Pleurae, Trachea, Bronchi)
23	lung
24	Anatomy of heart
25	Major arteries, veins and nerves of thorax
26	Bones of the Shoulder (Pectoral girdle) girdles
27	Bones of the Upper extremities
28	Bones of the Pelvic girdle
29	Bones of the Lower extremities
30	Abdominal cavity and organs

#### 11. Course Evaluation

The subject is annual, and therefore the grade is distributed at the rate of 10 marks for the first semester, 20 marks for the mid-year exam, and 10 marks for the second semester, so the annual endeavor score is 40 marks, while the remaining 60 marks are allocated to the final exam, both practical and its score is 20, and the theoretical score is 40.

During the first and second semesters, the grade is distributed between the theoretical and practical aspects, each of which has its own exams.

The theoretical aspect depends on surprise exams, daily follow-ups, seminars, attendance, and student activity, while the practical grade depends on passing the anatomical models exam, oral exams, and the extent of commitment and follow-up of the scientific material.

#### 12. Learning and Teaching Resources

- 1. Snell's Clinical Anatomy by Regions, 10th edition. Wolters Kluwer 2019
- 2. Netter's Head and Neck Anatomy for Dentistry, 3rd edition. Elsevier 2017
- 3. Gray's Atlas of Anatomy, 3rd edition. Elsevier 2021

#### 1. Course Name:

Medical Biology

2. Course Code:

108BL

#### 3. Semester / Year:

2 semester/ first stage

**4.** Description Preparation Date:

#### 2024-2025

#### 5. Available Attendance Forms:

Lectures and laboratory

6. Number of Credit Hours (Total) / Number of Units (Total)

120 hours / 6 unite

#### 7. Course administrator's name (mention all, if more than one name)

Name: Assist. Lecturer Shams Karim Mohammed

Email: Shamskareem@mu.edu.iq

#### 8. Course Objectives

#### **Course Objectives**

 It helps in identifying, isolating, diagnosing and treating microorganisms that cause human diseases and training students to provide medical services to hospitals and improve the health system.

# 9. Teaching and Learning Strategies

#### Strategy

- Knowledge and understanding
- Skill goals
- Stimulus and response method
- Long, short and semester exams
- Thinking skills

#### 10. Course Structure

Week	Hours	Required Learning	Unit or subject name Theoretical	Learning method	Evaluation method
		Outcomes			
1	2	Knowledge and	Introduction to medical	Problem-based	Short, semester,

	understanding.	and oral biology	loarning	mid waar and
	subject-specific skills	and oral biology	learning, collaboration, discussion,	mid-year and final exams
			debriefing, information review, practical	
			research, computer-based	
			learning.	
2 2	Knowledge understanding. subject-specific skills	Prokaryote and eukaryote	Problem-based learning, collaboration, discussion, debriefing, information	Short, semester, mid-year and final exams
			review, practical research, computer-based learning.	
3 2	Knowledge understanding. subject-specific skills	General and dimmunology	Problem-based learning, collaboration, discussion, debriefing, information review, practical research,	Short, semester, mid-year and final exams
			computer-based learning.	
4 2	Knowledge understanding. subject-specific skills	Bacteria and oral disease	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
5 2	Knowledge understanding. subject-specific skills	Genetics and its role in oral diseases	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
6	Knowledge and understanding. subject-specific skills	Simple epithelial tiss (Tongue)	Problem-based learning, collaboration, discussion, debriefing, information	Short, semester, mid-year and final exams

				review, practical	
				research, computer-based	
				learning.	
7	2	Knowledge	Stratified epithelial tissue	Problem-based	Short, semester
		understanding.		learning,	mid-year and
		subject-specific skills		collaboration,	final exams
		SKIIIS		discussion,	
				debriefing,	
				information	
				review, practical	
				research,	
				computer-based	
8	2	Knowledge	Clandular opitholial	learning. Problem-based	Short, semester
O	۷	understanding.	Glandular epithelial tissue (	learning,	mid-year and
		subject-specific	salivary gland)	collaboration,	final exams
		skills	Salivary glariu)	discussion,	imai exams
				debriefing,	
				information	
				review, practical	
				research,	
				computer-based	
				learning.	
9	2	Knowledge	General connective	Problem-based	Short, semester
		understanding. subject-specific	tissue	learning,	mid-year and
		skills	(blood)	collaboration, discussion,	final exams
				debriefing,	
				information	
				review, practical	
				research,	
				computer-based	
				learning.	
10	2	Knowledge	Muscular tissue	Problem-based	Short, semester
		understanding.		learning,	mid-year and
		subject-specific skills		collaboration,	final exams
		Sitting		discussion,	
				debriefing, information	
				review, practical	
				research,	
				computer-based	
				learning.	
11	2	Knowledge	Nerve tissue	Problem-based	Short, semester
		understanding.		learning,	mid-year and
		subject-specific skills		collaboration,	final exams
		SKIIIS		discussion,	
				debriefing,	
				information	
				review, practical	
				research, computer-based	
				learning.	
	1	i l		icai iiiig.	

12 2	Knowledge	Cell structure (oral	Problem-based	Short, semester
	understanding.	mucus	learning,	mid-year and
	subject-specific		collaboration,	final exams
	skills	membrane)	discussion,	IIIIai exaiiis
			debriefing,	
			information	
			review, practical	
			research,	
			computer-based	
			learning.	
13		Plasma membrane	Problem-based	Short, semester
	understanding.	structure	learning,	mid-year and
	subject-specific		collaboration,	final exams
	skills		discussion,	
			debriefing,	
			information	
			review, practical	
			research,	
			computer-based	
			learning.	
14 2	2 Knowledge	Dassage of Metarials	Problem-based	Short, semester
14	understanding.	Passage of Materials		l i
	subject-specific	across Cell	learning,	mid-year and final exams
	skills	Membrane	collaboration,	imai exams
			discussion,	
			debriefing,	
			information	
			review, practical	
			research,	
			computer-based	
		-	learning.	
15		Cell cycle	Problem-based	Short, semester
	understanding.		learning,	mid-year and
	subject-specific skills		collaboration,	final exams
	SKIIIS		discussion,	
			debriefing,	
			information	
			review, practical	
			research,	
			computer-based	
			learning.	
16 2		Mitosis and meiosis	Problem-based	Short, semester
	understanding.		learning,	mid-year and
	subject-specific		collaboration,	final exams
	skills		discussion,	
			debriefing,	
			information	
			review, practical	
			research,	
			computer-based	
			learning.	
17 2	Knowledge	Cell energy	Problem-based	Short, semester
	understanding.		learning,	mid-year and
	subject-specific		collaboration,	final exams
	skills		discussion,	
			debriefing,	
i I	1		acoricinis,	i l

Short, sem   Information   I	and
18 2 Knowledge understanding. subject-specific skills  19 2 Knowledge understanding. subject-specific skills  10 2 Knowledge understanding. subject-specific skills  11 3 3 Knowledge understanding. subject-specific skills  12 Knowledge understanding. subject-specific subject-spe	and
18   2 Knowledge understanding. subject-specific skills	and
18 2 Knowledge understanding. subject-specific skills  2 Knowledge understanding. subject-specific skills  2 Knowledge understanding. subject-specific skills  3 Knowledge understanding. subject-specific skills  4 Short, sem mid-year a final exam discussion, debriefing, information review, practical research, computer-based learning.  4 Computer-based learning.  5 Short, sem mid-year a final exam discussion, debriefing, information review, practical research, computer-based learning.  6 Short, sem mid-year a final exam discussion, debriefing, information review, practical research, computer-based learning.  7 Short, sem mid-year a final exam discussion, debriefing, information review, practical research, computer-based learning.	and
2 Knowledge understanding. subject-specific skills  Nucleic acid, DNA and learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  Short, sem mid-year a final examed to parasitolog  RN  Short, sem mid-year a final examed to parasitolog  Introduction parasitolog  Short, sem mid-year a final examed to parasitolog  Problem-based learning.  Short, sem mid-year a final examed to parasitolog  Short, sem mid-year a final examed to parasitolog	and
understanding. subject-specific skills  RN  learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  2 Knowledge understanding. subject-specific subject-specific	and
subject-specific skills  subject-specific skills  subject-specific skills  collaboration, discussion, debriefing, information review, practical research, computer-based learning.  19  2 Knowledge understanding, subject-specific subject-specific skills  Introduction to parasitolog subject-specific skills  Problem-based learning, mid-year and final examents of the state of the stat	
skills  skills  skills  discussion, debriefing, information review, practical research, computer-based learning.  Short, sem parasitolog  litroduction parasitolog  subject-specific  skills  discussion, debriefing, information review, practical research, computer-based learning.  Short, sem mid-year a final exam	IS
19 2 Knowledge understanding. subject-specific subject-specific lateral and subject-specific lateral an	
information review, practical research, computer-based learning.  2 Knowledge understanding. subject-specific subject-specific subject-specific specific spe	
review, practical research, computer-based learning.  2 Knowledge understanding. subject-specific subject-specific subject-specific specific specif	
research, computer-based learning.  2 Knowledge understanding. subject-specific subject-spe	
computer-based learning.  2 Knowledge understanding. subject-specific subj	
19 2 Knowledge understanding. subject-specific subject-specific learning.  Introduction to Problem-based Short, semple learning, mid-year and collaboration. final example final example subject-specific learning.	
19 2 Knowledge understanding. subject-specific subject-sp	
understanding. subject-specific parasitolog learning, mid-year a collaboration. final exam	
subject-specific subject-specific collaboration. final exam	ıester
The state of the s	
	S
skills discussion,	
debriefing,	
information	
review, practical	
research,	
computer-based	
learning.	
20 Z Knowledge Types of parasites and Problem-based Short, sem	ıester
understanding. hosts learning, mid-year a	
subject-specific skills collaboration, final exam	S
discussion,	
debriefing,	
information	
review, practical	
research,	
computer-based	
learning.	
21 2 Knowledge General and oral Problem-based Short, sem	
understanding. protozoa learning, mid-year a	
subject-specific skills collaboration, final exam	S
discussion,	
debriefing,	
information	
review, practical	
research,	
computer-based	
learning.	
22 Z Knowledge Human amoebas, E. Problem-based Short, sem	
understanding. histolytica, learning, mid-year a	
subject-specific skills E.coli, E.gingivalis collaboration, final exam	S
discussion,	
debriefing,	
information	
review, practical	
research,	
computer-based	
learning.	

23 2	Knowledge understanding.	Flagellates, Giardia	Problem-based learning,	Short, semester, mid-year and
	subject-specific	lamblia,	collaboration,	final exams
	skills	Trichomonas tenax,	discussion,	IIIIai exaiiis
		T.hominas,	•	
		T.vaginalis	debriefing, information	
			review, practical	
			research,	
			computer-based	
			learning.	
24 2	Knowledge	Leishmania , cutaneous	Problem-based	Short, semester
	understanding. subject-specific	and vesiral	learning,	mid-year and
	skills		collaboration,	final exams
	SKIIIS		discussion,	
			debriefing,	
			information	
			review, practical	
			research,	
			computer-based	
		<u> </u>	learning.	
25 2	Knowledge	Sporozoa, Plasmodium	Problem-based	Short, semester,
	understanding.	sp	learning,	mid-year and
	subject-specific skills		collaboration,	final exams
	SKIIIS		discussion,	
			debriefing,	
			information	
			review, practical	
			research,	
			computer-based	
			learning.	
26 2	Knowledge	Toxoplasma gondii	Problem-based	Short, semester,
	understanding. subject-specific		learning,	mid-year and
	skills		collaboration,	final exams
	SKIIIS		discussion,	
			debriefing,	
			information	
			review, practical	
			research,	
			computer-based	
27	V1. 1	NI a secondo a los S. O.	learning.	Classic
27 2	Knowledge understanding.	Nemathelminthes,	Problem-based	Short, semester
	subject-specific	Ascaris	learning,	mid-year and
	skills	lumbricoides,	collaboration,	final exams
			discussion,	
			debriefing, information	
			review, practical	
			research,	
			computer-based	
20	77 1 1		learning.	G1 .
28 2	Knowledge	Ancylostoma duodenale,	Problem-based	Short, semester
	understanding. subject-specific	Entrobius vermicularis	learning,	mid-year and
	skills		collaboration,	final exams
	SKIIIS		discussion,	
			debriefing,	

			information	i l	
			review, practical research, computer-based learning.		
29	2 Knowledge understanding. subject-specific skills	Platyhelminthes, Fasciola hepatica	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams	
30	2 Knowledge understanding. subject-specific skills	Schistosoma spp.	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams	
Lab number		Study unit	title		
1	Laboratory safety				
2	Parts of microscope				
3	Types of cells				
4	Simple epithelial tissue				
5	Stratified epithelia tissue				
6	Glandular epithelial tissue				
7	Serous, Mucous, Sero-mucous cell glands				
8	Proper connective tissue, Loose				
9	Proper connective tissue, dense				
10	Special connective tissue, type of cells				
11	Cartilage, Hyaline, Elastic, Fibro				
12	Compact and spongy bone				
13	Human Blood, W.B.C, R.B.C and frog blood				
14	Muscular tissue: Skeletal, cardiac and smooth muscles				
	Nerve cell				
15	Nerve cell				

17	Spinal cord and meninges
18	Entamoeba histolytica , Entamoeba coli
19	Giardia lamblia , Trichomonas vaginalis
20	Trichomonan tenax
21	Leishmania tropica,Leshmania donovani
22	Trypanosoma gambiense,T.rhodesiense
23	Plasmodium vivax, Toxoplasma gondii
24	Balantidium coli
25	Echinococcus granulosus,Taenia saginata Taenia solium
26	Ancylostoma, Ascaris , Entrobius
27	Schistosoma spp, Fasciola hepatica
28	Endoskeleton of frog
29	Experimentexamine samples of water
30	Experimentexamine samples of water (one hour), ExperimentBlood groups(one hour)

#### 11. Course Evaluation

- 10 degrees of first semester: 8 degrees of short and semester exams and two degrees of oral exam
- $10\ degrees$  of second semester:  $8\ degrees$  of short and semester exams and two degrees of oral exam
- 20 degrees of mid-year
- 60 degrees of final exam

# 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	Human Biology, 8th Edition. Cell Biology,3 edition.2017
Recommended books and references (scientific journals,	
reports)	
Electronic References, Websites	

1. Course Name:

Computers

2. Course Code:

103CS

3. Semester / Year:

2 Semester/ first Stage

**4.** Description Preparation Date:

2024-2025

5. Available Attendance Forms:

Theoretical lectures and practical laboratory

6. Number of Credit Hours (Total) / Number of Units (Total)

90 hours/4 unite

7. Course administrator's name (mention all, if more than one name)

Name: Abdul-Ala Saud Aziz

Email: AbdulalaSaud @mu.edu.iq

8. Course Objectives

**Course Objectives** 

 Introduction to computer science and teaches the student the performance of computers, approved methods, programs and the use computers in the medical field

9. Teaching and Learning Strategies

#### 10. Course Structure

Week	Hours	Required	Unit or subject name	Learning method	Evaluation
		Learning	Theoretical		method
		Outcome			
		s			
1	2	Knowledge a understandi subject-spec skills		Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
2	2	Knowledge understandi subject-spec skills		Problem-based learning, collaboration, discussion, debriefing,	Short, semester, mid-year and final exams

3 2 Knowledge understandid subject-spec skills  4 2 Knowledge understandid subject-spec skills  6 Cassroom Platform Google drise skills  7 Cassroom Platform Google drise skills  7 Cassroom Platform Google drise skills  8 Cassroom Problem-based learning, collaboration, discussion, debriefing, information review, practical r			understandi subject-spec skills Knowledge	Classroom Platform Google dri	practical research, computer-based learning.  Problem-based learning, collaboration, discussion, debriefing, information review, practical research,	mid-year and
3   2   Knowledge understandi subject-spec skills			understandi subject-spec skills Knowledge	Classroom Platform Google dri	computer-based learning.  Problem-based learning, collaboration, discussion, debriefing, information review, practical research,	mid-year and
Second Problem-based learning collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information, debriefing, only only only or problem-based learning, collaboration, discussion, debriefing, information, debriefing, only only or problem-based learning, collaboration, discussion, debriefing, information, debriefing, only or problem-based learning, collaboration, discussion, debriefing, only or problem-based learning, coll			understandi subject-spec skills Knowledge	Classroom Platform Google dri	learning.  Problem-based learning, collaboration, discussion, debriefing, information review, practical research,	mid-year and
Short, semester mid-year and final exams			understandi subject-spec skills Knowledge	Classroom Platform Google dri	Problem-based learning, collaboration, discussion, debriefing, information review, practical research,	mid-year and
understandi subject-spec skills  Short, semester mid-year and final exams  Google forms computer-based learning.  Short, semester mid-year and final exams  Short, semester problem-based learning.			understandi subject-spec skills Knowledge	Classroom Platform Google dri	learning, collaboration, discussion, debriefing, information review, practical research,	mid-year and
subject-spec skills  4 2 Knowledge understandi subject-spec skills  5 2 Knowledge understandi subject-spec skills  6 2 Knowledge understandi subject-spec skills  7 2 Knowledge understandi subject-speci skills  6 2 Knowledge understandi subject-speci skills  8 2 Knowledge understandin subject-speci skills  8 3 2 Knowledge understandin subject-speci skills  8 4 2 Knowledge understandin subject-speci skills  8 5 2 Knowledge understandin subject-speci skills  8 6 2 Knowledge understandin subject-speci skills  8 8 2 Knowledge understandin subject-speci skills  8 8 2 Knowledge understandin subject-speci skills  8 8 2 Knowledge understandin subject-speci skills  8 9 2 Knowledge understandin subject-speci skills  8 10 Knowledge understandin subject-speci skills  10 Knowledge und	4	2	subject-spec skills Knowledge		collaboration, discussion, debriefing, information review, practical research,	-
skills    Skills   Sk	4	2	skills  Knowledge		discussion, debriefing, information review, practical research,	final exams
4 2 Knowledge understandi subject-spec skills  5 2 Knowledge understandi subject-spec skills  6 2 Knowledge understandi subject-spec skills  7 2 Knowledge understandi subject-spec skills  8 2 Knowledge a Introduction about Window practical research, computer-based learning.  6 2 Knowledge a understandin subject-spec skills  8 2 Knowledge a Untroduction about Window subject-spec skills  8 2 Knowledge a Untroduction about Window subject-spec skills  8 2 Knowledge a Untroduction about Window subject-speci skills  8 2 Knowledge a Untroduction about Window subject-speci skills  8 2 Knowledge a Untroduction about Window subject-speci skills  8 2 Knowledge a Untroduction about Window subject-speci skills  8 2 Knowledge a Untroduction about Window subject-speci skills  8 3 2 Knowledge anderstandin subject-speci skills  8 4 2 Knowledge anderstandin subject-speci skills  8 5 2 Knowledge anderstandin subject-speci skills  8 5 2 Knowledge anderstandin subject-speci skills  8 6 2 Knowledge anderstandin subject-speci skills  8 6 2 Knowledge anderstandin subject-speci skills  8 7 8 2 Knowledge anderstandin subject-speci skills  8 8 9 2 Knowledge anderstandin subject-speci skills  8 10 2 Knowledge anderstandin subject-speci skills  8 10 2 Knowledge anderstandin subject-speci skills  10 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	4	2	Knowledge		information review, practical research,	
4 2 Knowledge understandi subject-spec skills  5 2 Knowledge understandi subject-spec skills  6 2 Knowledge understandi subject-spec skills  6 2 Knowledge understandi subject-spec skills  7 2 Knowledge understandi subject-spec skills  6 2 Knowledge understandi subject-spec skills  7 2 Knowledge understandin subject-spec skills  8 2 Knowledge understandin subject-spec skills  8 2 Knowledge understandin subject-spec skills  8 2 Knowledge understandin subject-speci skills  8 3 2 Knowledge understandin subject-speci skills  8 4 2 Knowledge understandin subject-speci skills  8 5 2 Knowledge understandin subject-speci skills  8 6 2 Knowledge understandin subject-speci skills  8 7 8 2 Knowledge understandin subject-speci skills  8 8 9 2 Knowledge understandin subject-speci skills  8 1 2 Knowledge understandin subject-speci skills  8 1 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	4	2			practical research,	
Computer-based learning.   Short, semester mid-year and final exams   Short, semester mid-year and final exam	4	2			=	
Short, semester mid-year and final exams   learning.	4	2			gomputer based	
4 2 Knowledge understandi subject-spec skills  5 2 Knowledge understandi subject-spec skills  6 2 Knowledge understandi subject-spec skills  6 2 Knowledge understandi subject-spec skills  7 2 Knowledge understandi subject-spec skills  8 2 Knowledge understandi subject-speci skills  8 3 Chowledge understandi subject-speci skills  8 4 Collaboration, discussion, debriefing, information review, practical research, computer-based learning.  8 Collaboration, discussion, debriefing, information review, practical research, computer-based learning.  8 Collaboration, discussion, debriefing, information review, practical research, computer-based learning.  8 Collaboration, discussion, debriefing, information review, practical research, computer-based learning.  8 Collaboration, discussion, debriefing, information review, practical research, computer-based learning.  8 Collaboration, discussion, debriefing, information review, practical research, computer-based learning.  8 Collaboration, discussion, debriefing, information review, practical research, computer-based learning.  8 Collaboration, discussion, debriefing, information, discussion, debriefing, debriefing, information, discussion, debriefing, d	4	2			computer-based	
Short, semester   Short, semester   Short, semester   Short, semester   Short, semester   Skills   Short, semester   Short, semester   Short, semester   Skills   Short, semester   Short, sem	4	2			learning.	
Short, semester   Short, semester   Short, semester   Short, semester   Short, semester   Skills   Short, semester   S			- 1	Google forms	Problem-based	Short, semester
Subject-speck skills			understandi		learning.	
Skills   Skills   discussion, debriefing, information review, practical research, computer-based learning.   Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.   Short, semester mid-year and final exams			subject-spec		<u> </u>	-
Short, semester mid-year and final exams			skills		-	
Short, semester mid-year and final exams   Short, semester mid-year and final exams						
Solution   Computer-based learning.   Computer-based learning.   Problem-based learning.   Collaboration, discussion, debriefing, information review, practical research, computer-based learning.   Short, semester mid-year and final exams   Short, semester learning.   Short, semester learning, information review, practical research, computer-based learning, information review, practical research, computer-based learning.   Short, semester mid-year and final exams   Short, semester learning, information review, practical research, computer-based learning.   Short, semester mid-year and final exams   Short, semester learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.   Short, semester mid-year and final exams   Short, semester learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.   Short, semester mid-year and final exams   Short, semeste						
Short, semester mid-year and final exams   Short, semester mid-year and final exams					=	
5					=	
discussion, debriefing, information review, practical research, computer-based learning.  The search of the search	5	2	Knowledge	Online conferencing	9	Short semester
subject-spec skills  2 Knowledge a understandin subject-speci skills  4 Knowledge a understandin subject-speci skills  4 Knowledge a understandin subject-speci skills  4 Knowledge a understandin subject-speci skills  5 Knowledge a understandin subject-speci skills  6 2 Knowledge a understandin subject-speci skills  6 8 2 Knowledge a understandin subject-speci skills  8 Collaboration, discussion, debriefing, information review, practical research, computer-based learning.  8 Collaboration, discussion, debriefing, information review, practical research, computer-based learning.  8 Collaboration, discussion, debriefing, information review, practical research, computer-based learning.  8 Problem-based learning.  8 Short, semester mid-year and final exams  Robert or the final exams		2		5		· 1
skills  Skills					o o	
Computer-based learning   Short, semester   Sh					-	illiai Cxailis
2 Knowledge a understandin subject-speci skills   Skills     8   2 Knowledge a understandin subject-speci skills   Skills     8   2 Knowledge a understandin subject-speci skills   Skills     8   2 Knowledge understandin subject-speci skills     8   7   7     9   7   7     9   8   8     9   9   9     9   9   9     9   9						
6 Z Knowledge a understandin subject-speci skills  Working with files and fold Using My computer  8 Z Knowledge understandin subject-speci skills  Working with files and fold Using My computer  8 Z Knowledge understandin subject-speci skills  Working with files and fold Using My computer  Working with Taskbar Desktop  Working with Taskbar Collaboration, discussion, debriefing, information review, practical research, computer-based learning.  Short, semester mid-year and final exams  Rocalization, discussion, debriefing, information review, practical research, computer-based learning.  Short, semester mid-year and final exams  Collaboration, discussion, debriefing, oliaboration, discussio						
Collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.    Collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.    Short, semester mid-year and final exams					-	
6 2 Knowledge understandin subject-speci skills Windows 10/Sta Windows 10/Sta Windows 10/Working with windows Program Windows 10/Sta Windows 10/Working with windows Program Windows 10/Sta Windows 10/Working with windows Program Collaboration, discussion, debriefing, information review, practical research, computer-based learning.  7 2 Knowledge understandin subject-speci skills Working with files and fold Using My computer Collaboration, discussion, debriefing, information review, practical research, computer-based learning.  8 2 Knowledge understandin subject-speci skills Working with Taskbar Desktop Collaboration, discussion, debriefing, collaboration, discussion, debrie					_	
Understandin subject-speci skills		2	Knowledge a	Introduction about Windows		Short comester
subject-speci skills  Windows 10/Working with windows Program  Windows Program  Windows 10/Working with collaboration, discussion, debriefing, information review, practical research, computer-based learning.  Working with files and fold Using My computer  Working with files and fold Using My computer  Learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  Knowledge understandin subject-speci skills  Working with Taskbar Desktop  Working with Taskbar Desktop  Working with Taskbar Desktop  Remaind final exams  Short, semester mid-year and final exams  Short, semester mid-year and final exams  Collaboration, discussion, debriefing, collaboration, discussi		۷				
skills windows Program discussion, debriefing, information review, practical research, computer-based learning.  7	6				_	
information review, practical research, computer-based learning.  Z Knowledge understandin subject-specis skills  Working with files and fold Using My computer  B Working with files and fold Using My computer  B Working with files and fold Using My computer  B Working with Taskbar Desktop  Working with Taskbar Desktop  Working with Taskbar Desktop  Information review, problem-based learning.  B Short, semester mid-year and final exams  Short, semester mid-year and final exams  Short, semester mid-year and final exams					-	IIIIai exaiiis
7 2 Knowledge understandin subject-speciskills  Working with files and fold Using My computer  Working with files and fold Using My computer  Working with files and fold Using My computer  By Collaboration, discussion, debriefing, information review, practical research, computer-based learning.  Working with Taskbar Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  Working with Taskbar Problem-based learning, collaboration, discussion, debriefing, discussion, discussion, debriefing, discussion, deb						
7 2 Knowledge understandin subject-speci skills  Working with files and fold Using My computer  Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  Rowledge understandin subject-speci skills  Working with Taskbar Desktop  Problem-based learning.  Problem-based learning.  Short, semester mid-year and final exams  Short, semester mid-year and final exams					<i>'</i>	
Taskbar   Problem-based   Problem-based   Short, semester   Shor					1	
7 2 Knowledge understandin subject-speci skills  8 2 Knowledge understandin subject-speci skills  8 2 Knowledge understandin subject-speci skills  9 Vorking with files and fold learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  9 Problem-based learning.  9 Problem-based learning.  9 Problem-based learning.  1 Problem-based learning.  1 Problem-based learning.  2 Knowledge understandin subject-speci skills  1 Problem-based learning.  2 Collaboration, discussion, debriefing, discussion, debr					•	
understandin subject-speci skills  Using My computer  learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  8  2 Knowledge understandin subject-speci skills  Working with Taskbar Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  Short, semester mid-year and final exams	7	2	Knowledge	Working with files and fold		Chart samester
subject-speci skills  subject-speci skills  subject-speci skills  collaboration, discussion, debriefing, information review, practical research, computer-based learning.  Real ming, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  Short, semester mid-year and final exams discussion, debriefing, debriefing, debriefing, debriefing, debriefing, debriefing, debriefing, debriefing, de	'	Z		<u> </u>		
skills  skills  skills  discussion, debriefing, information review, practical research, computer-based learning.  8  2 Knowledge understandin subject-speci skills  Working with Taskbar Problem-based learning, collaboration, discussion, debriefing, discussion, debriefing, information review, practical research, computer-based learning.  Short, semester mid-year and final exams				company company	Ç.	-
8 2 Knowledge understandin subject-speci skills  Working with Taskbar Desktop  Working with Taskbar Desktop  Taskbar Desktop  Working with Taskbar Desktop  Rearning, collaboration, discussion, debriefing, discussion, debriefing, debriefing, information review, practical research, computer-based learning.  Problem-based learning, mid-year and final exams					-	miai exams
8 2 Knowledge understandin subject-speci skills  Working with Taskbar problem-based learning.  Problem-based learning, mid-year and final exams						
8 2 Knowledge understandin subject-speci skills  Working with Taskbar Desktop  Taskbar Problem-based learning, mid-year and collaboration, discussion, debriefing,						
8 2 Knowledge understandin subject-speci skills Working with Taskbar Desktop Problem-based learning, mid-year and final exams					=	
8 2 Knowledge understandin subject-speci skills Working with Taskbar Problem-based learning, collaboration, discussion, debriefing,					-	
understandin subject-speci skills  Desktop  Desktop  Desktop  learning, mid-year and final exams  discussion, debriefing,		2	Vnowladae	Working with Taskhar		Chart a
subject-speci skills collaboration, discussion, debriefing,	δ	Z		$\mathcal{E}$		
skills discussion, debriefing,				Desktop	<u>o</u> .	-
discussion, debriefing,					·	miai exams
practical research,					=	
computer-based					=	
learning.		-	TZ 1 1	Their - Win 1		Cl
9 2 Knowledge Using Windows Accessories Problem-based Short, semester	9	2		Using Windows Accessories		
understandin learning, mid-year and					<u> </u>	
			subject-speci		collaboration,	final exams

				-	
		skills		discussion, debriefing, information review, practical research, computer-based	
				learning.	
10	2	Knowledge understandin subject-speci skills	A look at Control Panel	Problem-based learning, collaboration, discussion, debriefing, information review, practical research,	Short, semester mid-year and final exams
				computer-based	
				learning.	
11	2	Knowledge understandin subject-speci skills	Widows Explorer	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
12	2	Knowledge	Libraries	Problem-based	Short, semester
12	2	understandin subject-speci skills		learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	mid-year and final exams
13	2	Knowledge	Introduction about Micro		Short, semester
13	2	understandin subject-speci skills	Word2016 A look at Micro Word/Editing Document	learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	mid-year and final exams
14	2	Knowledge understandin subject-speci skills	Formatting Text/	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
15	2	Knowledge understandin subject-speci skills	Formatting paragraphs	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
	2	Knowledge	Proofing documents	Problem-based	Short, semester
16	2	Kilowicuge	1 rooming documents	i i obiciii-bascu	Short, semester,

17	2	subject-speci skills  Knowledge understandin subject-speci skills	Adding Tables	collaboration, discussion, debriefing, information review, practical research, computer-based learning. Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based	Short, semester, mid-year and final exams
18	2	Knowledge understandin subject-speci skills	Inserting Graphic Elements	learning.  Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
19	2	Knowledge understandin subject-speci skills	Controlling page Appearance	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
20	2	Knowledge understandin subject-speci skills	Introduction about Excels /A L at Microsoft Excel	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
21	2	Knowledge understandin subject-speci skills	Modifying A Works /performing Calculations	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
22	2	Knowledge understandin subject-speci skills	Formatting a worksh Developing a work book		Short, semester, mid-year and final exams

22	2	Vnovdodoo	Printing Workb	D - 1.1 1 1	C1
23	2	Knowledge understandin subject-speci skills	Contents/Customizing Layout	learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
24	2	Knowledge understandi subject-spec skills	Introduction about Micro Access/ A look at Micro Access	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
25	2	Knowledge understandi subject-spec skills	Creating Data tables /propertie the fields	learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
26	2	Knowledge understandi subject-spec skills	Querying the database/Desig Forms/Producing reports	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
27	2	Knowledge understandi subject-spec skills		Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
28	2	Knowledge understandi subject-spec skills	Formatting text/Using grap and Text	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
29	2	Knowledge understandi subject-spec skills	Manipulating the slides/U Multimedia Elements	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based	Short, semester mid-year and final exams

			learning.			
30	2 Knowledge understand subject-spe skills	i	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams		
Lab number		Study 1	ınit title			
1	Introduction abomagnetic disks.	out computer /Hardware and	Software/computer struct	ure/`Floppy		
2	Operating syste	ms/CD-ROM/				
3		lders High level programming netic expression/Type of Mor		riable/Library		
4	Introduction abo	out MS-DOS Operating systen	ns/DOS drive /Key-Board			
5	DOS commands	/Internal Commands/Externa	al Commands			
6	Introduction abouindows Progra	out Windows /A look at Wind m	ows 7/Stating Windows 7/\	Working with a		
7	Working with fil	es and folders/ Using My com	nputer			
8	Working with Ta	Working with Taskbar and Desktop				
9	Using Windows	Using Windows Accessories				
10	A look at Contro	l Panel				
11						
12	Libraries					
13	Introduction abo	out Microsoft Word A look at	Microsoft Word /Editing Do	ocument		
14	Formatting Text	/				
15	Formatting par	agraphs				
16	Proofing docur	nents				
17	Adding Tables	Adding Tables				
18	Inserting Grapl	nic Elements				
19	Controlling pag	ge Appearance				
20	Introduction al	oout Excels /A Look at Micros	oft Excel			
21	Modifying A W	orksheet /performing Calcula	tions			
22	Formatting a w	orksheet/ Developing a work	book			
23	Printing Workb	ook Contents/Customizing La	ayout			
24	Introduction al	oout Microsoft Access/ A look	at Microsoft Access			

25	Creating Data tables /properties of the fields			
26	Querying the database/Designing Forms/Producing reports			
27	ntroduction about Microsoft Power point/starting power point			
28	Formatting text/Using graphics and Text			
29	Manipulating the slides/Using Multimedia Elements			
30	Power point Management			

- 10 degrees of first semester:
- 10 degrees of second semester:
- 20 degrees of mid-year
- 60 degrees of final exam

Required textbooks (curricular books, if any)	
Main references (sources)	E-learning concepts and techniques
	Computer application in management
Recommended books and references (scientific journals, reports)	
Electronic References, Websites	

### **Medical Physics**

#### 2. Course Code:

#### **PS107**

### 3. Semester / Year:

### 2 semester/ First stage

### 4. Description Preparation Date:

#### 2024-2025

#### 5. Available Attendance Forms:

Lectures and laboratory

### 6. Number of Credit Hours (Total) / Number of Units (Total)

120 hours/6 unite

### 7. Course administrator's name (mention all, if more than one name)

Name: karar Mahdi talib

Email: karar.mahdi@mu.edu.iq

### 8. Course Objectives

### **Course Objectives**

- The medical physics lesson aims to teach some of the laws that link physics with medicine.
- This course aims to know the physical functions of the human body's organs and their medical applications in diagnosis and treatment, in description and application.
- Theoretical and practical mastery of the prescribed curriculum vocabulary.

## 9. Teaching and Learning Strategies

#### Strategy

- Knowledge and understanding
- Skill goals
- Stimulus and response method
- Long, short and semester exams
- Thinking skills

Week	Hours	Required	Unit or subject name	Learning	Evaluation
		Learning	Theoretical	method	method
		Outcomes			
1	2	Knowledge and understanding. subject-specific skills	Terminology, Modeling, Measurement Terms: Medical Physics, physic medicine, Physical therapy, Hea Physics	11 . 1	Short, semester, mid-year and final exams
2	2	Knowledge understanding. subject-specific skills	Radiological Physics, clinical physics.  Modeling, Accuracy, Precisior False Positive, False Negative	Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semester, mid-year and final exams
3	2	Knowledge understanding. subject-specific skills	Static forces :( type of levers with medical examples).  Dynamic forces (Centrifuge), gravity, Electrical, Frictional, Fo of muscle and joint	Problem- based learning,	Short, semester, mid-year and final exams
4	2	Knowledge understanding. subject-specific skills	Physics of teeth, Forces on norm teeth, Some Simple Cases of t Physics in Orthodontics, Crow Bridges, and Implants	Problem- based learning, collaboration, discussion, debriefing, information review, practical research, computer-	Short, semester mid-year and final exams

				based	
				learning.	
5	2	Knowledge	Bones:(Function of bones,	Problem-	Short, semester
	_	understanding.	Composition of bone, bone	based	mid-year and
		subject-specific	remodeling, compact and trabecu	learning,	final exams
		skills	bone)	collaboration,	iniai exams
			bolle)	discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
	2	W 1 . 1 1	G	learning.	<b>G</b> 1
	2	0	Stress-strain curve	Problem-	Short, semester
6		understanding. subject-specific	compressive and tensile stress,	based	mid-year and
		skills	young modulus). Bone joints :(	learning,	final exams
		<del></del>	Synovial fluid, coefficient of a	collaboration,	
			joint).	discussion,	
			•	debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
7	2		Heat and cold in medicine:	Problem-	Short, semester,
		understanding. subject-specific	Temperature scales, thermograp	based	mid-year and
		skills	cold in medicine and cryosurger	learning,	final exams
		SKIIIS		collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
8	2		Thermal conductivity, Therma	Problem-	Short, semester
		understanding.	shook. Teeth sensitive to hot or c	based	mid-year and
		aubiest sm: f:	ı		
		subject-specific		learning,	final exams
		subject-specific skills		collaboration,	final exams
				collaboration, discussion,	final exams
				collaboration, discussion, debriefing,	final exams
				collaboration, discussion, debriefing, information	final exams
				collaboration, discussion, debriefing, information review,	final exams
				collaboration, discussion, debriefing, information review, practical	final exams
				collaboration, discussion, debriefing, information review, practical research,	final exams
				collaboration, discussion, debriefing, information review, practical research, computer-	final exams
				collaboration, discussion, debriefing, information review, practical research, computer- based	final exams
		skills		collaboration, discussion, debriefing, information review, practical research, computer- based learning.	final exams
9	2		Energy, work and power of th	collaboration, discussion, debriefing, information review, practical research, computer- based	Short, semester,

		understanding.	la a dan	l d	:
		subject-specific	body:	based	mid-year and
		skills	First law of thermodynamic. Ene	learning,	final exams
		SKIIIS	change in the body (Met, Basa	collaboration,	
			metabolic rate (BMR).	discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
10	2	Knowledge	Work and power. Efficiency	Problem-	Short, semester
	_	understanding.	heat losses from the body.	based	mid-year and
		subject-specific	Anaerobic	learning,	final exams
		skills		collaboration,	mar exams
			phase and aerobic phase.	discussion,	
			Hypothalamus (body's	debriefing,	
			thermostat).Heat lost	information	
			by (radiation, convection,		
			evaporation of sweat and	review,	
			respiration).	practical	
			1 /	research,	
				computer-	
				based	
			_	learning.	
11	2	Knowledge	Pressure:	Problem-	Short, semester,
		understanding.	Definition, absolute pressure, ga	based	mid-year and
		subject-specific skills	pressure, negative pressure, un	learning,	final exams
		SKIIIS	of pressure. Measurement of	collaboration,	
			pressure in the body	discussion,	
			(Manometer). Pressure inside the	debriefing,	
			skull. Eye pressure.	information	
			skuii. Lye piessuie.	review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
12	2	Knowledge	Pressure in the	Problem-	Short, semester
12	۷	understanding.	skeleton. Pressure in the	based	mid-year and
		subject-specific		learning,	final exams
		skills	urinary bladder.Boyle's law:	collaboration,	mai camb
			(pressure while	discussion,	
			diving).HOT (hyperbaric	•	
			oxygen therapy).	debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
13	2	Knowledge	Ultrasound	Problem-	Short, semester
		understanding.	(A-scan, B-scan, M-scan and	based	mid-year and
		subject-specific	Doppler effect).	learning,	final exams
		skills	PP	collaboration,	

	1	DI		1
		Physiological effect of	discussion,	
		ultrasound in therapy	debriefing,	
			information	
			review,	
			practical	
			research,	
			computer-	
			based	
			learning.	
14	Knowledge	Light in medicine:	Problem-	Short, semester
	understanding.	Light nature, Planck	based	mid-year and
	subject-specific	Equation, (Reflection,	learning,	final exams
	skills	Refraction and Absorption	collaboration,	
		of Light,	discussion,	
		or Light,	debriefing,	
			information	
			review,	
			practical	
			research,	
			computer-	
			based	
			learning.	
15	Knowledge	Laser in medicine.	Problem-	Short, semester
	understanding.	What is laser? Application of	based	mid-year and
	subject-specific	laser in medicine	learning,	final exams
	skills	Atomic Transitions,	collaboration,	
		Population inversion, Laser	discussion,	
		=	debriefing,	
		Typical	information	
			review,	
			practical	
			research,	
			computer-	
			based	
			learning.	
16	Knowledge	Characteristics, General	Problem-	Short, semester
	understanding.	Applications of Laser, Laser Der		mid-year and
	subject-specific	Applications, Reshape gum tiss	learning,	final exams
	skills		collaboration,	ar chairis
		Laser aided teeth whitening, Las	discussion,	
		Drill.	debriefing,	
			information	
			review,	
			practical	
			research,	
			computer-	
			based	
			learning.	
17	2 Knowledge	Physics of eye and vision:	Problem-	Short, semester
1/	understanding.	, , ,	based	mid-year and
	subject-specific	Focusing element of the eye	learning,	final exams
	skills	(cornea, lens).	collaboration,	IIIIai Exailis
			discussion,	
			debriefing,	
1		II II	ueurenny. I	
			information	

	1		Т	7	1
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
18	2	Knowledge	Element of the eye (pupil)	Problem-	Short, semester
	_	understanding.		based	mid-year and
		subject-specific		learning,	final exams
		skills		collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
19	2	Knowledge	Element of the eye (pupil, aqued	Problem-	Short, semester,
		understanding.	humor, vitreous humor,	based	mid-year and
		subject-specific	sclera).	learning,	final exams
		skills	,	collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
20	2	Knowledge	Visual acuity, Snellen chart, opti	Problem-	Short, semester
20	_	understanding.	density.	based	mid-year and
		subject-specific	density.	learning,	final exams
		skills		collaboration,	imai caams
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				-	
				based	
24		V 1 . 1 .	DI	learning.	Cl
21	2	Knowledge	Physics of diagnostic X-ray:	Problem-	Short, semester
		understanding. subject-specific	Properties of X-ray,	based	mid-year and
		skills		learning,	final exams
		SKIIIS		collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	

	T	Т	ı	-	1
				computer-	
				based	
				learning.	
22	2	Knowledge	Production of X-ray. Absorption		Short, semester,
		understanding.	X-ray,	based	mid-year and
		subject-specific	-	learning,	final exams
		skills		collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
23	2	Knowledge	Contrast media-ray image	Problem-	Short, semester,
		understanding.	(penumbra, grid, and intensifyi	based	mid-year and
		subject-specific skills	screens).	learning,	final exams
		SKIIIS	·	collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
		1 1	5 11 1	learning.	
24	2	Knowledge	Radiation to patients from X-ra		Short, semester
		understanding. subject-specific	(filters).	based	mid-year and
		skills		learning,	final exams
		Simio		collaboration,	
				discussion, debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
25	2	Knowledge	Physics of nuclear medicine:	Problem-	Short, semester
		understanding.	Radioactivity decay, half-life, un	based	mid-year and
		subject-specific	Basic	learning,	final exams
		skills	Dasic	collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
		·			

26	2	Knowledge	instrumentation and its	Problem-	Short, semester
20	2	understanding.	medical application (GM-tube	based	mid-year and
		subject-specific	medical application (GM-tube	learning,	final exams
		skills		collaboration,	Illiai Cxallis
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
27	2	Knowledge	Photomultiplier tube, scintillati	Problem-	Short, semester
	-	understanding.	detector, solid state detector).	based	mid-year and
		subject-specific	detector, some state detector).	learning,	final exams
		skills		collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
28	2	Knowledge	Therapy with radioactivity.	Problem-	Short, semester
		understanding.	Radiation	based	mid-year and
		subject-specific	doses in nuclear medicine	learning,	final exams
		skills		collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
29	2	Knowledge	Physics of radiation therapy:	Problem-	Short, semester
		understanding.	The dose units (Rad and Gray)	based	mid-year and
		subject-specific skills		learning,	final exams
		SIIIAS		collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
20		IZ 1 1	D: 11 C 1:	learning.	Classia
30	2	Knowledge	Principles of radiation therapy.	Problem-	Short, semester
		understanding. subject-specific	Brach therapy, quality factor	based	mid-year and
l l		subject-special		learning,	final exams

	skills	(QF)	collaboration discussion, debriefing, information review, practical research, computer- based learning.	
Lab number		Study uni	t title	
1	Guid	delines of Medical Physic obeyed by the		
2		Graphing Tec	chniques	
3		Ohm's la	aw:	
4	verify ohm's law - to find the value of different values of resistance			
5	Semiconductors (junction diode)			
6	To determine the characteristics of the semiconductors Comparison between omic and non-omic resistance.			
7	Cathode Ray Oscilloscope			
8	-Measurement of deflection sensitivity of D. C. voltageMeasurement of deflection sensitivity of A. C. voltage			
9	The focal length of convex lens: -Rough value of focal length of different convex lenses,			
10	A graphical method of measuring of focal length, Comparison between these methods and the given value.			
11	Hook's law: -To verify Hook's law and determine the force constant of			
12	The springTo determine the work done by stretching the spring.			
13		Focal length of cor- Locating the radiu		
14		Determining the	focal length	

15	General review and 1st course exam
16	Laser applications:
	-To measure the width of a single slit by using a laser
17	To measure the wavelength of laser by using a certain
	single slit
18	Boyle's law:
10	-To verify Boyle's law
	, ,
19	To measure the pressure of the atmosphere
20	Inverse Square law:
	- To verify the inverse square law
21	Radiation shielding by different thicknesses of of a certain
	material
22	Viscosity of a liquid
	- To determine the viscosity of a medium using a small
23	Sphere falls with a constant terminal velocity.
25	- To verify Stokes' law
	20 years and
24	Velocity of the sound
	- To measure the velocity of the sound by using a resonance
	tube, closed at one end, at room temperature
25	Calculated the theoretical and practical values of the
	velocity of sound and comparing between them
26	The focal length of a converging lens
	- To determine the focal length of a converging lens by lens
27	Displacement method using conjugate foci.
27	- To calculate curvature value of this converging lens
	To calculate cal value of this converging lens
28	Simple Pendulum
	-To determine the periodic time and its variation with the
	length of the pendulum
29	To calculate the acceleration of free fall
30	General review and 2nd course exam

- 10 degrees of first semester: 8 degrees of short and semester exams and two degrees of oral exam
- 10 degrees of second semester: 8 degrees of short and semester exams and two degrees of oral exam
- 20 degrees of mid-year
- 60 degrees of final exam

12. Learning and reaching Resources	
Required textbooks (curricular books, if any)	
Main references (sources)	<ul><li>Medical Physics</li><li>Physics of the Human Body</li></ul>
Recommended books and references (scientific journals,	
reports)	

### **Human rights and democracy**

#### 2. Course Code:

#### 105HRAD

### **3.** Semester / Year:

### Two semesters - first year

### **4.** Description Preparation Date:

#### 2024-2025

### 5. Available Attendance Forms:

All students attend the classroom

6. Number of Credit Hours (Total) / Number of Units (Total)

30h/2 unites

### 7. Course administrator's name (mention all, if more than one name)

Name: ghassan kadhim ghayed Email: ghassan. kadhim@mu.edu.iq

### 8. Course Objectives

Course Objectives | \*The program provides a sure opportunity for the student to learn about his rights well as his objective commitment to his duties

- \* Spreading a culture and model of education leading to moderation.
- \* Localizing the concepts of democracy, freedom and equality.

### 9. Teaching and Learning Strategies

#### Strategy

- Knowledge and understanding
- Thinking and deduction.
- Stimulus and response method
- Long, short and semester exams thinking skills

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluatio n method
1	1	Knowledge of rights and duties	Chapter One: A conceptual and definitional introduction to rights The first topic: human rights in ancient civilizations Demands 1-2-3-4: 1- Human rights in Mesopotamia civilization 2- Human rights in the Nile Valley civilization.	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct questions -Rapid exams -ReportsMonthly exams - Mid-year exam -final exam

2	1	Knowledge of rights duties	<ul><li>3- Rights in Greek and Greek civilization.</li><li>4- Rights in Roman civilization</li></ul>	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct questions -Rapid exams -Reports. -Monthly exams - Mid-year exam
3	1	Knowledge of rights duties	Chapter Two: Human rights in human thought Demands (1-2-3-4) 1- The idea of human rights among ancient Greek philosophers and thinkers. 2- The idea of human rights during the medieval period.	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct questions -Rapid exams -Reports. -Monthly exams - Mid-year exam
4	1	Knowledge of rights duties	3- The idea of human rights during the Renaissance period. 4- The idea of human rights in the modern era.	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct questions -Rapid exams -ReportsMonthly exams - Mid-year exam
5	1	Knowledge of rights duties	Chapter three: Human rights in divine laws and religions Demands (1-2-3) 1- Human rights in Judaism. 2- Human rights in the Christian religion. 3- Human rights in the Islamic religion.	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct questions -Rapid exams -ReportsMonthly exams - Mid-year exam
6	1	Commitment to rights and duties	chapter fourth: Human rights resources Requirement (1- 2-3) 1- International source A- The Universal Declaration of Human Rights B- The two international covenants 2- The regional source	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct questions -Rapid exams -ReportsMonthly exams - Mid-year exam
7	1	Commitment to rights and duties	A- The European Declaration of Human Rights. B- The African Declaration of Human Rights. C- The Arab Charter on Human Rights	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based	-Direct questions -Rapid exams -Reports. -Monthly exams

				learning.	- Mid-year exam
8	1	Commitment to rights and duties	3-The national source. A- Iraqi national constitutions. B- The current national constitution.	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct questions -Rapid exams -ReportsMonthly exams - Mid-year exam
9	1	Commitment to rights and duties	Chapter fifth: Human rights guarantees. Requirement (1) 1- Belief and social guarantees. 2- Islam and the recognition of rights and freedoms. 3- Responsibility and the other in the Islamic religion.	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct questions -Rapid exams -ReportsMonthly exams - Mid-year exam
10	1	Commitment to rights and duties	Requirement (2). Internal guarantees: 1- The National Constitution. 2- Judiciary and civil legislation.	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct questions -Rapid exams -ReportsMonthly exams - Mid-year exam
11	1	Commitment to rights and duties	Requirement (3) Guarantees at the external level. 1- International conventions. 2- United Nations and General Assembly publications. 3- Publications of regional charters and treaties	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct questions -Rapid exams -ReportsMonthly exams - Mid-year exam
12	1	Commitment to rights and duties	Chapter six: The future of human rights Demands (1-2) 1- The future of human rights at the level of international trends.	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.=	-Direct questions -Rapid exams -ReportsMonthly exams - Mid-year exam

12	1	Commitment to	2 The future of rights at the	Problem-based	Divost
13	1	Commitment to rights and duties	2-The future of rights at the national level.	learning, collaboration, discussion, debriefing, information review, practical	-Direct questions -Rapid exams -Reports. -Monthly
				research, computer-based learning.	exams - Mid-year exam
14	1	Knowledge democracy And right Political participation	Chapter One: Democracy The concept and its development. Requirement (1-2) 1-General entrance 2- Concepts of democracy and establishing its components.	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct questions -Rapid exams -ReportsMonthly exams - Mid-year exam
15	1	Knowledge democracy And right Political participation	Chapter tow: The emergence of democratic systems, ideas and practices. Requirement (1-2) 1- Democratic systems and ideas in ancient civilizations	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct questions -Rapid exams -ReportsMonthly exams - Mid-year exam
16	1	Knowledge democracy And right Political participation	2-Democratic systems and ideas in the modern era	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct questions -Rapid exams -ReportsMonthly exams - Mid-year exam
17	1	Knowledge democracy And right Political participation	Chapter three: Types of democratic systems. Requirement (1-2-3) 1- The direct democratic system. 2- The semi-direct democratic system.	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct questions -Rapid exams -Reports. -Monthly exams - Mid-year exam
18	1	Knowledge democracy And right Political participation	3- The undemocratic dictatorial regime.	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct questions -Rapid exams -ReportsMonthly exams - Mid-year exam

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19	1	Knowledge democracy And right Political participation	Chapter Four: Institutions for achieving democratic systems Requirement (1-2-3) 1- Legislative institutions. 2- Executive institutions.	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct questions -Rapid exams -ReportsMonthly exams - Mid-year exam
20	1	Knowledge democracy And right Political participation	3- Independent institutions (especially judicial).	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct questions -Rapid exams -ReportsMonthly exams - Mid-year exam
21	1	Knowledge democracy And right Political participation	Chapter fifth Mechanisms for activating democratic systems. Requirement (1-2) 1- Parliamentary councils. 2- Local councils	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct questions -Rapid exams -Reports. -Monthly exams - Mid-year exam
22	1	Knowledge democracy And right Political participation	Requirement (3-4). 1- Election and representation mechanisms. 2- Nomination and participation mechanisms and conditions.	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct questions -Rapid exams -ReportsMonthly exams - Mid-year exam
23	1	Knowledge democracy And right Political participation	Chapter six: Electoral process Requirement (1-2) 1- Organizing the election process and the electoral system. 2- The electoral district or districts.	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct questions -Rapid exams -Reports. -Monthly exams - Mid-year exam
24	1	Knowledge democracy And right Political participation	Chapter Seven Nomination and election campaign Requirement (1-2) 1- The right to nomination and its conditions. 2- The electoral campaign and its legal determinants.	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct questions -Rapid exams -ReportsMonthly exams - Mid-year exam

25	1	Knowledge democracy And right Political participation	Chapter Eight Criticism and evaluation of the electoral process Requirement (1-2) 1- Opinion on the electoral process and the electoral system. 2- Criticism of the nature of the electorate and the electoral system	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct questions -Rapid exams -Reports. -Monthly exams - Mid-year exam
26	1	Knowledge democracy And right Political participation	Chapter Nine Public opinion and the right to express one's opinion Requirement (1-2-3-4) 1- Introducing public opinion 2- Forming public opinion.	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct questions -Rapid exams -ReportsMonthly exams - Mid-year exam
27	1	Knowledge democracy And right Political participation	3- The importance of public opinion and its legislative determinants. 4- Factors affecting public opinion.	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct questions -Rapid exams -Reports. -Monthly exams - Mid-year exam
28	1	Knowledge democracy And right Political participation	Chapter Ten Guarantees for democracy. Requirement: (1-2) 1-Legal guarantees. 2-Political guarantees.	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct questions -Rapid exams -ReportsMonthly exams - Mid-year exam
29	1	Knowledge democracy And right Political participation	Chapter Eleven The future of democratic systems Requirement (1-2-3-4) 1- The reality of the democratic process and the possibility of response. 2- Social transformations and the nature of the political system.	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct questions -Rapid exams -Reports. -Monthly exams - Mid-year exam
30	1	Knowledge democracy And right Political participation	<ul><li>3- Political participation and public effectiveness.</li><li>4- Acceptability and the criterion for progress and advancement</li></ul>	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct questions -Rapid exams -Reports. -Monthly exams - Mid-year

	exam -final exam
11. Course Evaluation	
Score distribution out of 100: (5 marks) First semester: (2.5 marks) short ex (20 marks) Mid-year exam. (5 marks) Second semester: (2.5 marks) short (70 marks) Final exam 12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	*Hamid Hanoun's book, Human Rights, Al-Sanho Library, Baghdad 2013. *Wael Abdel Latif, Constitutions of the Ethnic State, House of Cultural Affairs, Iraq, 2006. *Hassan Muhammad Shafiq, Human Rights, Dar Yazuri, Jordan 2008. *Muhammad Fadel, Al-Democracy, Al-Dar Al-Arabi, Beirut 2010
Main references (sources)	
Recommended books and references (scientific journals, reports)	Journal of Political Science, issued by the College of Political Science.
	https://www.un.org/ar/global-issues/human-right

Dental anatomy

2. Course Code:

104DA

3. Semester / Year:

2 Semester/ First Stage

**4.** Description Preparation Date:

2024-2025

5. Available Attendance Forms:

Theoretical lectures and practical laboratory

6. Number of Credit Hours (Total) / Number of Units (Total)

120 hours / 6 unite

7. Course administrator's name (mention all, if more than one name)

Name: Mukhalled Salim .Abdulla Email: mukhalled@mu.edu.iq

### 8. Course Objectives

#### **Course Objectives**

- Preparing the student at a high level of scientific with regard to dental anatomy
- Identifying the types of teeth, terms, tooths composition, individuals and identifying features details for each tooth and learning for teeth carving wax models.

## 9. Teaching and Learning Strategies

#### Strategy

- Acquire knowledge about the dental anatomy of teeth and morphology of each
- tooth
- Identify the types of teeth regarding thier features
- Learn how to make a wax model of each individual tooth by learning carving

	Week	Hours	Required	Unit or subject	Learning method	Evaluation
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		Learning	name		method
		Outcomes	Theoretical		
1	4	Knowledge understanding. subject-specific skills	Introduction	Theoretical lecture using Power point, Problem- based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
2	4	Knowledge understanding. subject-specific skills	Introduction	Theoretical lecture using Power point, Problem- based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
3	4	Knowledge understanding. subject-specific skills	Numbering Systems	Theoretical lecture using Power point, Problem- based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
4		Knowledge understanding. subject-specific skills	Numbering Systems	Theoretical lecture using Power point, Problem- based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
5	4	understanding. subject-specific skills	Anatomical Landmar	Theoretical lecture using Power point, Problem- based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
6	4	Knowledge understanding.	Anatomical Landma	Theoretical	Short, semester,

6		subject-specific skills		lecture using Power point, Problem-	mid-year and final exams
				based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	
7	4	Knowledge understanding. subject-specific skills	Permanent Maxill Central Incisor	Theoretical lecture using Power point, Problem- based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
8	4	understanding. subject-specific skills	Permanent Maxill Central Incisor	Theoretical lecture using Power point, Problem- based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
9	4	Knowledge understanding. subject-specific skills	Permanent Maxill Lateral Incisor	Theoretical lecture using Power point, Problem- based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
10	4	understanding. subject-specific skills	Permanent Maxill Lateral Incisor	lecture using Power point, Problembased learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
11	4	Knowledge understanding. subject-specific skills	Permanent Mandibu Incisors	Theoretical lecture using Power point, Problembased learning, collaboration, discussion, debriefing,	Short, semester, mid-year and final exams

Т	1	Т			
		V. 1.1		information review, practical research, computer-based learning.	
12	4	Knowledge understanding. subject-specific skills	Permanent Mandibu Incisors	Theoretical lecture using Power point, Problem- based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
13	4	understanding. subject-specific skills	Permanent Mandibu Incisors	Theoretical lecture using Power point, Problem- based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
14	4	Knowledge understanding. subject-specific skills	Permanent Canines	Theoretical lecture using Power point, Problem- based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
15	4	understanding. subject-specific skills	Permanent Canines	Theoretical lecture using Power point, Problem- based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
16	4	Knowledge understanding. subject-specific skills	Permanent Maxill Premolars	Theoretical lecture using Power point, Problem- based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams

17	4		Permanent Maxill	Theoretical	Short, semester,
		understanding. subject-specific skills	Premolars	lecture using Power point, Problembased learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	mid-year and final exams
18	4	Knowledge understanding. subject-specific skills	Permanent Mandibu First Premolars	Theoretical lecture using Power point, Problem- based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
19	4	Knowledge understanding. subject-specific skills	Permanent Mandibu First Premolars	Theoretical lecture using Power point, Problem- based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
20	4	Knowledge understanding. subject-specific skills	Permanent Mandibu Second Premolar	Theoretical lecture using Power point, Problem- based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
21	4	Knowledge understanding. subject-specific skills	Permanent Maxillary F Molar Permanent maxill second and third molars	Theoretical lecture using	Short, semester, mid-year and final exams
22	4	Knowledge understanding. subject-specific skills	Permanent Maxill First Molar Permanent maxill second and	Theoretical lecture using Power point, Problembased learning, collaboration,	Short, semester, mid-year and final exams

			third molars	discussion, debriefing,	
				information review, practical research, computer-based learning.	
23	4	Knowledge understanding. subject-specific skills	Permanent Mandibu First Molar	Theoretical lecture using Power point, Problem- based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
24	4	Knowledge understanding. subject-specific skills	Permanent Mandibu Second and third Molars	Theoretical lecture using Power point, Problem- based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
25	4	Knowledge understanding. subject-specific skills	Tooth Development	Theoretical lecture using Power point, Problem- based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
26	4	Knowledge understanding. subject-specific skills	Tooth Development	Theoretical lecture using Power point, Problem- based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
27	4	Knowledge understanding. subject-specific skills	Pulp Cavities	Theoretical lecture using Power point, Problem- based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams

28	4	Knowledge understanding. subject-specific skills	Pulp Cavities	Theoretical lecture using Power point, Problem- based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams		
29	4	Knowledge understanding. subject-specific skills	Occlusion a physiologic form of teeth and periodontion	Theoretical lecture using Power point, Problem- based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams		
30	4	Knowledge understanding. subject-specific skills	Occlusion a physiologic form of teeth and periodontiu	Theoretical lecture using Power point, Problem- based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams		
Lab number	Stu	dy unit title					
1	Ana	ntroduction to Dental Anatomy & Carving nstruments					
2	Nun	Numbering systems.					
Car		Practical demonstration of Carving a Cube (1cm*1cm*1cm)					
Ana Tee		-Introduction to Anatomical landmarks on Teeth modelsCarving of a cube.					
the Ma		cription &Carvi Labial Aspect c x. Right Central sor.	of P.				
6	the	Description &Carving of he Mesial aspect of P. Max. Right Central Incisor					

7	Description ,Carving &
	Finishing of the Incisal
	Aspect of Permanent Max.
	Right Central Incisor.
8	Practical Training of
	Carving of P. Max. Right
	Central Incisor
9	Practical Exam. Of
	Carving of P. Max. Right
	Central Incisor
10	Description &Carving of
	the Labial & Mesial
	Aspects of P. Max. Right
	Canine.
11	Description ,Carving &
	Finishing of the Incisal
	Aspect of P Max. Right
12	Canine.
12	Practical Training of
	Carving of P. Max. Right Canine.
13	
13	Practical Exam. of
	Carving of P. Max. Right Canine.
14	Mid Year Practical
17	Examination of Tooth
	Carving.
15	Description &Carving of
	the Buccal & Mesial
	Aspects of P.Max. Right 1
	st Premolar.
16	Description, Carving &
	Finishing of the Occlusal
	Aspect of P.Max. Right 1
	st Premolar
17	Practical Training of
	Carving of P. Max. Right
	1 st Premolar
18	Practical Exam. Of
	Carving of P. Max. Right
	1 st Premolar
19	Description &Carving of
	the Buccal & Mesial
	Aspects of P.Mand. Right
	1 st Premolar.

20	Description & Carving of
20	Description & Carving of
	the Buccal & Mesial
	Aspects of P.Mand. Right
	1 st Premolar.
21	Practical Training of
	Carving of P. Mand. Right
	1 st Premolar
22	Practical Exam. Of
	Carving of P. Mand. Right
	1 st Premolar
23	Description &Carving of
	the Buccal & Mesial Aspects of P Max.Right 1
	st Molar.
24	Description, Carving &
	Finishing of the Occlusal
	Aspect of P. Max. Right 1
	st Molar.
25	Practical Training of
	Carving of P. Max. Right
	1 st molar.
26	Practical Exam. of
	Carving of P. Max. Right
	1 st molar.
27	escription &Carving of
	he Buccal & Mesial
	spects of P. Mand. Right
	st Molar
28	Description ,Carving &
	Finishing of the Occlusal
	aspect of P.Mand 1 st
	Molar/Practical Training
	of Carving p.Mand 1 st
	molar.
29	Practical Examination of
	Carving of P. Mand. Right
	1 st Molar
20	
30	Final Oral & Practical
	Examination of Tooth
	Carving

- 10 degrees of first semester 10 degrees of second semester 20 degrees of mid-year 60 degrees of final exam

Required textbooks (curricular books, if any)	
Main references (sources)	Woelfel's Dental Anatomy It's Relevance to     Dentistry     Wheler's dental anatomy, physiology and occlusion, By Major M Ash
Recommended books and references	
(scientific journals, reports)	
Electronic References, Websites	

### Medical Terminology

#### 2. Course Code:

#### 109FL

### **3.** Semester / Year:

### 2 semester/ First stage

### **4.** Description Preparation Date:

#### 2024-2025

### 5. Available Attendance Forms:

Lectures

### 6. Number of Credit Hours (Total) / Number of Units (Total)

30 hours/2 unite

# 7. Course administrator's name (mention all, if more than one name)

Name: Alaa Manea Lafta Email: Alaa.Manea@mu.edu.iq

### 8. Course Objectives

#### **Course Objectives**

- The English lesson aims to identify the principles of English language
- This course aims to know the characteristics of English language in general and the special characteristics English language such as Small Talk, Common Mistakes and grammars..

### 9. Teaching and Learning Strategies

#### Strategy

- Knowledge and understanding
- Skill goals
- Stimulus and response method
- Long, short and semester exams
- Thinking skills

Week	Hours	Required Learning Outcomes	Unit or subject name Theoretical	Learning method	Evaluation method
1	1	Knowledge and understanding.	Prefixes & suffixes		Short, semester, mid-year and

				debriefing, informa	final exams
				review, practical resea	illiai cxailis
				computer-based learnin	
2	1	Knowledge	Integumentary system	Problem-based learn	Short, semester,
_		understanding.		collaboration, discuss	
		G		debriefing, informa	final exams
				review, practical resea	
				computer-based learnin	
3	1	Knowledge	Muscular system	Problem-based learn	
		understanding.		collaboration, discuss	•
				debriefing, informa	final exams
				review, practical resea	
_			D :	computer-based learnin	
4	1	Knowledge	Respiratory system	Problem-based learn	, ,
		understanding.		collaboration, discuss	mid-year and
				debriefing, informa	final exams
				review, practical resea computer-based learnin	
	1	Knowledge	Digestive system	•	Chart competer
5	1	understanding.	Digestive system	Problem-based learn collaboration, discuss	Short, semester, mid-year and
		unuerstallullig.		debriefing, informa	final exams
				review, practical resea	illiai exallis
				computer-based learnin	
	1	Knowledge and	Nervous system	Problem-based learn	Short, semester,
(	1	understanding.	Tierious system	collaboration, discuss	mid-year and
6		unider standaring.		debriefing, informa	final exams
				review, practical resea	ina chamb
				computer-based learnin	
7	1	Knowledge	Cardiovascular system	Problem-based learn	Short, semester,
•	_	understanding.	-	collaboration, discuss	
				debriefing, informa	final exams
				review, practical resea	
				computer-based learnin	
8	1	Knowledge	Blood and Lymph	Problem-based learn	,
		understanding.		collaboration, discuss	
				debriefing, informa	final exams
				review, practical resea	
			-	computer-based learnin	
9	1	Knowledge	Immune system	Problem-based learn	
		understanding.		collaboration, discuss	•
				debriefing, informa	final exams
				review, practical resea computer-based learnin	
10	1	Knowledge	Endocrine system	Problem-based learn	Short, semester,
10	1	understanding.	Zidocinio system	collaboration, discuss	mid-year and
		under standing.		debriefing, informa	final exams
				review, practical resea	imai camis
				computer-based learnin	
11	1	Knowledge	Five sense	Problem-based learn	Short, semester,
	1	understanding.		collaboration, discuss	mid-year and
		- 6		debriefing, informa	final exams
				review, practical resea	
	<u> </u>			computer-based learnin	
12	1	Knowledge	Genitourinary system	Problem-based learn	Short, semester,
		understanding.		collaboration, discuss	mid-year and
				debriefing, informa	final exams
				review, practical resea	
				computer-based learnin	
		1711	Dental terminology (part I)	Problem-based learn	Short, semester,
13	1	Knowledge understanding.	Dental terminology (part 1)	collaboration, discuss	mid-year and

	1			debriefing, informa	final exams
				review, practical resea	IIIIai exaiiis
				computer-based learnin	
14	1	Knowledge	Dental terminology part II	Problem-based learn	Short, semester,
14	1	understanding.	zemm termmoregy part if	collaboration, discuss	mid-year and
		unacio camanig.		debriefing, informa	final exams
				review, practical resea	
				computer-based learnin	
15	1	Knowledge	Dental terminology part III	Problem-based learn	Short, semester,
10		understanding.	5. 1	collaboration, discuss	mid-year and
		G		debriefing, informa	final exams
				review, practical resea	
				computer-based learnin	
16	1	Knowledge	Small Talk	Problem-based learn	Short, semester,
		understanding.		collaboration, discuss	mid-year and
				debriefing, informa	final exams
				review, practical resea	
				computer-based learnin	
17	1	Knowledge	Common Mistakes	Problem-based learn	
		understanding.		collaboration, discuss	,
				debriefing, informa	final exams
				review, practical resea	
				computer-based learnin	
18	1	Knowledge	Passive voice	Problem-based learn	, ,
		understanding.		collaboration, discuss	
				debriefing, informa	final exams
				review, practical resea	
				computer-based learnin	
19	1	Knowledge	Direct and indirect speech	Problem-based learn	
		understanding.		collaboration, discuss	•
				debriefing, informa	final exams
				review, practical resea	
		1 1	C ' F 1: 1	computer-based learnin	<b>61</b>
20	1	Knowledge	Synonyms in English	Problem-based learn	, ,
		understanding.		collaboration, discuss	mid-year and
				debriefing, informa	final exams
				review, practical resea computer-based learnin	
21	1	Knowledge	Adjectives	Problem-based learn	Short, semester,
21	1	understanding.	Adjectives	collaboration, discuss	mid-year and
		under standing.		debriefing, informa	final exams
				review, practical resea	IIIIai Caaiiis
				computer-based learnin	
22	1	Knowledge	Integrating a quotation into	Problem-based learn	Short, semester,
<i>44</i>	1	understanding.	essay	collaboration, discuss	mid-year and
				debriefing, informa	final exams
				review, practical resea	
				computer-based learnin	
23	1	Knowledge	Prepositions in English Gram		Short, semester,
	1	understanding.	with Examples	collaboration, discuss	mid-year and
		8		debriefing, informa	final exams
				review, practical resea	
				computer-based learnin	
24	1	Knowledge	Idioms and Phrases	Problem-based learn	Short, semester,
	]	understanding.		collaboration, discuss	mid-year and
				debriefing, informa	final exams
				review, practical resea	
	1			computer-based learnin	
25	1	Knowledge understanding.	Writing assignment	Problem-based learn collaboration, discuss	Short, semester, mid-year and

				debriefing, informa	final exams
				review, practical resea	
				computer-based learnin	
26	1	Knowledge	Pronunciation rules	Problem-based learn	,
		understanding.			mid-year and
				debriefing, informa	final exams
				review, practical resea	
				computer-based learnin	
27	1	Knowledge	Tenses	Problem-based learn	
		understanding.		collaboration, discuss	mid-year and
				debriefing, informa	final exams
				review, practical resea	
				computer-based learnin	
28	1	Knowledge	Synonyms and Antonyms	Problem-based learn	Short, semester,
		understanding.		collaboration, discuss	mid-year and
				debriefing, informa	final exams
				review, practical resea	
				computer-based learnin	
29	1	Knowledge	Paraphrasing	Problem-based learn	Short, semester,
		understanding.		collaboration, discuss	mid-year and
				debriefing, informa	final exams
				review, practical resea	
				computer-based learnin	
30	1	Knowledge	Essay writing skills	Problem-based learn	Short, semester,
		understanding.		collaboration, discuss	mid-year and
				debriefing, informa	final exams
				review, practical resea	
				computer-based learnin	

5 degrees of first semester:

5 degrees of second semester

20 degrees of mid-year 70 degrees of final exam

Required textbooks (curricular books, if any)	
Main references (sources)	Headway-English Course
	Oxford English Grammar Course
Recommended books and references	
(scientific journals, reports)	
Electronic References, Websites	

1. Course Name:							
Arabic I	Arabic Language						
2. Course Code:							
102 AI							
<b>3.</b> S	emeste	er / Year:					
Two se	mesters	s - first year					
<b>4.</b> [	escript	tion Preparati	on Date:				
2024-2							
		Attendance F					
P	Ali stuae	ents attend the	e classroom				
			s (Total) / Number of	Units (Total)			
	30h/2 u		de nama (mantian a	II :f mare than one	ma\		
		administrator Shassan kadhii	's name (mention a m Ghavd	ll, it more than one i	name)		
			m@mu.edu.iq				
		Objectives					
Course U	)bjective:	5	<ul><li>Introducing the in</li><li>Reducing linguist</li></ul>	nportance of the Arabic l	anguage		
			Developing language				
9. T	eaching	and Learning					
<ul> <li>Knowledge and understanding</li> <li>Thinking and deduction.</li> <li>Stimulus and response method</li> <li>Long, short and semester exams thinking skills .</li> </ul>							
10. Course Structure							
Week	Hours	Required	Unit or subject	Learning method	Evaluation		
		Learning Outcomes	name		method		
		Cutcomics					

1	1	Developing linguistic abilities	Al-Mutanabbi: (his biography, verses from his poetry and criticism)	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct question -Rapid exams -Reports. -Monthly exams - Mid-year exam -final exam
2	1	Developing linguistic abilities	Badr Shaker Sayyab: (his biography, verses from his poetry and criticism)	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct question -Rapid exams -Reports. -Monthly exams - Mid-year exam
3	1	Developing linguistic abilities	Nazik al-Malaika: (his biography, verses from his poetry and criticism)	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct question -Rapid exams -Reports. -Monthly exams - Mid-year exam
4	1	Developing linguistic abilities	Muhammad Mahdi Al-Jawahiri: (his biography, verses from his poetry and criticism)	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct question -Rapid exams -Reports. -Monthly exams - Mid-year exam
5	1	Developing linguistic abilities	Grammatical topics Noun phrase	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct question -Rapid exams -Reports. -Monthly exams - Mid-year exam
6	1	Developing linguistic abilities	Actual sentence.	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct question -Rapid exams -Reports. -Monthly exams - Mid-year exam

7	1	Developing linguistic abilities	The beginner	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct question -Rapid exams -Reports. -Monthly exams - Mid-year exam
8	1	Developing linguistic abilities	the news	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct question -Rapid exams -Reports. -Monthly exams - Mid-year exam
9	1	Developing linguistic abilities	Copiers	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct question -Rapid exams -Reports. -Monthly exams - Mid-year exam
10	1	Developing linguistic abilities	Parent and child tags in the name	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct question -Rapid exams -ReportsMonthly exams - Mid-year exam
11	1	Developing linguistic abilities	The original signs in the present tense verb.	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct question -Rapid exams -ReportsMonthly exams - Mid-year exam
12	1	Developing linguistic abilities	Sub -accusative signs	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct question -Rapid exams -Reports. -Monthly exams - Mid-year exam
13	1	Developing linguistic abilities	Sub-prepositions	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct question -Rapid exams -ReportsMonthly exams - Mid-year exam
14	1	Developing linguistic abilities	Subjunctive signs	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct question -Rapid exams -Reports. -Monthly exams - Mid-year exam

15	1	Developing linguistic abilities	Morphological topics Derivatives	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct question -Rapid exams -Reports. -Monthly exams - Mid-year exam
16	1	Developing linguistic abilities	Name of subject	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct question -Rapid exams -Reports. -Monthly exams - Mid-year exam
17	1	Developing linguistic abilities	Exaggeration formulas	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct question -Rapid exams -Reports. -Monthly exams - Mid-year exam
18	1	Developing linguistic abilities	participle	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct question -Rapid exams -Reports. -Monthly exams - Mid-year exam
19	1	Developing linguistic abilities	Abstract verb and more	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct question -Rapid exams -Reports. -Monthly exams - Mid-year exam
20	1	Developing linguistic abilities	Masculine, feminine, and feminine signs	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct question -Rapid exams -Reports. -Monthly exams - Mid-year exam
21	1	Developing linguistic abilities	Missing name	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct question -Rapid exams -ReportsMonthly exams - Mid-year exam
22	1	Developing linguistic abilities	Plural of missing nouns	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct question -Rapid exams -Reports. -Monthly exams - Mid-year exam

23	1	Developing linguistic abilities	Shortened name	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct question -Rapid exams -Reports. -Monthly exams - Mid-year exam
24	1	Developing linguistic abilities	Plural noun	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct question -Rapid exams -Reports. -Monthly exams - Mid-year exam
25	1	Developing linguistic abilities	Elongated name	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct question -Rapid exams -ReportsMonthly exams - Mid-year exam
26	1	Developing linguistic abilities	Plural of extended noun	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct question -Rapid exams -Reports. -Monthly exams - Mid-year exam
27	1	Developing linguistic abilities	Collect crushing	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct question -Rapid exams -Reports. -Monthly exams - Mid-year exam
28	1	Developing linguistic abilities	Spelling topics Deletion and addition Letters that are deleted Letters that are added	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct question -Rapid exams -Reports. -Monthly exams - Mid-year exam
29	1	Developing linguistic abilities	The short Alif and the extended Alif The bound ta' and the open ta'.	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct question -Rapid exams -Reports. -Monthly exams - Mid-year exam

30	1	Developing linguistic abilities	The hamza rulings Numbering Rhetoric sections.	and and	its	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-	-Direct question -Rapid exams -ReportsMonthly exams - Mid-year exam -final exam
						based learning.	
11. Course Evaluation							
(20 marl (5 marks (70 marl	(5 marks) First semester: (2.5 marks) short exams and attendance, (2.5 marks) reports. (20 marks) Mid-year exam. (5 marks) Second semester: (2.5 marks) short exams and attendance, (2.5 marks) reports. (70 marks) Final exam						
12. Le	earning	and Teaching	Resources				
Required textbooks (curricular books, if any)			Beirut Ahmed Egypt 1 Abd Ad Clock I Yousse	1998. I Shala 1957. Dun Al- House, ef Ezz <i>l</i>	e, Arabic Grammar, Scientific Office of A bi, Arabic grammar and application to Ramadan, Encyclopedia of Poets of the Jordan 2001. Al-Din, Iraqi poets of the twentieth cent Baghdad, 1969.	it, Abbasid Era	
Main references (sources)				•	-		
Recommended books and references			references				
(scientific	(scientific journals, reports)						

Electronic References, Websites

https://www.youtube.com/watch?v=rnYYcOrTGfw&t=431s

•	Course Name:	
Me	edical Chemistry	
•	Course Code:	
CH	1106	
•	Semester / Year:	
2.5	Semester/ First stage	
•	Description Preparation Date:	
20	24-2025	
•	Available Attendance Forms:	
	Lectures and laboratory	
•	Number of Credit Hours (Total) / Number of Units (Total) 120 hours / 6 unite	
	120 hours/ 6 unite	
•	Course administrator's name (mention all, if more than one na	me)
	Name: Dr. Dhurgham Aziz Katia	
	Email: <b>Dhurghamaziz417@mu.edu.iq</b>	
•	Course Objectives	
•	The medicinal chemistry course aims to identify the Course Objectives	
	basic principles of general chemistry, organic and	
	biochemistry.	
•	This course aims to know the characteristics of	
	chemical compounds in general chemistry, analyze	
	them, study the solubility of chemical compounds,	
	and detect carbohydrates , fats, and proteins in	
	general	
	<b>3</b>	
•	Teaching and Learning Strategies	
•	Knowledge and understanding	Strategy
	Civil goals	
•	Skill goals	
•	Stimulus and response method	
	Lann about and assess on our ex-	
•	Long, short and semester exams	
•	Thinking skills	

# Course Structure

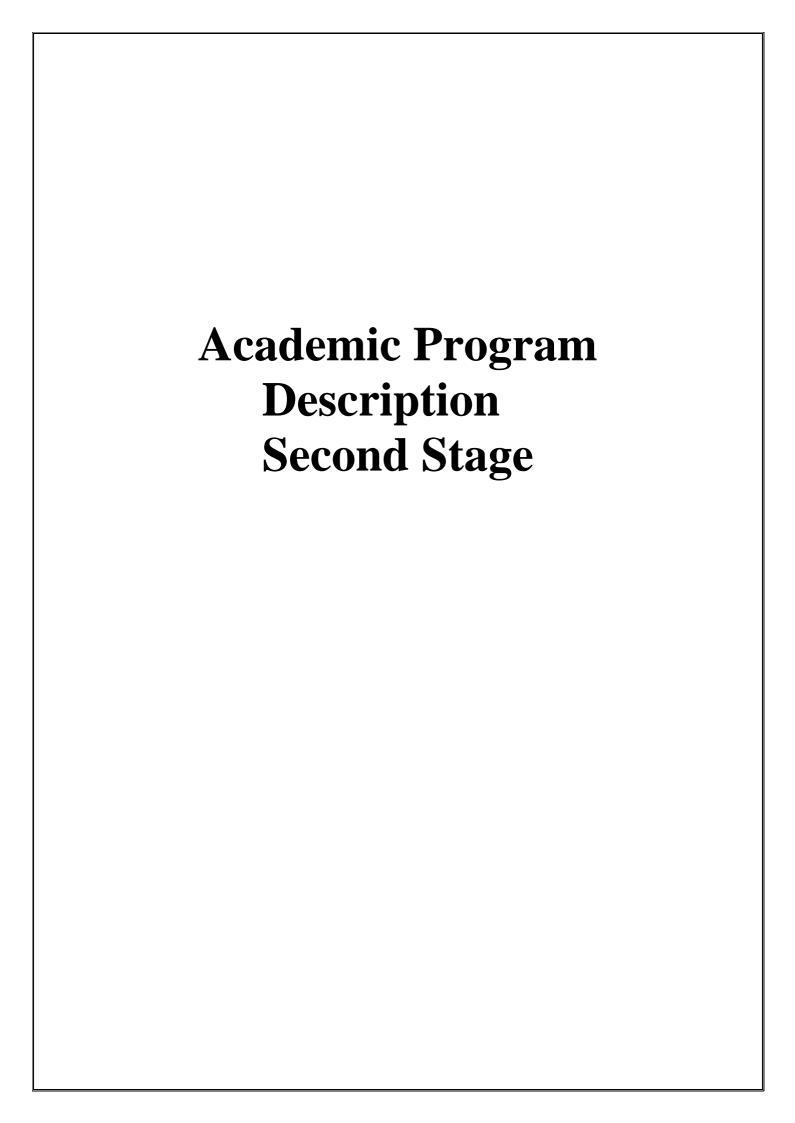
Week	Hours	Required	Unit or subject name	Learning	Evaluation
		Learning	Theoretical	method	method
		Outcomes			
1	4	Knowledge and understanding. subject-specific skil	Acid, Base and Salt		Short, semester, mid-year and final exams
2	4	Knowledge and understanding. subject-specific skil	salts, preparation of salts		Short, semester, mid-year and final exams
3	4	Knowledge and understanding. subject-specific skil	Fluid and electrolyte	discussion, debriefing, information	Short, semester, mid-year and final exams
4	4	Knowledge and understanding. subject-specific skil	Buffer-pH and Acid-Base Balance	review, practical	Short, semester, mid-year and final exams
5	4	1 . 1.	acid-base balance and blood pH	research, computer- based learning	Short, semester, mid-year and final exams
6	4	Knowledge and understanding. subje specific skills	Colloids and colloidal dispersions		Short, semester, mid-year and final exams
7	4	Knowledge and understanding. subje specific skills	Chirality in Biological Systems		Short, semester, mid-year and final exams
8	4	Knowledge and understanding. subje specific skills	concentration, preparation of solutions		Short, semester, mid-year and final exams
9	4	Knowledge and understanding. subje specific skills	Pollution	_	Short, semester, mid-year and final exams
10	4	Knowledge and understanding. subje specific skills	Radiochemistry		Short, semester, mid-year and final exams
11	4	Knowledge and understanding. subje specific skills	Alkanes and Cycloalkanes		Short, semester, mid-year and final exams
12	4	Knowledge and understanding. subje specific skills	Alkenes and Alkynes		Short, semester, mid-year and final exams
13	4	Knowledge and understanding. subje specific skills	Aromatic compounds		Short, semester, mid-year and final exams
14	4		Aromatic compounds in Nature		Short, semester, mid-year and final exams
15	4	_	Stereoisomers of Carbon		Short, semester, mid-year and final exams
16	4	Knowledge and understanding. subje specific skills	Diastereomers,		Short, semester, mid-year and final exams
17	4	Knowledge and	Alcohols, Phenols, Ethers and Thiols (preparation, reactions)		Short, semester, mid-year and

		specific skills	final exams			
18	4	Knowledge and understanding. subje specific skills  Carboxylic Acids And Their Derivatives , part 1	Short, semester mid-year and final exams			
19	4	Knowledge and understanding. subje specific skills  Carboxylic Acids And Their perivatives , part 2	Short, semester mid-year and final exams			
20	4	Knowledge and understanding. subje specific skills	Short, semester mid-year and final exams			
21	4	Knowledge and understanding. subje specific skills	Short, semester mid-year and final exams			
22	4	Knowledge and understanding. subje specific skills	Short, semester mid-year and final exams			
23	4	Knowledge and understanding. subje specific skills  Disaccharides Carbohydrates and oral health	Short, semester mid-year and final exams			
24	4	Knowledge and Lipids understanding. subject-specific skil	Short, semester mid-year and final exams			
25	4	Knowledge and understanding. subject-specific skil	Short, semester mid-year and final exams			
26	4	Knowledge and understanding. subject-specific skil	Short, semester mid-year and final exams			
27	4	Knowledge and understanding. subject-specific skil  Amino acids Effects of protein on oral health	Short, semester mid-year and final exams			
28	4	Knowledge and understanding. subject-specific skil	Short, semester mid-year and final exams			
29	4	Knowledge and understanding. subject-specific skil	Short, semester mid-year and final exams			
30	4	Knowledge and understanding. subject-specific skil	Short, semester mid-year and final exams			
Lab n	umber	Study unit title				
	1	Action of Strong Base and Acids				
2		Solubility rules and Applications (Solubility rules of salts).				
3		Test for negative ions (Anions).part 1				
4		Test for negative ions (Anions). part 2				
5		PH meter				
6		Test for positive ions (Cations). part 1				
7		Test for positive ions (Cations). part 2				
	8	Titration				
	9	Safety of chemicals part 1				
		1				

10	Safety of chemicals part2	
11	hydrocarbons	
12	Aliphatic Hydrocarbons	
13	Aromatic hydrocarbons, part 1	
14	Aromatic hydrocarbons, part 2	
15	Preparation of aspirin	
16	alcohol	
17	Phenols reactions	
18	Carboxylic Acids reactions part 1	
19	Carboxylic Acids reactions part 2	
20	Aldehydes and ketones	
21	Carbohydrates reactions	
22	Monosaccharides reactions	
23	Disaccharides reactions	
24	Lipids reactions part 1	
25	Lipids reactions part 2	
26	Proteins reactions	
27	Amino acids reactions	
28	Paper chromatography part 1	
29	Paper chromatography part 2	
30	osmosis	

20 degrees of mid-year 60 degrees of final exam

<u> </u>	
Learning and Teaching Resources	
Required textbooks (curricular books, if any)	
Main references (sources)	The Chemical Basis of Life
Recommended books and references (scientific journals,	
reports)	
Electronic References, Websites	



General Human Anatomy

#### 2. Course Code:

201AN

#### 3. Semester / Year:

2 semester/ second year

# 4. Description Preparation Date:

2024-2025

#### 5. Available Attendance Forms:

Theoretical lectures and Laboratory sessions

# 6. Number of Credit Hours (Total) / Number of Units (Total)

90 hours "30 hours' theory & 60 hours practical" with 4 credits "2 for the theory and 2 for the practical.

# 7. Course administrator's name (mention all, if more than one name)

Name: Mukhalled Salim .Abdulla Email: mukhalled@mu.edu.iq

# 8. Course Objectives

# Course Objectives:

- Preparation of the student scientifically with regard to human anatomy, especially what concerns the anatomy of the head and neck and its relationship to his precise specialty as a dentist.
- Phenomenological knowledge of the natural human body structure.
- Diagnosing body parts, systems and organs, with a focus on the hea and neck.

# 9. Teaching and Learning Strategies

# **Strategy**

- The primary mission of the laboratory is to educate dental students to enable them to describe basic primary functions.
- For the general anatomical structure and recognition of anatomical relationships and clinical significance.
- Using anatomical models, radiographs, video clips and images from the communications network(Internet) to expand students' awareness.

10. Cour	se struc	ture			
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1.	1	Understanding and assimilating	Scalp	- Theoretical lectures	- Quizzes - Seminars
2. 3.	1	the scientific	Scalp The orbital region/	- Illustrating images and	- Tutorial Free
4.	1	Possibility of	The orbital region	movies.	question
5. 6.	1	inference and access to any	The Nasal region  Mandibular nerve	- X- rays - Problem-	- Daily following
7.	1	part of the body strictly and	Face	- based learning,	activity

8.	1	easily.	Face	collaboration,
9.	1	,	Oral cavity	discussion,
10.			Oral cavity	debriefing,
	1		•	information
11.	1		Tongue	review,
12.	1		Temporal region	practical
13.	1		Parotid gland	research, computer-
14.	1		Parotid gland	- based
15.	1		The Pterygopalatine	learning.
	-		fossa	
16.	1		Temporomandibular	
17.			joint Temporomandibular	
17.	1		joint	
18.	1		The neck	
	1			
19.	1		The neck	
20.	1		Triangles of the neck	
21.	1		Triangles of the neck	
22.	1		Submandibular region	
23.	1		Root of the neck	
24.	1		Root of the neck	
25.	1		Arteries of the neck	
26.	1		Arteries of the neck	
27.	1		Brain	
28.	1		Cranial nerves	
29.	1		Pharynx	
30.	1		Larynx	

Lab number	Study unit title			
1	Anatomy of scalp			
2	Anatomy of face part 1			
3	Anatomy of face part 2			
4	Anatomy of parotid region			
5	Temporal, infratemporal fossa			
6	muscles of mastication			
7	Mandibular nerve			
8	Maxillary artery			
9	Pterygopalatine fossa			
10	Maxillary nerve			
11	Nasal cavity and paranasal sinuses			

12	Tempromandibular joint (TMJ)
13	Orbital region and Muscles of the eye
14	Ophthalmic nerve, artery and vein
15	anatomy of eyeball
16	Anatomy of mouth(The Lips ,oral Cavity,Tongue)
17	The Palate
18	Superficial anatomy of neck
19	Triangles of neck
20	Arteries of head and neck (internal carotid artery)
21	External carotid artery
22	Subclavian artery
23	Veins of the Head and Neck (internal jugular vein, subclavian vein, and venus sinuses)
24	Anatomy of brain
25	Submandibular region
26	Anatomy of pharynx
27	Lymph drainage of head and neck
28	Anatomy of larynx
29	Root of neck
30	Cranial nerves

#### 11. Course Evaluation

The subject is annual, and therefore the grade is distributed at the rate of 10 marks for the first semester, 20 marks for the mid-year exam, and 10 marks for the second semester, so the annual endeavor score is 40 marks, while the remaining 60 marks are allocated to the final exam, both practical and its score is 20, and the theoretical score is 40.

During the first and second semesters, the grade is distributed between the theoretical and practical aspects, each of which has its own exams.

The theoretical aspect depends on surprise exams, daily follow-ups, seminars, attendance, and student activity, while the practical grade depends on passing the anatomical models exam, oral exams, and the extent of commitment and follow-up of the scientific material.

# 12. Learning and Teaching Resources

- 1. Snell's Clinical Anatomy by Regions, 10th edition. Wolters Kluwer 2019
- 2. Netter's Head and Neck Anatomy for Dentistry, 3rd edition. Elsevier 2017
- 3. Gray's Atlas of Anatomy, 3rd edition. Elsevier 2021

Cours	e Nam	e:				
Bioch	emistr	у				
Cours	e Code	:				
BC212	)					
Semes	ster / Y	'ear:				
2 Sem	ester/	Second stage				
Descr	Description Preparation Date:					
2024-2	2025					
Availa	ible Att	tendance Forms	S:			
Lectu	res and	l laboratory				
Numb	er of C	redit Hours (To	otal) / Number of Units	(Total)		
120 h	ours/6	6 unite				
Cours	se adm	ninistrator's na	me (mention all, if mo	ore than one name)		
Email Course			mu.edu.iq An introduction to bioche	-	-	
			resulting variables, irregu implications and method	·		
Teachi	ng and	l Learning Stra	tegies			
Course	e Struc	ture				
Week	Hours	Required	Unit or subject name	Learning method	Evaluation	
		Learning	Theoretical		method	
		Outcomes				
1	4	Knowledge and understanding. subject-specific s	Enzymes: Definition, Terminology, and Classification	Problem-based learning, collaboration, discussion, debriefing, information review, practical research computer-based learning	mid-year and final exams	
2	4	Knowledge and understanding. subject-specific s	enzyme action	collaboration, discussion,	Short, semester, mid-year and final exams	

enzyme assays

Clinical significance of

Knowledge and

understanding.

subject-specific sl

4

final exams

Short, semester,

debriefing, information review, practical research, computer-based learning.

Problem-based learning,

debriefing, information

review, practical research,

collaboration, discussion, mid-year and

				computer-based learning.
4	4	Knowledge and	Vitamins, definition,	Problem-based learning, Short, semester,
		understanding.	classification	collaboration, discussion, mid-year and
		subject-specific sl	J.GOSMOGRA	debriefing, information final exams
				review, practical research,
				computer-based learning.
5	4	Knowledge and	Digestion and	Problem-based learning, Short, semester,
			absorption of	collaboration, discussion, mid-year and
		subject-specific sl	carbohydrates, lipids ,ar	debriefing, information final exams
			proteins	review, practical research,
				computer-based learning.
6	4	Knowledge and	Chemistry of	Problem-based learning, Short, semester,
		understanding.	carbohydrates	collaboration, discussion, mid-year and
		subject-specific ski	,	debriefing, information final exams
				review, practical research,
				computer-based learning.
7	4	_	Metabolism of	Problem-based learning, Short, semester,
		understanding.	Carbohydrates:	collaboration, discussion, mid-year and
		subject-specific ski	part 1	debriefing, information final exams
				review, practical research,
				computer-based learning.
8	4		Metabolism of	Problem-based learning, Short, semester,
			Carbohydrates:	collaboration, discussion, mid-year and
		subject-specific ski	part 2	debriefing, information final exams
				review, practical research,
			-	computer-based learning.
9	4	Knowledge and	Carbohydrates	Problem-based learning, Short, semester,
		understanding.	metabolism regulation	collaboration, discussion, mid-year and
		subject-specific ski		debriefing, information final exams
				review, practical research,
				computer-based learning.
10	4	Knowledge and	Chemistry of Proteins	Problem-based learning, Short, semester,
		understanding.	and amino acids	collaboration, discussion, mid-year and
		subject-specific ski		debriefing, information final exams
				review, practical research,
1.4	4	TZ 1 1 1	Mataball	computer-based learning.
11	4	Knowledge and	Metabolism of	Problem-based learning, Short, semester,
		understanding.	Proteins and amino	collaboration, discussion, mid-year and
		subject-specific ski	acids	debriefing, information final exams
				review, practical research,
12	4	Vnovilodes and	Motoboliom of Drotoin	computer-based learning.
12	4	Knowledge and understanding.	Metabolism of Protein	Problem-based learning, Short, semester,
		subject-specific ski	and amino acid	collaboration, discussion, mid-year and debriefing, information final exams
		Subject-specific ski	regulation	3,
				review, practical research, computer-based learning.
12	1	Knowledge and	Motabolism of Dratain	
13	4	Knowledge and understanding.	Metabolism of Protein	Problem-based learning, Short, semester, collaboration, discussion, mid-year and
		subject-specific ski	and amino acid	1 1
		Subject specific ski	inherited disorder	,g,
				review, practical research,
				computer-based learning.

14 Knowledge and understanding. subject-specific ski  15 4 Knowledge and Lipid :definition,	Problem-based learning, Short, semester, collaboration, discussion, mid-year and debriefing, information final exams review, practical research,
subject-specific ski	debriefing, information final exams review, practical research,
	review, practical research,
15 4 Knowledge and Lipid :definition.	
15 4 Knowledge and Lipid :definition.	computer based learning
15 4 Knowledge and Lipid: definition.	computer-based learning.
	Problem-based learning, Short, semester,
understanding. classification	collaboration, discussion, mid-year and
subject-specific ski	debriefing, information final exams
	review, practical research,
	computer-based learning.
16 4 Knowledge and Metabolism of Lipid:	Problem-based learning, Short, semester,
understanding. oxidation of Fatty	collaboration, discussion, mid-year and
subject-specific ski Acids	debriefing, information final exams
	review, practical research,
	computer-based learning.
17 4 Knowledge and Biosynthesis of Fatty	· · ·
understanding. Acids	collaboration, discussion, mid-year and
subject-specific ski	debriefing, information final exams
	review, practical research,
	computer-based learning.
18 4 Knowledge and Integration of	
understanding. metabolism of	
Garbonyaratos, lipia	,411
Proteins	review, practical research,
	computer-based learning.
19 4 Knowledge and Metabolism of Purin	
understanding. and	collaboration, discussion, mid-year and
subject-specific ski Pyrimidines Derivativ	es debriefing, information final exams
part 2	review, practical research,
	computer-based learning.
20 4 Knowledge and Metabolism of Purin	<u> </u>
understanding. and	collaboration, discussion, mid-year and
subject-specific ski pyrimidines disorder	debriefing, information final exams
	review, practical research,
	computer-based learning.
21 4 Knowledge and Nucleic Acids	Problem-based learning, Short, semester,
understanding. Definition and Prote	in collaboration, discussion, mid-year and
subject-specific ski synthesis	debriefing, information final exams
oyos.s	review, practical research,
	computer-based learning.
22 4 Knowledge and Hormone definition,	Problem-based learning, Short, semester,
understanding. classification	collaboration, discussion, mid-year and
subject-specific ski	debriefing, information final exams
J. T.	review, practical research,
	computer-based learning.
23 4 Knowledge and Hormone disorder	
23 4 Knowledge and Hormone disorder understanding.	
	debriefing, information final exams
subject-specific ski	The second of th
subject-specific ski	review, practical research,
24 4 Knowledge and Acid-base balance	review, practical research, computer-based learning.  Problem-based learning, Short, semester,

		understanding. subject-specific s		collaboration, discussion, debriefing, information review, practical research, computer-based learning.	mid-year and final exams
25	4	Knowledge and understanding. subject-specific s	Trace elements disorder	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
26	4	Knowledge and understanding. subject-specific sl	Salivary secretion(saliva), Pancreatic juice	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
27	4	Knowledge and understanding. subject-specific s	Electrolytes	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
28	4	Knowledge and understanding. subject-specific s	Liver Function Test	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
29	4	Knowledge and understanding. subject-specific sl	Kidney Function Test	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
30	4	Knowledge and understanding. subject-specific sl	Exam	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams

Lab number	Study unit title
1	Lab safety
2	Sample collection-1
3	Sample collection -2
4	Spectrophotometer
5	Standard curve

6	Blood glucose+ HbA1c			
7	Total Protein			
8	Albumin+ Globulin			
9	Troponin			
10	Liver function test (Bilirubin)			
11	Alkaline Phosphatase			
12	Alkaline Phosphatase			
13	Lipid in blood (cholesterol & lipoprotein)			
14	Triglyceride			
15	Kidney function Test (urea)			
16	Serum creatinine &creatinine clearness			
17	General Urine Analysis-1			
18	General Urine Analysis-2			
19	Uric acid			
20	Amylase in serum+ saliva			
21	Creatine phosphokinase			
22	lactate Dehydrogenase			
23	serum calcium			
24	serum phosphorus			
25	serum Na			
26	serum K			
27	serum Iron			
28	Vitamin D			

29	Vitamin C
30	Acid phosphatase

# Course Evaluation

- 10 degrees of first semester: 8 degrees of short and semester exams and two degrees of oral
- 10 degrees of second semester: 8 degrees of short and semester exams and two degrees of oral exam
- 20 degrees of mid-year 60 degrees of final exam

Learning and Teaching Resources			
Lippincott's Illustrated Reviews, Biochemistry Tietz Fundamentals of Clinical Chemistry			

Oral Histology and Embryology

#### 2. Course Code:

211EL

# 3. Semester / Year:

2 semester/ Second stage

# **4.** Description Preparation Date:

2024-2025

#### 5. Available Attendance Forms:

Lectures and laboratory

# 6. Number of Credit Hours (Total) / Number of Units (Total)

120 hours / 6 units

# 7. Course administrator's name (mention all, if more than one name)

Name: Sabah Qaysar Musa Fadhil Abbas Hamad Fadielalquraishe@mu.edu.iq

# 8. Course Objectives

#### **Course Objectives**

- Introducing the students to the stages of formation and development of the fetus and knowing the congenital malformations accompanying this development.
- This course also aims to study the principles of and technique of slide preparation for microscopic investigation.
- Study the development of tooth and its supporting structures a developmental disturbances of teeth.
- Study the development of oral mucosa, TMJ and Salivary glands and developmental disturbances of these structures.

# 9. Teaching and Learning Strategies

#### Strategy

- Knowledge and understanding
- Skill goals
- Stimulus and response methods
- Long, short and semester exams
- Thinking skills

10. Cour	10. Course Structure					
Week	Hours	Required	Unit or	Learning method	Evaluation	
		Learning	subject name		method	
		Outcomes	Theoretical			
1	2	Knowledge and understanding. subject-specific skills	Embryogenesis: week, ovulat fertilization implantation	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semeste mid-year and final exams	
2	2	Knowledge understanding. subject-specific skills	2nd week,Bilam germ layer	collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semeste mid-year and final exams	
3	2	Knowledge understanding. subject-specific skills	3rd week triland germ layer: gastrula and neurulation	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semeste mid-year and final exams	
4	2	Knowledge understanding. subject-specific skills	Development of l and neck(phary arch,pouch & cleft	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semeste mid-year and final exams	
5	2	Knowledge understanding. subject-specific skills	Development of and anomalies	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semeste mid-year and final exams	
6	2	Knowledge and understanding. subject-specific skills	Development of tor and anomalies 2	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semeste mid-year and final exams	
7	2	Knowledge understanding. subject-specific skills	Development of pa and anomalies	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semeste mid-year and final exams	
8	2	Knowledge understanding. subject-specific skills	Slide preparation	Problem-based learn collaboration, discuss debriefing, information revipractical research, compubased learning.	Short, semeste mid-year and final exams	
9	2	Knowledge understanding. subject-specific skills	Tooth development developmental disturbances of teet	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semeste mid-year and final exams	
10	2	Knowledge understanding. subject-specific	Dentinogenesis dentin structure	Problem-based learning, collaboration, discussion, debriefing, information review,	Short, semeste mid-year and final exams	

		skills		practical research, computer- based learning.	
11	2	Knowledge understanding, subject-specific skills	Amelogenesis, Ena structures	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semeste mid-year and final exams
12	2	Knowledge understanding. subject-specific skills	Clinical considera for dentin and enam	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semeste mid-year and final exams
13	2	Knowledge understanding. subject-specific skills	Dental Pulp	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semeste mid-year and final exams
14	2	Knowledge understanding. subject-specific skills	Cementum and clir consideration 2	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semeste mid-year and final exams
15	2	Knowledge understanding. subject-specific skills	Root formati Cementogenesis	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semeste mid-year and final exams
16	2	Knowledge understanding. subject-specific skills	Periodontal ligamen	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semeste mid-year and final exams
17	2	Knowledge understanding. subject-specific skills	Principles fiber of and gingival fibers	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semeste mid-year and final exams
18	2	Knowledge understanding. subject-specific skills	Alveolar bone	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semeste mid-year and final exams
19	2	Knowledge understanding. subject-specific skills	Bone formation resorption	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semeste mid-year and final exams
20	2	Knowledge understanding. subject-specific skills	Proteins involve mineralization of b and dentin	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semeste mid-year and final exams
21	2	Knowledge understanding. subject-specific	Oral mucosa and t types	Problem-based learning, collaboration, discussion,	Short, semeste mid-year and

		skills		debriefing, information review, practical research, computer- based learning.	final exams
22	2	Knowledge understanding. subject-specific skills	Gingiva dentogingival junc 2	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semeste mid-year and final exams
23	2	Knowledge understanding. subject-specific skills	Eruption of teeth	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semeste mid-year and final exams
24	2	understanding. subject-specific skills	Shedding of teeth	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semeste mid-year and final exams
25	2	Knowledge understanding. subject-specific skills	Salivary gland	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semeste mid-year and final exams
26	2	Knowledge understanding. subject-specific skills	Salivary proteins	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semeste mid-year and final exams
27	2	Knowledge understanding, subject-specific skills	ТМЈ	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semeste mid-year and final exams
28	2	Knowledge understanding. subject-specific skills	Maxillary sinus	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semeste mid-year and final exams
29	2	Knowledge understanding. subject-specific skills	Histochemistry	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semeste mid-year and final exams
30	2	Knowledge understanding. subject-specific skills	Age changes of and hard tissues	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semeste mid-year and final exams

Lab number	Study unit title
1	first week of development ovulation and implantation / data show slides
2	Second week of development: bilaminar germ layer / data show

3	3rd week trilaminar germ layer: gastrulation and neurulation / Video presentation

4	Development of head and neck(pharyngeal arch,pouch & cleft) / data show
5	Development of face and anomalies / data show
6	Development of tongue and anomalies / data show
7	Development of palate and anomalies / data show
8	Slide preparation / data show
9	Tooth development / data show& microscopic slides
10	Dentinogenesis and dentin structure / data show& microscopic slides
11	amelogenesis and enamel structure / data show& microscopic slides
12	Clinical consideration for dentin and enamel / data show
13	Dental Pulp / data show& microscopic slides
14	Cementum / data show& microscopic slides
15	Root formation & cementogenesis / data show& microscopic slides
16	PDL / data show& microscopic slides
17	PDL fiber &gingival fiber / data show& microscopic slides
18	Alveolar bone / data show& microscopic slides
19	Bone formation and resorption / data show& microscopic slides
20	mineralization of bone and dentin / data show& microscopic slides
21	Oral mucosa / data show& microscopic slides
22	Gingiva and dentogingival junction / data show& microscopic slides
23	Eruption of teeth / data show& microscopic slides
24	Shedding of teeth / data show& microscopic slides
25	Salivary gland / data show& microscopic slides
26	Salivary proteins / data show
27	TMJ / data show
28	Maxillary sinus / data show
29	Histochemistry / data show
30	Changes in dental hard &soft tissue / data show

# 11. Course Evaluation

- 10 degrees of first semester: 8 degrees of short and semester exams and two degrees of oral exam
- 10 degrees of second semester: 8 degrees of short and semester exams and two degrees of oral exam
- 20 degrees of mid-year
- 60 degrees of final exam

12.	Learning	and Teaching	a Resources
		aria reacining	g

Required textbooks (curricular books, if any)	
Main references (sources)	• Ten cate's oral histology development, structures and function. Antonio Nanci. 9th edition. 2017, Elsevier.
	• Orban's oral histology and embryology. Kumar. 14th edition. 2015, Elsevier.
Recommended books and references (scientific	
journals, reports)	
Electronic References, Websites	

# Histology

#### 2. Course Code:

#### 213 GH

# 3. Semester / Year:

# 2 semester/ second stage

# 4. Description Preparation Date:

#### 2024-2025

#### 5. Available Attendance Forms:

Lectures and laboratory

# 6. Number of Credit Hours (Total) / Number of Units (Total)

120 hours/6 unite

# 7. Course administrator's name (mention all, if more than one name)

Name: Marwah Mohammed Hanaf Email: marwahaamf @mu.edu.iq

# 8. Course Objectives

# • To teach the student practical and theoretical applications of the various general body tissues and body organs

# 9. Teaching and Learning Strategies

#### Strategy

- Explain the structures of different tissues and organs of the body
- Use and draw simple diagrams on the board
- Using Data Show to display different sections of body tissues and organs in several directions Preparing tissue sections
- Using light microscopes to display different sections of tissue

# 10. Course Structure

Week	Hours	Required	Unit or subject name	Learning method	Evaluation
		Learning	Theoretical		method
		Outcomes			
1	2	Knowledge and understanding. subject-specific		Problem-based learning,	Short, semester mid-year and
		skills		collaboration, discussion, debriefing,	final exams

understanding- subject-specific skills  2 Knowledge and understanding- subject-specific skills  4 Virinary System: kidney nephrons, collecting tubules ducts  4 Collaboration, discussion, debriefing, information review, practical research, computer-based learning.  5 Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  6 Virinary System: virinary problem-based learning.  7 Collaboration, discussion, debriefing, information review, practical research, computer-based learning.  8 Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  8 Short, semester mid-year and final exams discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	2	2	Warran I. I.		practical research,	
2 Knowledge understanding, subject-specific skills  2 Knowledge understanding, subject-specific skills  2 Knowledge understanding, subject-specific skills  3 2 Knowledge understanding, subject-specific skills  4 2 Knowledge understanding, subject-specific skills  5 2 Knowledge understanding, subject-specific skills  6 2 Knowledge understanding, subject-specific skills  6 2 Knowledge understanding, subject-specific skills  7 2 Knowledge understanding, subject-specific skills  6 2 Knowledge understanding, subject-specific skills  7 2 Knowledge and understanding, subject-specific skills  7 2 Knowledge and understanding, subject-specific skills  7 2 Knowledge understanding, subject-specific skills  7 2 Knowledge and understanding, subject-specific skills  7 2 Knowledge understanding, subject-specific skills  7 3 3 3 3 4 2 Knowledge understanding, subject-specific skills  7 4 4 5 2 Knowledge understanding, subject-specific skills  7 5 6 7 6 7 7 7 7 7 7 8 7 8 7 8 7 8 7 8 7 8	2	2	IZ. a. l			
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3   2   Knowledge understanding, subject-specific skills						final exams
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understanding subject-specific skills  2 Knowledge understanding subject-specific skills  8 Respiratory System: conducting portion  2 Knowledge understanding subject-specific skills  5 2 Knowledge understanding subject-specific skills  2 Knowledge understanding subject-specific skills  5 2 Knowledge understanding subject-specific skills  6 2 Knowledge understanding subject-specific skills  6 2 Knowledge and understanding subject-specific skills  7 2 Knowledge understanding subject-specific skills  8 Problem-based learning collaboration, discussion, debriefing information review, practical research, computer-based learning.  9 Problem-based learning collaboration discussion, debriefing information review, practical research, computer-based learning.  9 Problem-based learning collaboration discussion, debriefing information review, practical research, computer-based learning.  10 Problem-based learning collaboration discussion, debriefing information review, practical research, computer-based learning.  11 Problem-based learning collaboration discussion, debriefing information review, practical research, computer-based learning.  12 Rowledge understanding understanding information review, practical research, computer-based learning.  13 Problem-based learning collaboration, discussion, debriefing information review, practical research, computer-based learning.  14 Problem-based learning collaboration, discussion, debriefing information review, practical research, computer passed learning.  15 Problem-based learning collaboration discussion, debriefing information review, practical research, computer passed learning collaboration discussion, debriefing information review practical research passed learning collaboration discussion debr	2	2	Vnowlodgo	Connective Tiesus		Chart competor
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4 2 Knowledge understanding, subject-specific skills  5 2 Knowledge understanding, subject-specific skills  6 2 Knowledge understanding, subject-specific skills  7 2 Knowledge and understanding, subject-specific skills  7 2 Knowledge and understanding, subject-specific skills  8 2 Knowledge and understanding, subject-specific skills  9 2 Knowledge and understanding, subject-specific skills  1 3 2 Knowledge and understanding, subject-specific skills  1 4 3 2 Knowledge and understanding, subject-specific skills  1 5 3 2 Knowledge and understanding, subject-specific skills  1 5 6 6 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8					-	
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subject-specific skills    Subject-specific skills   Portion   Collaboration, discussion, debriefing, information review, practical research, computer-based learning.   Short, semester mid-year and final exams   Short, semester mid-year and final exams	•	4				´ 1
Skills   S			subject-specific	•		-
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Computer-based learning.   Computer-based learning.   Short, semester mid-year and final exams   Short, semes						
Short, semester   Problem-based   learning.   Short, semester   Problem-based   learning,   collaboration,   discussion, debriefing,   information review,   practical research,   computer-based   learning,   collaboration,   discussion, debriefing,   information review,   practical research,   computer-based   learning,   collaboration,   discussion, debriefing,   information review,   practical research,   computer-based   learning,   collaboration,   discussion, debriefing,   information review,   practical research,   computer-based   learning.					practical research,	
5 2 Knowledge understanding-subject-specific skills  2 Knowledge and understanding-subject-specific skills  2 Knowledge and understanding-subject-specific skills  3 Knowledge and understanding-subject-specific skills  4 Urinary System: kidney nephrons, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  5 Vanowledge and understanding-subject-specific skills  6 Urinary System: ureter, urinary bladder, and male and female urethra  6 Vanowledge and understanding-subject-specific skills  7 Vanowledge and understanding-subject-specific skills  8 Vanowledge and understanding-subject-specific skills  8 Vanowledge and understanding-subject-specific skills  9 Vanowledge and understanding-subject-specific skills  10 Vanowledge and understanding-subject-specific skills  11 Vanowledge and understanding-subject-specific skills  12 Vanowledge and understanding-subject-specific skills  13 Vanowledge and understanding-subject-specific skills  14 Vanowledge and understanding-subject-specific skills  15 Vanowledge and understanding-subject-specific skills  16 Vanowledge and understanding-subject-specific skills  18 Vanowledge and understanding-subject-specific skills  19 Vanowledge and understanding-subject-specific skills  10 Vanowledge and understanding-subject-specific skills  11 Vanowledge and understanding-subject-specific skills  12 Vanowledge and understanding-subject-specific skills  13 Vanowledge and understanding-subject-specific skills  14 Vanowledge and understanding-subject-specific skills  15 Vanowledge and understanding-subject-specific skills  16 Vanowledge and understanding-subject-specific skills  17 Vanowledge and understanding-subj					computer-based	
understanding, subject-specific skills  2 Knowledge and understanding, subject-specific skills  4 Virinary System: kidney nephrons, collecting tubules ducts  4 Collaboration, discussion, debriefing, information review, practical research, computer-based learning.  5 Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  6 Virinary System: without the discussion of the problem-based learning.  7 Collaboration, discussion, debriefing, information review, practical research, computer-based learning.  8 Problem-based learning.  9 Problem-based learning.  1 Problem-based learning, collaboration, discussion, debriefing, information, discussion, debriefing, information review, practical research, computer-based learning.					learning.	
subject-specific skills  2 Knowledge and understanding subject-specific skills  2 Knowledge and understanding subject-specific skills  3 Knowledge understanding subject-specific skills  4 Collaboration, discussion, debriefing, information review, practical research, computer-based learning.  5 Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  6 Vrinary System: ureter, urinary bladder, and male and female urethra  8 Problem-based learning.  9 Problem-based learning.  9 Problem-based learning.  10 Short, semester mid-year and final exams  11 Short, semester mid-year and final exams	5	2		Respiratory System:	Problem-based	Short, semester
skills    Skills   Sk				respiratory		-
6 Z Knowledge and understanding. subject-specific skills  7 Z Knowledge understanding. subject-specific skills  Virinary System: problem-based learning. collecting tubules ducts  Virinary System: problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  Virinary System: problem-based learning, information review, practical research, computer-based learning.  Virinary System: problem-based learning.  Virinary System: problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.				portion	,	final exams
6			SKIIIS			
6 Example 2 Knowledge and understanding subject-specific skills  7 2 Knowledge and understanding subject-specific skills  6 Urinary System: kidney nephrons, collecting tubules ducts  8 Computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  9 Vrinary System: ureter, urinary bladder, and male and female urethra  1 Computer-based learning, collaboration, discussion, debriefing, information, discussion, debriefing, information review, practical research, computer-based learning.  1 Computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.					·	
Collecting tubules ducts   Computer-based learning.   Computer-based learning.						
6 2 Knowledge and understanding. subject-specific skills					·	
ducts    Subject-specific skills   Kidney nephrons, collecting tubules ducts   Learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.   Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.   Problem-based learning, collaboration, discussion, debriefing, information review, practical research, information review, practical research, practical research, information review, practical research, practical research, information review, practical research, information review		2	V.,	TI' C .	_	Classic
subject-specific skills  collecting tubules ducts  collaboration, discussion, debriefing, information review, practical research, computer-based learning.  7		2		• •		
skills  ducts  ducts  discussion, debriefing, information review, practical research, computer-based learning.  7	6			• -		•
information review, practical research, computer-based learning.  Z Knowledge understanding. subject-specific skills  Urinary System: Problem-based learning, ureter, urinary bladder, and male and female urethra  information review, practical research, computer-based learning.  Problem-based learning, mid-year and final exams				_		IIIIai EXaIIIS
7 2 Knowledge understanding. subject-specific skills  Urinary System: ureter, urinary bladder, and male and female urethra  practical research, computer-based learning.  Problem-based mid-year and final exams  Short, semester mid-year and final exams				aucts		
7 2 Knowledge understanding. subject-specific skills  Urinary System: Problem-based learning.  Urinary System: Problem-based learning, mid-year and final exams final exams  occurrence of the problem-based learning, mid-year and final exams final exams  occurrence of the problem-based learning, mid-year and final exams final exams					1 · · · · · · · · · · · · · · · · · · ·	
7 2 Knowledge understanding. subject-specific skills  Urinary System: ureter, urinary bladder, and male and female urethra  Dearning.  Problem-based learning, mid-year and final exams  Collaboration, discussion, debriefing, information review, practical research,					I	
7 2 Knowledge understanding. subject-specific skills  Urinary System: Problem-based learning, mid-year and final exams short, semester mid-year and final exams final exams					-	
understanding. subject-specific skills  ureter, urinary bladder, and male and female urethra  ureter, urinary learning, collaboration, discussion, debriefing, information review, practical research,	7	2	Knowledge	Urinary System:		Short, semester
subject-specific skills  bladder, and male and female urethra  collaboration, discussion, debriefing, information review, practical research,						· 1
and female discussion, debriefing, information review, practical research,						-
urethra information review, practical research,			SK1IIS		discussion, debriefing,	
practical research,						
					I	
					computer-based	
learning.					_	
	8	2				Short, semester,
understanding. System: Skin: learning, mid-year and				System: Skin:		_
SUDJECT-Specific   callaboration   E:1			subject-specific		collaboration,	final exams

Г	Т	skills		11	
		SKIIIS	epidermis, dermis	discussion, debriefing,	
				information review,	
				practical research,	
				computer-based	
	0	Vnowledge	Into average and are	learning.	Ch out
9	2	Knowledge understanding.	Integumentary	Problem-based	Short, semester
		subject-specific	System: skin	learning,	mid-year and
		skills	glands, hair, and nails	collaboration,	final exams
				discussion, debriefing, information review,	
				<i>'</i>	
				practical research,	
				computer-based	
10	2	Knowledge	TT	learning.	Classit assumentari
10	2	understanding.	Hemopoiesis: b	Problem-based	Short, semester
		subject-specific	marrow	learning,	mid-year and
		skills		collaboration,	final exams
				discussion, debriefing,	
				information review,	
				practical research, computer-based	
				_	
11	2	Knowledge	Hamanajasis, bland call	learning. Problem-based	Chart compater
11	2	understanding.	Hemopoiesis: blood cell		Short, semester
		subject-specific		learning,	mid-year and final exams
		skills		collaboration, discussion, debriefing,	illiai exailis
				information review,	
				practical research,	
				computer-based	
				learning.	
12	2	Knowledge	Circulatory System	Problem-based	Short, semester
12	4	understanding.	Circulatory System	learning,	mid-year and
		subject-specific		collaboration,	final exams
		skills		discussion, debriefing,	Illiai Cxailis
				information review,	
				practical research,	
				computer-based	
				learning.	
13	2	Knowledge	Circulatory System	Problem-based	Short, semester
	۷	understanding.	Circulatory bystom	learning,	mid-year and
		subject-specific		collaboration,	final exams
		skills		discussion, debriefing,	
				information review,	
				practical research,	
				computer-based	
				learning.	
14	2	Knowledge	Lymphoid System	Problem-based	Short, semester
		understanding.	J	learning,	mid-year and
		subject-specific		collaboration,	final exams
		skills		discussion, debriefing,	
				information review,	
				practical research,	
				computer-based	
				learning.	
L					
15	2	Knowledge	Lymphoid System	Problem-based	Short, semester
15	2	Knowledge understanding.	Lymphoid System	Problem-based learning,	Short, semester, mid-year and

		subject-specific skills		collaboration, discussion, debriefing, information review, practical research, computer-based learning.	final exams
16	2	Knowledge understanding. subject-specific skills	Nervous System	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
17	2	Knowledge understanding. subject-specific skills	Nervous System	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
18	2	Knowledge understanding. subject-specific skills	Endocrine System	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
19	2	Knowledge understanding. subject-specific skills	Endocrine System	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
20	2	Knowledge understanding. subject-specific skills	Endocrine System	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
21	2	Knowledge understanding. subject-specific skills	Digestive System	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams

22	2	Knowledge	Digestive System	Problem-based	Short, semester
		understanding.		learning,	mid-year and
		subject-specific skills		collaboration,	final exams
		SKIIIS		discussion, debriefing,	
				information review,	
				practical research, computer-based	
				learning.	
23	2	Knowledge	Digestive System	Problem-based	Short, semester
23		understanding.	Digestive bystem	learning,	mid-year and
		subject-specific		collaboration,	final exams
		skills		discussion, debriefing,	
				information review,	
				practical research,	
				computer-based	
2.4		77 1 1	D: 1: C 1	learning.	<b>01</b>
24	2	Knowledge understanding.	Digestive System	Problem-based	Short, semester
		subject-specific		learning, collaboration,	mid-year and final exams
		skills		discussion, debriefing,	mai camb
				information review,	
				practical research,	
				computer-based	
				learning.	
25	2	Knowledge	Male Reproductive Syst	Problem-based	Short, semester
	_	understanding.	· · · · · · · · · · · · · · · · · · ·	learning,	mid-year and
		subject-specific		collaboration,	final exams
		skills		discussion, debriefing,	
				information review,	
				practical research,	
				computer-based learning.	
26	2	Knowledge	Male Reproductive Syst		Short, semester
		understanding.		learning,	mid-year and
		subject-specific skills		collaboration,	final exams
		SIIIIS		discussion, debriefing,	
				information review, practical research,	
				computer-based	
				learning.	
27	2	Knowledge	Female Reproduct	Problem-based	Short, semester
	_	understanding.	System	learning,	mid-year and
		subject-specific		collaboration,	final exams
		skills		discussion, debriefing,	
				information review,	
				practical research,	
				computer-based	
28	2	Knowledge	Female Reproduct	learning. Problem-based	Short, semester
20	۷	understanding.	System Reproduct	learning,	mid-year and
		subject-specific	System	collaboration,	final exams
		skills		discussion, debriefing,	2
				information review,	
1				practical research,	

		-	T	ı		
					computer-based	
29		2	Knowledge	Special Sense Organs: e	learning. Problem-based	Short, semester,
			understanding. subject-specific skills		learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	mid-year and final exams
30		2	Knowledge understanding. subject-specific skills	Special Sense Organs: e	Problem-based learning, collaboration, discussion, debriefing, intormation review, practical research, computer-based learning.	Short, semester, mid-year and final exams
Lab num	ıber	Study unit title				
1		Slides of basic types of tissue				
2		Slides of types of epithelial tissue				
3		Slides of types of blood cells in blood smears				
4		Slides of larynx, trachea				
5		Slides of lungs including bronchi and bronchioles				
6		Slides of kidney				
7		Slides of ureter, urinary bladder				
8		Slides of layers of epidermis, dermis				
9		Slide	es of skin gland	s, hair		
10		Slides of bone marrow types				
11		Slides of blood cells development				
12		Slides of large artery (aorta), small artery				
13		Slid	es of medium s	ized vein		
14		Slide	es of lymph noc	des, palatine tonsils		

Slides of thymus, spleen

Slides of nerve fibers, spinal cord

Slides of ganglia, cerebrum, and cerebellum

Slides of parathyroid glands, adrenal glands

Slides of pineal gland, endocrine pancreas

Slides of lip, tongue, and salivary glands

Slides of esophagus, stomach

Slides of pituitary gland, thyroid gland

15 16

**17** 

18

19

**20** 

21

22

23	Slides of duodenum, ileum, and colon
24	Slides of testes, duct of the epididymis
25	Slides of prostate gland, seminal vesicles, and penis
26	Slides of ovaries, corpus luteum, and uterus
27	lides of placenta, vagina, and mammary glands
28	Slides of vertical section of cornea, retina
29	Slides of vertical section of internal ear
30	Slides of testes, duct of the epididymis

# 11. Course Evaluation

- 10 degrees of first semester: 8 degrees of short and semester exams and two degrees of oral exam
- 10 degrees of second semester: 8 degrees of short and semester exams and two degrees of oral exam
- 20 degrees of mid-year
- 60 degrees of final exam

# 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Junqueira's Basic Histology TEXT & ATLAS Illustrated Dental Embryology, Histology, and Anatomy
Main references (sources)	
Recommended books and references	
(scientific journals, reports)	
Electronic References, Websites	

**Dental Material** 

2. Course Code:

209DM

3. Semester / Year:

2 semester/ Second stage

4. Description Preparation Date:

#### 2024-2025

5. Available Attendance Forms:

Lectures and laboratory

6. Number of Credit Hours (Total) / Number of Units (Total)

90 hours/4 unite

7. Course administrator's name (mention all, if more than one name)

Name: Ahmed Talib Gadban Email: Ahmed.talib@mu.edu.iq

# 8. Course Objectives

#### **Course Objectives**

 Learn the physical, chemical and mechanical propert of materials used in dentistry and learn skills
 Necessary for the correct handling and adaptation of these materials

# 9. Teaching and Learning Strategies

# Strategy

- Knowledge and understanding
- Skill goals
- Stimulus and response method
- Long, short and semester exams
- Thinking skills

# 10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name Theoretical	Learning method	Evaluation method
1	3	Knowledge and understanding.	• Introduction to dental	Theoretical	Short, semester,

		subject-specific	materials	lecture using	mid-year and
		skills		Power point,	final exams
			• /		mar exams
			biological properties of der	based	
			materials	learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
2	2	Vnovelodao	N/ 1		Chart garagetar
2	3	Knowledge understanding.	• Mechanical properties	Theoretical	Short, semester
		subject-specific		lecture using	mid-year and final exams
		skills		Power point, Problem-	final exams
		0.1.1.10		based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
3	3	Knowledge	Gypsum materials	Theoretical	Short, semester
	3	understanding.	• Definition, requirement,	lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills	types,	Problem-	mar exams
			• gypsum bonded investment	based	
			<ul><li>phosphate bonded</li></ul>	learning,	
			investment	collaboration,	
			<ul> <li>ethyl silicate bonded</li> </ul>	discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
4	3	Knowledge	Gypsum materials	Theoretical	Short, semester
-		understanding.	J F	lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-	
				based	
<u> </u>				learning,	
				icai iiiig,	
				collaboration,	

		T		1.1	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
5	3	Knowledge	Impression materials	Theoretical	Short, semester
		understanding.	Definition	lecture using	mid-year and
		subject-specific	<ul> <li>Ideal properties of</li> </ul>	Power point,	final exams
		skills	impression	Problem-	
			materials	based	
			Classification of	learning,	
				collaboration,	
			impression	discussion,	
			materials	debriefing,	
			* Non elastic impression	information	
			materials	review,	
			* Impression plaster	practical	
			* Impression compound	research,	
			* Zinc oxide – eugenol	computer-	
			* Elastomeric impress	based	
			material		
	2	Knowledge and		learning.	Cl
	3	understanding.	Impression materials	Theoretical	Short, semester
6		subject-specific		lecture using	mid-year and
		skills		Power point,	final exams
				Problem-	
				based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
7	3	Knowledge	Impression materials	Theoretical	Short, semester
		understanding.		lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-	
				based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				practical research	
				research,	
				_	

				learning.	
8	3	Knowledge	Impression materials	Theoretical	Short, semester
		understanding.	•	lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-	
				based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
9	3	Knowledge	Impression materials	Theoretical	Short, semester
•		understanding.		lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-	
				based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
10	3	Knowledge	Waxes	Theoretical	Short, semester
		understanding.	• Definition,	lecture using	mid-year and
		subject-specific	• Requirements,	Power point,	final exams
		skills	• classification of wax	Problem-	
				based	
			according to origin & melting	learning,	
			point,	collaboration	
			• classification of wax accord	discussion,	
			to uses, properties of de	debriefing,	
			waxes.	information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
11	3	0	Waxes	Theoretical	Short, semester
		understanding.		lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-	
				based	
	1			learning,	

Collaboration, discussion, debriefing, information review, practical research, computer-based learning.   Polymers	and
debriefing, information review, practical research, computer-based learning.  12	and
information review, practical research, computer-based learning.  12	and
Theoretical research, computer-based learning.  Short, sem polymers and polymers and polymerization polymer, copolymer, cross-link polymer and passed learning.  Theoretical lecture using power point, Problem-based learning, applicable polymer and problem-based learning, applicable praction processes and polymer and polymer and problem-based polymer and polymer and polymer and problem-based polymer and polymer and problem-based polymer and polymer and polymer and problem-based polymer and polymer and problem-based polymer and pol	and
Theoretical research, computer-based learning.   Polymers   Theoretical subject-specific skills   Polymers and polymerization	and
Tesearch, computer-based learning.  3 Knowledge understanding. subject-specific skills  Polymers  Polymers  Polymers  Polymers  Polymers and lecture using polymerization  Polymerization  Definition of polymer, copolymer, copolymer, cross-link polymer and  Problem-based learning, cross-link polymer and	and
12   3   Knowledge understanding. subject-specific skills   Polymers   Polymers and polymerization   Polymer, copolymer, cross-link polymer and   Computer-based learning.   Theoretical lecture using polymer point, Problem-based learning, cross-link polymer and   Polymers and polymer point, Problem-based learning, cross-link polymer and   Polymers and polymer point, Problem-based learning, cross-link polymer and   Polymers and polymer point, Problem-based learning, cross-link polymer and   Polymers and polymer point, Problem-based learning, cross-link polymer and   Polymers and polymer point, Problem-based learning, cross-link polymer and   Polymers and polymer point, Problem-based learning, cross-link polymer and   Polymers and polymer point, Problem-based learning, cross-link polymer and   Polymers and polymer point, Problem-based learning, cross-link polymer and   Polymers and polymer point, Problem-based learning, cross-link polymer and   Polymers and polymer point, Problem-based learning, cross-link polymer and   Polymers and polymer point, Problem-based learning, cross-link polymer and   Polymers and polymer polymer polymer and polymer polym	and
12 3 Knowledge understanding. subject-specific skills  Polymers  Power point, Problem- based learning, copolymer, copolymer, copolymer, copolymer, cross-link polymer and  Power point, Problem- based learning, copolymer, copolymer, copolymer and	and
12 3 Knowledge understanding. subject-specific skills  Polymers  Polymers  Polymers  Polymers  Polymers  Polymers  Polymers  Polymers  Polymers  Power point, Problem- based copolymer, copolymer, copolymer, cross-link polymer and  Power point, Problem- based learning, copolymer, cross-link polymer and	and
12 Short, sem understanding. subject-specific skills  Polymers  Polymers  Polymers  Polymers  Polymers  Polymers  Polymers  Polymers  Power point, problem- based learning, cross-link polymer and  Power point, problem- based learning, cross-link polymer and	and
12 Short, sem understanding. subject-specific skills  Polymers  Polymers  Polymers  Polymers  Polymers  Polymers  Polymers  Polymers  Power point, problem- based learning, cross-link polymer and  Power point, problem- based learning, cross-link polymer and	and
understanding. subject-specific skills  • Polymers and polymerization • Definition of polymer, copolymer, cross-link polymer and  lecture using Power point, Problem-based learning, applicable proteins	and
subject-specific skills  polymerization Definition of polymer, copolymer, cross-link polymer and  polymerization Problem- based learning, cross-link polymer and	
Definition of polymer, copolymer, cross-link polymer and  Problembased learning, cross-link polymer and	
copolymer, cross-link polymer and learning,	
cross-link polymer and learning,	ļ
cross-link polynici and	
Dograp of polymorization collaboration,	
Degree of polymenzation	
• Factors which control debriefing	
Structure	
and properties of polymer review.	
• Types of polymerization • practical	
Heat research,	
activated acrylic computer-	
» Composition based	
» Properties learning.	
• Chemically activated	
resin »	
Composition	
» Properties	
13   Short, sem	
understanding. subject-specific subject-	
resin rower point, innarexam	.S
compared to heat activated Problem-	
resins	
Polymers used in learning,	
dentistry collaboration,	
Processing errors discussion,	
debiteting,	
information	
review,	
practical	
research,	
computer-	
based	
learning.	
14 3 Knowledge Investment materials Theoretical Short, sem	
understanding. • factors affecting setting lecture using mid-year a	
subject-specific time, Power point, final exam	.S
skills setting expansion, Problem-	
strength, based	
storage and manipulation learning,	
of collaboration,	
discussion	
gypsum products, and	

			hygroscopic expansion	debriefing,	
			Trygroscopic expansion	information	
				review,	
				practical	
				research,	
				-	
				computer- based	
45	2	17 1. 1	On and an atomicle	learning.	G1
15	3	Knowledge understanding.	Cement materials	Theoretical	Short, semester
		subject-specific	Classification of dental	lecture using	mid-year and
		skills	cements	Power point,	final exams
			Definition	Problem-	
			Requirements	based	
			·	learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
16	3	Knowledge	Temporary filling	Theoretical	Short, semester
		understanding.	Definition	lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-	
				based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
17	3	Knowledge	Metal and metal alloy	Theoretical	Short, semester
1/	3	understanding.	• indication	lecture using	mid-year and
		subject-specific			final exams
		skills	• Types	Power point, Problem-	IIIIai Exallis
			Requirements	based	
			Metallic denture base		
			materials	learning,	
			<ul> <li>Types of metal and metal</li> </ul>	collaboration,	
			alloys	discussion,	
			Definition of alloy	debriefing,	
			Requirement of casting	information	
			,	review,	
			alloy	practical	
			Application of dental alloy	research,	
			classification of metal	computer-	
[			classification of dental	based	
	<u> </u>		olaboliloation of abritai	Daseu	<u> </u>

			allov	loarning	
			alloy	learning.	
			• gold foil (advantage,		
			disadvantages)		
			• gold alloys		
			Composition		
			Properties		
18	3		Metal and metal alloy	Theoretical	Short, semester
		understanding. subject-specific		lecture using	mid-year and
		skills		Power point,	final exams
				Problem-	
				based	
				learning, collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
19	3	Knowledge	Metal and metal alloy	Theoretical	Short, semester
		understanding.	Alternative of gold alloys •	lecture using	mid-year and
		subject-specific	Metal ceramic alloys	Power point,	final exams
		skills	Requirement	Problem-	
			• Types	based	
			Removable denture base	learning,	
			alloys	collaboration,	
			Requirements	discussion,	
			• Types	debriefing,	
			Co -Cr alloy	information	
			Application	review,	
			Composition	practical	
			• properties,	research,	
			•Advantages	computer- based	
			Disadvantages	learning.	
20	3	Knowledge	Metal and metal alloy	Theoretical	Short, semester
20		understanding.	* Titanium and Titanium	lecture using	mid-year and
		subject-specific	alloys	Power point,	final exams
		skills	Applications	Problem-	
			Properties	based	
			Ni/Cr alloys	learning,	
			Composition	collaboration,	
			Indications	discussion,	
			Wrought stainless steel allo	debriefing,	
			TVI Ought stainless steel allo	miormation	
				review,	
				practical	
				research,	
				computer- based	
				learning.	
	Ì		<u> </u>	icai iiiig.	

	1	77 1 1	Pilling		<b>a</b> 1
21	σ	Knowledge understanding. subject-specific skills	Filling materials  • Direct filling material  - Definition  - Factors causing loss of tooth substance  - Requirement of an ideal filling material.  - Classification of filling materials  - Anterior filling materials Disadvantages Composite filling materials composition and structure  Types of composite  - Posterior filling materials Dental amalgam  - Classification of amalgam alloys  - Properties of set amalgam  - Shaping and finishing  - Mercury toxicity	Theoretical lecture using Power point, Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semester mid-year and final exams
22	3	Knowledge understanding. subject-specific skills	filling material	Theoretical lecture using Power point, Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semester, mid-year and final exams
23	3	Knowledge understanding. subject-specific skills	Filling materials	Theoretical lecture using Power point, Problem- based learning, collaboration, discussion, debriefing, information review, practical	Short, semester, mid-year and final exams

24 3 Knowledge understanding, subject-specific skills  25 3 Knowledge understanding, subject-specific skills  26 3 Knowledge understanding, subject-specific skills  27 3 Knowledge understanding, subject-specific skills  28 4 Root canal filling materials  29 5 3 Knowledge understanding, subject-specific skills  20 6 3 Knowledge understanding, subject-specific skills  20 7 3 Knowledge understanding, subject-specific skills  20 8 Root canal filling materials  20 8 Root canal filling materials  20 9 Root canal filling materials  20 9 Root canal filling materials  21 9 Root canal filling materials  22 9 Root canal filling materials  23 8 Knowledge understanding, subject-specific skills  24 9 Root canal filling materials  25 9 Root canal filling materials  26 9 Root canal filling materials  27 9 Root canal filling materials  28 0 Root canal filling materials  29 Root canal filling materials  20 Root canal filling materials  21 Root canal filling materials  22 Root canal filling materials  23 Root canal filling materials  24 Root canal filling materials  25 Root canal filling materials  26 Root canal filling materials  27 Root canal filling materials  28 Root canal filling materials  29 Root canal filling materials  20 Root canal filling materials  27 Root canal filling materials  28 Root canal filling materials  29 Root canal filling materials  20 Root canal filling mat				1	,	
24   3   Knowledge understanding subject-specific skills   Filling materials   Theoretical lecture using subject-specific skills   Filling materials   Theoretical lecture using power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.    25   3   Knowledge understanding subject-specific skills   Preventive materials   Preventi					research,	
24   3 Knowledge understanding subject-specific skills						
24   3   Knowledge understanding subject-specific skills   Filling materials   Ecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, subject-specific skills   Preventive materials   Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.   Short, semester mid-year and final exams   Short, semester mid-year and mid-year						
Subject-specific skills   Subject-specific skilling materials   Subject-specific skill						
subject-specific skills  25  3 Knowledge understanding, subject-specific skills  Preventive materials Problembased learning. Collaboration, discussion, debriefing, information review, practical research, computerbased learning. Collaboration, discussion, debriefing, information review, practical research, computerbased learning. Collaboration, discussion, debriefing, information review, practical research, computerbased learning. Collaboration, discussion, debriefing, information review, practical research, computerbased learning.  Short, semester lecture using leave point, Problembased learning. Collaboration, discussion, debriefing, information review, practical research, computerbased learning.  Short, semester mid-year and problembased learning. Collaboration, discussion, debriefing, information review, practical research, computerbased learning.  Short, semester mid-year and problembased learning. Collaboration, discussion, debriefing, information review, practical research, computerbased learning. Collaboration, discussion, debriefing, information review, practical research, computerbased learning. Collaboration, discussion, debriefing, information review, practical research, computerbased learning. Collaboration, discussion, debriefing, information review, practical research, computerbased learning. Collaboration, discussion, debriefing, information review, practical research, computerbased learning. Collaboration, debriefing, information review, practical research, computerbased learning. Collaboration	24	3		Filling materials		· 1
Skills   Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, subject-specific skills   Preventive materials     Preventive materials   Preventive materials   Preventive materials     Preventive materials   Preventive using power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.     Root canal filling materials     Obturating materials     Proventive materials   Preventive using power point, Problem-based learning.     Collaboration, discussion, debriefing, information review, practical research, computer-based learning.     Collaboration, discussion, debriefing, information review, practical research, computer-based learning.     Collaboration, discussion, debriefing, information review, practical research, computer-based learning.     Collaboration, discussion, debriefing, information review, practical research, computer-based learning.     Collaboration, discussion, debriefing, information review, practical research, computer-based learning.     Collaboration, discussion, debriefing, information review, practical research, computer-based learning.     Collaboration, discussion, debriefing, information review, practical research, computer-based learning.     Collaboration, discussion, debriefing, information review, practical research, computer-based learning.     Collaboration, discussion, debriefing, information review, practical research, computer-based learning.     Collaboration, discussion, debriefing, information review, practical research, computer-based learning.     Collaboration, discussion, debriefing, information review, practical research, computer-based learning.     Collaboration, discussion, debriefing, information review, practical research, computer-based learning.     Collaboration, discussion, debriefing, information review, practical research, computer-based learning.     Collaboration, discussion, debriefing, information review					_	-
25 3 Knowledge understanding, subject-specific skills  Root canal filling materials obturating materials (obturating materials)  Root canal filling materials (obturating materials obturating materials (obturating materials obturating materials obturating materials obturating materials obturating materials obturating materials object-specific skills  Root canal filling materials (obturating materials obturating materials object-specific skills  Root canal filling materials (obturating materials object-specific skills  Root canal filling materials obturating materials object-specific skills  Root canal filling materials obturating materials object of the provided in the provided						final exams
25   3 Knowledge understanding, subject-specific skills   Preventive materials     • Problem-based learning			SKIIIS			
25						
25   Skinowledge understanding, subject-specific skills   Preventive materials     26   Skinowledge understanding, subject-specific skills     27   Skinowledge understanding, subject-specific skills     28   Skinowledge understanding, subject-specific skills     29   Skinowledge understanding, subject-specific skills     20   Skinowledge understanding, subject-specific skills     21   Skinowledge understanding, subject-specific skills     22   Skinowledge understanding, subject-specific skills     24   Skinowledge understanding, understan						
25 3 Knowledge understanding, subject-specific skills  Knowledge understanding, subject-specific skills  Knowledge understanding, subject-specific skills  Root canal filling materials (obturating materials)  Root canal filling materials)  Root canal filling materials  (obturating materials)  Root canal filling materials					collaboration,	
25 3 Knowledge understanding, subject-specific skills  Root canal filling materials place in search, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  Root canal filling materials place in search, computer-based learning.  Root canal filling materials place in search, computer-based learning.  Root canal filling materials place in search, computer-based learning.  Root canal filling materials place in search, computer-based learning.  Root canal filling materials place in search, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  Riowledge understanding.  Einishing and polishing material in short, semester mid-year and final exams fina					discussion,	
25 3 Knowledge understanding, subject-specific skills  Root canal filling materials (obturating materials)  Root canal filling materials (obturating					debriefing,	
25 3 Knowledge understanding subject-specific skills  Root canal filling materials subject-specific skills  Root canal filling materials obturating materials subject-specific skills  Root canal filling materials obturating materials  Root canal filling material  Power point, Problem-based learning, collaboration, debriefing, information review, practical research, computer-based learning.  Short, semester mid-year and final exams  Finishing and polishing material short, semester mid-year and search, computer-based learning.  Theoretical short, semester mid-year and short, semester mid-year and short, semester mid-year and material short, semester mid-year and mid-yea					information	
25 3 Knowledge understanding, subject-specific skills  26 3 Knowledge understanding, subject-specific skills  27 3 Knowledge understanding subject-specific skills  28 4 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8					review,	
25 3 Knowledge understanding subject-specific skills  26 3 Knowledge understanding subject-specific skills  27 3 Knowledge understanding subject-specific skills  28 Knowledge understanding subject-specific skills  29 Root canal filling materials (obturating materials)  20 Root canal filling materials (obturating materials)  20 Root canal filling materials (obturating materials)  21 Root canal filling materials (obturating materials)  22 Root canal filling materials (obturating materials)  23 Root canal filling materials (obturating materials)  24 Root canal filling materials (obturating materials)  25 Root canal filling materials (obturating materials)  26 Root canal filling materials (obturating materials)  27 Root canal filling materials (obturating materials)  28 Root canal filling materials (obturating materials)  29 Power point, Problem-based learning.  20 Short, semester mid-year and final exams  20 Power point, Problem-based learning.  20 Short, semester mid-year and final exams  28 Short, semester mid-year and material learning.  29 Short, semester mid-year and final exams  20 Short, semester mid-year and material learning.  20 Short, semester mid-year and mid-y					practical	
25 3 Knowledge understanding subject-specific skills  26 3 Knowledge understanding subject-specific skills  27 3 Knowledge understanding subject-specific skills  28 Knowledge understanding subject-specific skills  29 Knowledge understanding subject-specific skills  20 3 Knowledge understanding subject-specific skills  20 3 Knowledge understanding subject-specific skills  20 3 Knowledge understanding subject-specific skills  20 4 Knowledge understanding subject-specific skills  20 5 Knowledge understanding materials  21 5 Knowledge understanding materials  22 6 Theoretical lecture using power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  23 Knowledge understanding material  24 Theoretical short, semester mid-year and polishing material  25 Theoretical short, semester mid-year and polishing material  26 Theoretical short, semester mid-year and polishing material  27 Theoretical short, semester mid-year and polishing material  28 Knowledge understanding material  29 Theoretical short, semester mid-year and polishing material  29 Theoretical short, semester mid-year and polishing material					research,	
Short, semester materials   Preventive materials   Preventive materials   Preventive materials   Preventive materials   Problem-based learning, collaboration, debriefing, information review, practical research, computer-based learning, subject-specific skills   Problem-based learning, collaboration, debriefing, information review, practical research, computer-based learning materials   Problem-based learning, collaboration, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.   Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.   Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.   Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.   Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.   Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.   Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.   Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.   Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, comp					computer-	
25 3 Knowledge understanding, subject-specific skills  26 3 Knowledge understanding, subject-specific skills  27 3 Knowledge understanding, subject-specific skills  28 Root canal filling materials (obturating materials)  • Root canal filling materials) • Root canal filling materials (obturating materials) • Root canal filling materials • Preventive materials • Problem- • based • learning. • Short, semester mid-year and final exams • Short, semester mid-year and final exams • Problem- • based • learning. • Collaboration, • discussion, • debriefing, • mid-year and • final exams • Short, semester mid-year and • short, semester • short, semester  mid-year and • short, semester • short, semester  mid-year and • short, semester • short,					based	
understanding, subject-specific skills  Preventive materials  Problem based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  Root canal filling materials  (obturating materials)  Root canal filling materials  (obturating material)  Root canal filling material  (obturating material)  Root canal filling material  Froblem  based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  Finishing and polishing material  Short, semester mid-year and final exams  Short, semester mid-year and placed learning.  Short, semester mid-year and placed learning.  Short, semester mid-year and placed learning.					learning.	
understanding, subject-specific skills  Preventive materials  Problem based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  Root canal filling materials  (obturating materials)  Root canal filling materials  (obturating material)  Root canal filling material  (obturating material)  Root canal filling material  Froblem  based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  Finishing and polishing material  Short, semester mid-year and final exams  Short, semester mid-year and placed learning.  Short, semester mid-year and placed learning.  Short, semester mid-year and placed learning.	25	3	Knowledge	Preventive materials		Short, semester
Subject-specific skills  Root canal filling materials (obturating materials learning, collaboration, debriefing, information review, practical research, computer-based learning.  Root canal filling materials (obturating materials lecture using materials (obturating material learning, collaboration, debriefing, information review, practical research, computer-based learning, collaboration, debriefing, information review, practical research, computer-based learning, collaboration, debriefing, information review, practical research, computer-based learning.  Root canal filling material secture using power point, Problem-based learning, collaboration, debriefing, information review, practical research, computer-based learning.  Root canal filling material secture using information review, practical research, computer-based learning.  Short, semester mid-year and				<ul> <li>Preventive materials</li> </ul>	lecture using	mid-year and
Skills						final exams
26 3 Knowledge understanding, skills Root canal filling materials (obturating materials) Root canal filling materials (obturating material lecture using procession, debriefing, information review, practical research, computer-based learning.  Noot canal filling materials (obturating material materials) Root canal filling materials (obturating material materials) Root canal filling materials (obturating material materials) Root canal filling problems based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  27 3 Knowledge understanding.  Knowledge understanding material Theoretical lecture using material Theoretical lecture using material Short, semester mid-year and seminary material search, computer-based learning.			skills		-	
26 3 Knowledge understanding, subject-specific skills Root canal filling materials (obturating materials) • Root canal filling materials) • Root canal filling materials (obturating materials) • Root canal filling materials (obturating material lecture using Power point, Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.  27 3 Knowledge understandings  Knowledge understandings  Finishing and polishing material lecture using Power point, Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.					based	
26 3 Knowledge understanding, subject-specific skills Root canal filling materials (obturating materials) • Root canal filling materials) • Root canal filling materials (obturating materials) • Root canal filling materials (obturating material lecture using Power point, Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.  27 3 Knowledge understandings  Knowledge understandings  Finishing and polishing material lecture using Power point, Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.					learning,	
26 3 Knowledge understanding subject-specific skills Root canal filling materials (obturating materials) • Root canal filling materials (obturating material learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  27 3 Knowledge understandings with the computer based learning.  Finishing and polishing material Short, semester mid-year and final exams Short, semester mid-year and final exams Short, semester mid-year and given based learning.  Short, semester mid-year and final exams Short, semester mid-year and given based learning.					_	
26 3 Knowledge understanding, skills Potential passed learning.  Root canal filling materials (obturating materials) • Root canal filling materials (obturating materials) • Root canal filling materials (obturating material problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  27 3 Knowledge understanding, material  Root canal filling materials (obturating material problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  Finishing and polishing material Theoretical lecture using material short, semester mid-year and material short, semester mid-year and m					· · · · · · · · · · · · · · · · · · ·	
26 3 Knowledge understanding, subject-specific skills Problem—based learning.  Root canal filling materials (obturating materials (obturating materials)  Root canal filling materials (obturating material materials (obturating material materials)  Root canal filling material lecture using Power point, Problem—based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  Root canal filling material material secture using Power point, Problem—based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  Root canal filling material secture using problem based learning.  Short, semester mid-year and polishing material secture using material secture using search problems.						
26 3 Knowledge understanding, subject-specific skills (obturating materials) • Root canal filling materials (obturating material lecture using materials (obturating material learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  27 3 Knowledge understanding, subject-specific skills (obturating material) • Root canal filling materials (obturating material lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  28 Knowledge understanding, information review, practical research, computer-based learning.						
26 3 Knowledge understanding subject-specific skills (obturating materials) • Root canal filling materials lecture using Power point, Problembased learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  27 3 Knowledge understanding. Finishing and polishing material save and polishing material lecture using Power point, Problembased learning.  Short, semester mid-year and final exams  Finishing and polishing material short, semester mid-year and final exams  Short, semester mid-year and final exams  Short, semester mid-year and final exams  Theoretical short, semester mid-year and final exams  Short, semester mid-year and final exams						
26 3 Knowledge understanding, skills Root canal filling materials (obturating materials) • Root canal filling materials) • Root canal filling materials) • Root canal filling materials (obturating material learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  27 3 Knowledge understanding. Finishing and polishing material lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.						
26 3 Knowledge understanding, subject-specific skills (obturating materials) • Root canal filling materials (obturating material lecture using Power point, Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.  27 3 Knowledge understanding, subject-specific skills (obturating material) Finishing and polishing material Theoretical lecture using Theoretical lecture using material Short, semester mid-year and final exams Short, semester mid-year and final exams Short, semester mid-year and Theoretical lecture using material Short, semester mid-year and Short, semester mid-year and material Short, semester mid-year and Short, semester mid-year and short, semester mid-year and short					_	
26 3 Knowledge understanding subject-specific skills (obturating materials) • Root canal filling materials (obturating material lecture using Power point, Problembased learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  27 3 Knowledge understanding material  Finishing and polishing material  Root canal filling materials (bturating material lecture using Power point, Problembased learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  Short, semester mid-year and final exams  Short, semester mid-year and final exams  Finishing and polishing material Short, semester mid-year and final exams						
26 3 Knowledge understanding, subject-specific skills (obturating materials) • Root canal filling materials (obturating material learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  27 3 Knowledge understanding material (should be material)  Finishing and polishing material (short, semester)  Finishing and polishing material (short, semester)  Boot canal filling material (short, semester)  Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  Finishing and polishing material (short, semester)  Boot canal filling materials (short, semester)  Power point, Problem-based learning.					•	
Short, semester mid-year and final exams   Short, semester mid-year and seminal   Short, seminal   Short, seminal   Short, semin						
materials (obturating materials) • Root canal filling materials (obturating material) • Root canal filling materials (obturating material) • Root canal filling material  • Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.  27  3 Knowledge understanding, material  • Finishing and polishing material  • Finishing and polishing material  • Short, semester mid-year and	26	3	Knowledge	Root canal filling		Short semester
subject-specific skills  (obturating materials)  • Root canal filling material learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  Knowledge understanding.  Knowledge understanding.  Finishing and polishing material  Short, semester mid-year and	20	]				1
• Root canal filling materials (obturating material learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  27 3 Knowledge understanding. Finishing and polishing material Theoretical lecture using mid-year and					_	
materials (obturating material  based learning, collaboration, discussion, debriefing, information review, practical research, computer- based learning.  7 3 Knowledge understanding. Theoretical green in the second in the seco			skills		<u>=</u>	mar exams
learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  Knowledge understanding.  Knowledge understanding material  Finishing and polishing material  Finishing and polishing lecture using mid-year and					1 1	
collaboration, discussion, debriefing, information review, practical research, computer-based learning.  Knowledge understanding.  Knowledge understanding.  Finishing and polishing material  material  collaboration, discussion, debriefing, information review, practical research, computer-based learning.  Short, semester mid-year and				materials(obturating material		
discussion, debriefing, information review, practical research, computer-based learning.  Knowledge understanding. material Finishing and polishing material discussion, debriefing, information review, practical research, computer-based learning.  Theoretical lecture using mid-year and					_	
debriefing, information review, practical research, computer-based learning.  Knowledge understanding. material Finishing and polishing material decture using mid-year and					· ·	
information review, practical research, computer-based learning.  Knowledge understanding. material information review, practical research, computer-based learning.  Theoretical lecture using mid-year and					·	
review, practical research, computer-based learning.  Knowledge understanding. material review, practical research, computer-based learning.  Theoretical short, semester mid-year and					_	
practical research, computer-based learning.  Knowledge understanding. material practical research, computer-based learning.  Finishing and polishing material practical research, computer-based learning.  Theoretical lecture using mid-year and						
27 3 Knowledge understanding. material research, computerbased learning.  Finishing and polishing material recture using mid-year and					·	
27 3 Knowledge understanding. material computer-based learning.  Theoretical lecture using mid-year and mid-year and					_	
27 3 Knowledge understanding. Finishing and polishing material based learning.  Theoretical Short, semester lecture using mid-year and						
27 3 Knowledge understanding. Finishing and polishing material lecture using mid-year and					-	
27 3 Knowledge understanding. Finishing and polishing material Theoretical lecture using mid-year and						
understanding. material lecture using mid-year and	27	2	Vnowledge	Finishing and natishing		Chart compater
indebitati	2/	3	_			· ·
rower point,   mai exams				materiai	_	
			subject specific		rowei poiiit,	illiai exallis

		skills	. Finishing and and	Problem-	
		SKIIIS	<ul> <li>Finishing and polish</li> </ul>		
			material	based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
28	3	Knowledge	Relining material	Theoretical	Short, semester
20	3	understanding.	Definition	lecture using	mid-year and
		subject-specific		_	final exams
		skills	• Types	Power point,	illiai exailis
		011110	<ul> <li>Requirements</li> </ul>	Problem-	
			<ul> <li>Indication</li> </ul>	based	
			<ul> <li>Soft liners</li> </ul>	learning,	
			- Types	collaboration,	
			- Requirements	discussion,	
			-Indication	debriefing,	
				information	
			- Properties	review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
29	3	Knowledge	Implant materials	Theoretical	Short, semester
		understanding.		lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-	
				based	
				learning,	
				collaboration,	
				discussion,	
				-	
				debriefing,	
				information	
				review,	
				practical	
				research,	
1				computer-	
				based	
				learning.	
30	3		Maxillofacial materials	learning. Theoretical	Short, semester
30	3	understanding.	Maxillofacial materials	learning. Theoretical lecture using	mid-year and
30	3	understanding. subject-specific	Maxillofacial materials	learning. Theoretical lecture using Power point,	
30	3	understanding.	Maxillofacial materials	learning. Theoretical lecture using Power point, Problem-	mid-year and
30	3	understanding. subject-specific	Maxillofacial materials	learning. Theoretical lecture using Power point,	mid-year and
30	3	understanding. subject-specific	Maxillofacial materials	learning. Theoretical lecture using Power point, Problem-	mid-year and
30	3	understanding. subject-specific	Maxillofacial materials	learning. Theoretical lecture using Power point, Problembased	mid-year and
30	3	understanding. subject-specific	Maxillofacial materials	learning. Theoretical lecture using Power point, Problembased learning,	mid-year and
30	3	understanding. subject-specific	Maxillofacial materials	learning. Theoretical lecture using Power point, Problembased learning, collaboration, discussion,	mid-year and
30	3	understanding. subject-specific	Maxillofacial materials	learning. Theoretical lecture using Power point, Problembased learning, collaboration,	mid-year and

	review, practical research, computer- based learning.	
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						learning.	
Lab nun	nber	Study unit title					
1		Introduction and physical properties of dental material					
2		Me	chanical prope	rties (stress strain c	ırve)		
3		Sho	owing different	types of gypsum ma	aterials (plas	ster and stone)	
4		Ste	ps of mixing pl	aster and demonstra	ate the step	s of setting	
5		lm	pression plaste	r, demonstrate the r	nanipulatio	n of impression	compound
6			c oxide impres c oxide impres	sion material and ag sion	ar impressio	on demonstrate	the mixing of
7		_	•	on (elastic impression according to manu		-	and the mixing of
8		Pol	ysulphide, con body	densation and addit	ion silicon\r	nixing of heavy	body and light
9		Pol	yether, hybrid	impression, digital i	mpression		
10		Showing different types of wax (denture base plate, denture casting wax and others					
11		Demonstrate how to use wax material and its manipulation					
12		Inti	roduction to po	olymers			
13				denture base mater strate the mixing of	•	_	tivated
14		The	ermoplastic po	ymers (flexible dent	ure base ma	aterial)	
15		In	vestment mate	erials (showing the m	nethod of th	e investment)	
16		In	troduction to c	ement materials			
17			nowing differer ement	it types of cement m	aterials and	the method of	f mixing of
18		Te	emporary filling	g (use and manipulat	ion)		
19		In	troduction to r	netal and metal allo	У		
20		Sh	nowing the diff	erent types of metal	and metal a	alloy	
21		In	troduction to c	rown and bridge ma	terial		
22		In	troduction to f	illing material			
23		Aı	malgam filling s	showing the amalgar	n capsules a	and mixing of a	malgam
24		Co	omposite filing	(chemical and light a	activated)		
25		M	icro filled, hyb	rid, and nano-compo	site		

26	Demonstrate the setting of chemical and light activated composite filling material
27	howing different types of preventive materials (tooth pastes, gargles. Mouthash fluoride varnishes and resin sealers)
28	Demonstrate the obturating materials (Gutta percha, sealers) and endodontic instruments
29	Finishing and polishing materials
30	Relining materials

- 10 degrees of first semester: 8 degrees of short and semester exams and two degrees of oral exam
- 10 degrees of second semester: 8 degrees of short and semester exams and two degrees of oral exam
- 20 degrees of mid-year
- 60 degrees of final exam

Electronic References, Websites

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	
Main references (sources)	Philips scince of dental materials 2012 edition 12 Craig's Restirative dental material 2018 edition
Recommended books and references (scientific journals, reports)	

# 1. Course Name: Prosthodontics 2. Course Code: 210 PR 3. Semester / Year:

# 2 Semester/ second Stage

#### 4. Description Preparation Date:

#### 2024-2025

#### 5. Available Attendance Forms:

Theoretical lectures and practical laboratory

6. Number of Credit Hours (Total) / Number of Units (Total)

#### 150 hours/6 unite

# 7. Course administrator's name (mention all, if more than one name)

Name: Mohammed Abdulaziz Reda Alsmael Email: mohammed\_alsmael@mu.edu.iq

# 8. Course Objectives

# Preparing the student at a high level of scientific with regard to prosthodontics Identifying the types of prosthodontic appliances, prosthodontic terms and the solutions for partial and complete loss of teeth

# 9. Teaching and Learning Strategies

#### Strategy

- Acquire knowledge about the treatment for teeth loss and prosthodontic appliances
- Identify the types of prosthesis
- Learn how to make complete denture for edentulous patients

#### 10. Course Structure

Week	Hours	Required	Unit or subject name	Learning	Evaluation
		Learning	Theoretical	method	method

		Outcomes			
1	5	Knowledge and understanding. subject-specific skills	Introduction  Complete denture  Objective of complete denture  General consideration in complete denture construction  Complete denture compor parts	information review, practical research, computer- based learning.	Short, semester mid-year and final exams
2	5	Knowledge understanding. subject-specific skills	Anatomical landmarks  • Anatomical landmarks  - Maxillary arch anatomical landmarks  -Supporting structures  - Limiting structures  □ Relief areas	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
3	5	Knowledge understanding. subject-specific skills	Anatomical landmarks  • Anatomical landmarks  □ Mandibular arch anatomical landmarks  □ Supporting structures □ Limiting structures □ Relief areas	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semester mid-year and final exams
4	5	Knowledge understanding. subject-specific skills	Complete Denture Impression  Impression tray  Definition  Parts of the impression tray  Types of tray  Stock tray  Definition  Types of stock trays  Factors effect in selection of stock tray	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical	Short, semester, mid-year and final exams

				research,	
				computer- based learning.	
5	5	Knowledge understanding. subject-specific skills	- Complete Denture Impression - • Special tray - □ Advantages of special tray - □ Materials used for construction - ofspecial tray - □ Types of special tray - □ Techniques or methods for - construction ofspecial tray - □ Criteria for special tray construction	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning,	Short, semester mid-year and final exams
6	5	Knowledge and understanding. subject-specific skills	- Complete Denture Impression - Definition - Complete denture impression - Definition - Objective of impression making - Primary impression - Definition - Materials used for making primary impression Primary cast - Definition - Production ofstudy cast - Secondary impression - Definition - Master cast - Definition - Materials used for final impression - Technique used for making final - impression - Boxing an impression and making - the casts - Advantages of boxing - Common fault in impression making	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
7	5	Knowledge understanding. subject-specific skills	<ul> <li>Record Base</li> <li>Record base – Definition</li> <li>Requirements of record base</li> <li>Types of materials used in construction of record base</li> </ul>	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing,	Short, semester mid-year and final exams

Г	Ī			information	1
				information	
				review,	
				practical	
				research,	
				computer- based learning.	
0	5	Knowledge	- Occlusion Rims	_	Clarat areas
8	5	understanding.	- Occlusion rims –	Theoretical	Short, semester
		subject-specific	Definition	lecture using	mid-year and final exams
		skills	- • Requirements of occlusion	Power point, Problem-based	IIIIai exailis
			rim		
			- • Materials used in	learning,	
			construction of	collaboration, discussion,	
			- occlusion rim	·	
				debriefing, information	
			<ul><li>- • Measurements of maxillary</li><li>- occlusion rim</li></ul>		
			- • Measurements of	review,	
			- • Measurements of mandibular	practical	
			- occlusion rim	research,	
			- occlusion rim - • Uses of occlusion rim	computer-	
				based learning.	
			<ul><li>Occlusal plane</li><li>Fox – bite</li></ul>		
0	5	Knowledge		Theoretical	Chart compater
9	5	understanding.	Anatomy And Physiology Of	lecture using	Short, semester mid-year and
		subject-specific	Physiology Of	Power point,	final exams
		skills	Temporomandibular	Problem-based	IIIIai exaiiis
			Joint	learning,	
			Tamanamandihulan	collaboration,	
			Temporomandibular	discussion,	
			joint (TMJ) –	debriefing,	
			Definition	information	
			<ul><li>Ligaments</li><li>Muscles</li></ul>	review,	
			• Muscles	practical	
				research,	
				computer-	
				based learning.	
10	5	Knowledge	Anatomy And Physiology	Theoretical	Short, semester
10	J	understanding.	Of	lecture using	mid-year and
		subject-specific	Temporomandibular Joint	Power point,	final exams
		skills	Mandibular axes and	Problem-based	
			mandibular	learning,	
			movements	collaboration,	
			• Knowledge of mandibular	discussion,	
			movements	debriefing,	
			•Mandibular movements	information	
			1. Iunidio dini ino venicino	review,	
				practical	
				research,	
				computer-	
				based learning.	
11	5	Knowledge	Maxillomandibular relation	Theoretical	Short, semester
11		understanding.	<ul> <li>Types of jaw relation</li> </ul>	lecture using	mid-year and
11		4 4			-
		subject-specific	<ul> <li>Vertical jaw relation</li> </ul>	Power point,	final exams
		subject-specific skills	<ul> <li>Vertical jaw relation</li> <li>Rest position</li> </ul>	Power point, Problem-based	final exams

			1 11.	11 1	
			– occlusal distance	collaboration,	
			☐ Importance of vertical	discussion,	
			dimension	debriefing,	
				information	
			dimension	review,	
				practical	
				research,	
				computer-	
				based learning.	
12	5	Knowledge	Methods Of Recording Vertical	Theoretical	Short, semester
		understanding.	Relation	lecture using	mid-year and
		subject-specific skills	<ul> <li>Method of recording rest</li> </ul>	Power point,	final exams
		SKIIIS	vertical dimension	Problem-based	
			<ul> <li>Method of recording occlusal</li> </ul>	learning,	
			vertical dimension • Pre –	collaboration,	
			extraction records	discussion,	
			• Methods without pre – extraction red	debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based learning.	
13	5	Knowledge	Horizontal Jaw Relation	Theoretical	Short, semester
15	5	understanding.	• Centric jaw relation	lecture using	mid-year and
		subject-specific	- Centric jaw relation	Power point,	final exams
		skills	relation	-	illiai exailis
			Telation	Problem-based	
			relation	learning,	
				collaboration,	
			☐ Factors that complicates	discussion,	
			centric jaw relation	debriefing,	
			□ Methods of recording eccen	information	
			jaw relation	review,	
				practical	
				research,	
				computer-	
				based learning.	
14	5		Dental Articulators	Theoretical	Short, semester
		understanding.	(Classification &	lecture using	mid-year and
		subject-specific	Digital computerized	Power point,	final exams
		skills	articulator programming)	Problem-based	
			Dental articulator	learning,	
			☐ Definition	collaboration,	
			☐Functions of articulator	discussion,	
			☐ Requirements of articulator	debriefing,	
			☐ Types of articulator	information	
				review,	
				practical	
				research,	
				computer- based learning.	
15	5	Knowledge	Face – Bow	Theoretical	Short competer
15	5	understanding.	• Face – bow		Short, semester
		subject-specific	• Face – bow  □ Definition	lecture using	mid-year and
		skills		Problem beard	final exams
		-	☐ Parts of face – bow	Problem-based	

Important of the face – bow discussion, discussion, debriefing, information review, practical research, computer-based learning.   Short, semester mid-year and proper point.   Proparation of articulator   Preparation of the casts and mounting the upper cast on CL II articulator   Preparation of the casts and mounting the upper cast on CL II articulator   Proparation of the casts and mounting the upper cast on CL II articulator   Proparation of the casts and mounting the upper cast on CL II articulator   Proparation of the casts and mounting the upper cast on CL II articulator   Proparation of the casts and mounting the upper cast on CL II articulator   Proparation of the casts and mounting the upper cast on CL II articulator   Proparation of the casts and mounting the upper cast on CL II articulator   Proparation of the casts and mounting the upper cast on CL II articulator   Proparation of the casts and mounting the upper cast on t	Γ	1	DT 00 1	1 .	
16			☐ Types of face – bow	learning,	
16			☐ Important of the face – bow	,	
16				,	
16				•	
16					
S   Knowledge understanding. subject-specific skills				•	
Solution				_	
Sknowledge understanding. subject-specific skills					
Mounting					
Subject-specific skills   Definition   Definition   Preparation of articulator   Preparation of the casts and mounting the lower cast   Definition   Preparation of the casts and mounting the lower cast   Definition   Definition   Definition   Preparation of the casts and mounting the lower cast   Definition   Defi					
subject-specific skills    Definition	16			Theoretical	Short, semester
Skills				lecture using	mid-year and
Treparation of the casts and mounting the upper cast on CL II articulator   Mounting the lower cast   learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.    Selection of Artificial Teeth skills   Selection of anterior teeth   Theoretical lecture using subject-specific skills   Materials of anterior teeth   Difference between acrylic and porcelain teeth   Materials of anterior Teeth   Difference between acrylic and porcelain teeth   Messio -distal length   Occlusa form teeth   Advantages of casp form teeth   Advantages of casp form teeth   Advantages of non - cusp fined research, computer-based learning.   Short, semester mid-year and final exams			☐ Definition	Power point,	final exams
mounting the upper cast on CL II articulator		SKIIIS	☐ Preparation of articulator	Problem-based	
CL II articulator			☐ Preparation of the casts and	learning,	
articulator			mounting the upper cast on	collaboration,	
articulator			CL II	discussion,	
Mounting the lower cast   Information review, practical research, computer-based learning subject-specific skills   Selection of Artificial Teeth   Selection of anterior teeth   The factors of shade selection   Materials of anterior teeth   Difference between acrylic and porcelain teeth   Difference between acrylic and porcelain teeth   Short, semester mid-year and final exams      18			articulator	-	
Sknowledge understanding. subject-specific skills			☐ Mounting the lower cast		
occurred during mounting practical research, computer-based learning.    Sknowledge understanding-subject-specific skills   Selection of Artificial Teeth			_	review.	
Selection Of Artificial Teeth   Selection of Anterior teeth   Theoretical   lecture using   Power point,   Problem-based learning   Short, semester   mid-year and   mid-			occurred during mounting		
Selection Of Artificial Teeth   Theoretical lecture using Power point, Problem-based learning, information review, practical research, computer-based learning, subject-specific skills   Selection Of Posterior Teeth   Difference between acrylic and porcelain teeth   Difference between acrylic and procedure, based learning information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.   Difference between acrylic and procedure procedu				-	
Selection Of Artificial Teeth   Selection of anterior teeth   Selection of anterior teeth   The factors of shade selection   Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, subject-specific skills   Shade   Bucco - lingual width   Mesio - distal length   Occluso - gingival height   Occlusal form teeth   Advantages of non - cusp f teeth   Advantages of non - cusp f teeth   Advantages of non - cusp f teeth   Advantages of casp form teeth   Advantages of casp				-	
Selection of Artificial Teeth   Selection of anterior teeth   Selection of anterior teeth   Selection of anterior teeth   Selection of shade selection   Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, subject-specific skills   Shade   Bucco - lingual width   Mesio - distal length   Occluso - gingival height   Occluso - gingival height   Advantages of non - cusp f teeth   Advantages of non - cusp f teeth   Short, semester mid-year and final exams   Short, semester mid-year and power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical lecture using power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practi					
*Selection of anterior teeth	17	5 Knowledge	Selection Of Artificial Teeth		Short, semester
Subject-specific skills    The factors of shade selection   Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.    Materials of anterior teeth   Difference between acrylic and porcelain teeth   Difference between acrylic and porcelain teeth   Difference between acrylic and procedure based learning.    Skoowledge understanding subject-specific skills   Shade selection Of Posterior Teeth   Difference between acrylic and procedure based learning information review, practical lecture using power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.    Short, semester mid-year and final exams power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.    Skoowledge understanding street procedure is a subject-specific skills   Short, semester mid-year and final exams power point, Problem-based learning. Short, semester mid-year and final exams procedure is a subject-specific skills   Short, semester mid-year and final exams procedure is a subject-specific short semester mid-year and final exams procedure is a subject-specific short semester mid-year and final exams procedure is a subject-specific short semester mid-year and final exams procedure is a subject-specific short semester mid-year and final exams procedure is a subject-specific short semester mid-year and final exams procedure is a subject-specific short semester mid-year and final exams procedure is a subject-specific short semester mid-year and final exams procedure is a subject-specific short semester mid-year and final exams procedure is a subject-specific short semester mid-year and final exams procedure is a subject-specific short semester mid-year and final exams procedure is a subject-specific short seminary semina					
Skills   factors of shade selection   Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.    Sknowledge understanding. subject-specific skills   Shade   Bucco -lingual width   Mesio -distal length   Occluse -gingival height   Occluse -gingival height   Docclusal form   Advantages of casp form teeth   Advantages of non - cusp freeth   Theoretical lecture using mid-year and final exams   Froblem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.   Short, semester mid-year and final exams   Short, semester mid-year and   Short, semester mid-year and   Theoretical research, computer-based learning.   Short, semester mid-year and   Theoretical lecture using mid-year and   Short, semester mid-year and   Sho				_	_
Width    Materials of anterior teeth   Difference between acrylic and porcelain teeth   Difference between acrylic and porcelain teeth   Difference between acrylic and porcelain teeth   Difference between acrylic and procedure based learning.    Selection of Posterior Teeth   Difference between acrylic and procedure based learning.   Shade   Difference between acrylic and procedure based learning.   Short, semester mid-year and final exams   Dower point, Problem-based learning, collaboration, debriefing, information review, practical research, computer-based learning.   Advantages of non - cusp form teeth   Difference between acrylic and procedure procedure.   Short, semester mid-year and final exams   Dower point, Problem-based learning, collaboration, debriefing, information review, practical research, computer-based learning.		skills	factors of shade selection		
Width    Materials of anterior teeth   Difference between acrylic and porcelain teeth   Difference between acrylic and review, practical research, computer-based learning, subject-specific skills   Shade   Bucco -lingual width   Mesio -distal length   Occluso -gingival height   Occluso -gingival height   Occluso form teeth   Advantages of casp form teeth   Advantages of non - cusp form teeth   Information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.   Inf					
Materials of anterior teeth   Difference between acrylic and porcelain teeth   Difference between acrylic and procedure   Difference between acrylic and ebriefing, information   Problem-based learning   Doceluso - gingival height   Doccluso - gingiva			Width	_	
Materials of anterior teeth   Difference between acrylic and porcelain teeth   Difference between acrylic and porcelain teeth   Difference between acrylic and porcelain teeth   Difference between acrylic and practical research, computer-based learning.      Sknowledge understanding. subject-specific skills   Shade   Bucco -lingual width   Mesio -distal length   Occluso -gingival height   Occluso -gingival height   Doccluso -gingival height   Do			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,	
Difference between acrylic and porcelain teeth   Difference between acrylic and porcelain teeth   practical research, computer-based learning.     Selection Of Posterior Teeth   Difference based learning     Shade   Bucco - lingual width   Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.     Advantages of non - cusp freeth   Advantages of non - cusp freeth   Difference between acrylic and review, practical research, computer-based learning.     Advantages of non - cusp freeth   Difference between acrylic and review, practical research, computer-based learning.     Advantages of non - cusp freeth   Difference between acrylic and review, practical research, computer-based learning.     Advantages of non - cusp freeth   Difference based learning and provided and			Materials of anterior teeth	-	
and porcelain teeth research, computer-based learning.    Selection Of Posterior Teeth understanding. subject-specific skills   Shade   Bucco -lingual width   Problem-based learning.     Occluso -gingival height   Occluso form teeth   Advantages of casp form teeth   Advantages of non - cusp form teeth   Bucco -lingual width   Problem-based learning, collaboration, debriefing, information review, practical research, computer-based learning.     Advantages of non - cusp form teeth   Short, semester mid-year and form teeth   Theoretical lecture using   Short, semester mid-year and     Advantages of non - cusp form teeth   Theoretical lecture using   Short, semester mid-year and				•	
Sknowledge understanding. subject-specific skills					
Selection Of Posterior Teeth   Computer-based learning.   Short, semester   Shade   Doccluso - Gingula width   Doccluso - Gingula height   Docclusal form   Advantages of casp form teeth   Advantages of non - cusp feeth   Doccluso - Gingula width   Doccluso - Gingula height   Docclusal form   Collaboration, debriefing, information review, practical research, computer-based learning.   Short, semester   Theoretical lecture using Power point, Problem-based learning, collaboration, debriefing, information review, practical research, computer-based learning.   Short, semester   Theoretical lecture using   Theoretical lecture				•	
Sknowledge understanding. subject-specific skills			porceiam teem	*	
Sknowledge understanding. subject-specific skills				-	
Sknowledge understanding. subject-specific skills  Shade □ Bucco -lingual width □ Occluso -gingival height □ Occlusal form □ Advantages of casp form teeth □ Advantages of non - cusp f teeth □ Sknowledge understanding. □ Shade □ Bucco -lingual width □ Occluso -gingival height □ Occlusol form □ Advantages of casp form teeth □ Short, semester mid-year and final exams    Power point, Problem-based learning, collaboration, debriefing, information review, practical research, computer-based learning.    Short, semester mid-year and final exams     Short, semester mid-year and mid-year a					
understanding. subject-specific skills    Bucco -lingual width   Bucco -lingual width   Problem-based   learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.    Advantages of non - cusp f teeth   Advantages of non - cusp f teeth   Teeth   Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	18	5 Knowledge	Selection Of Posterior Teeth	•	Short semester
subject-specific skills  Bucco -lingual width  Mesio -distal length  Occluso -gingival height  Occlusal form  Advantages of casp form teeth  Advantages of non - cusp f teeth  Teeth  Showledge understanding.  Subject-specific skills  Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  I Arrangement Of Artificial Theoretical Short, semester mid-year and mid-year and	10				· 1
Mesio -distal length   Problem-based   learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.   Sknowledge understanding.   Advantagement Of Artificial Theoretical Short, semester, mid-year and   Tower point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.   Short, semester, mid-year and   Short, semeste		_		_	-
Occluso -gingival height Occlusal form Advantages of casp form teeth Advantages of non - cusp f teeth  Teeth  Sknowledge understanding.  Advantages of non - Cusp f teeth  Teeth  I learning, collaboration, discussion, debriefing, information review, practical research, computer- based learning.  I. Arrangement Of Artificial Theoretical Teeth  Teeth  Short, semester mid-year and				-	mai camb
Occlusal form  Advantages of casp form teeth  Advantages of non - cusp f teeth  Advantages of non - cusp f teeth  Sknowledge understanding.  Teeth  Collaboration, discussion, debriefing, information review, practical research, computer-based learning.  Theoretical Short, semester mid-year and			=		
Advantages of casp form teeth  Advantages of non - cusp f teeth  Advantages of non - cusp f teeth  Teeth  Sknowledge understanding.  Teeth  Advantages of casp form debriefing, information review, practical research, computer-based learning.  Theoretical Short, semester mid-year and					
teeth  Advantages of non - cusp f teeth  Teeth  Advantages of non - cusp f teeth  Teeth  Teeth  Advantages of non - cusp f teeth  Teeth  Computer-based learning  Theoretical lecture using mid-year and				,	
Advantages of non - cusp f teeth review, practical research, computer-based learning.  Knowledge understanding. Teeth retail lecture using mid-year and				·	
teeth review, practical research, computer-based learning.  Knowledge understanding. Teeth Teeth review, practical research, computer-based learning.  Theoretical Short, semester mid-year and					
practical research, computer-based learning.  5 Knowledge understanding. Teeth Teeth practical research, computer-based learning. Theoretical lecture using mid-year and					
research, computer-based learning.  5 Knowledge understanding. Teeth  Teeth  research, computer-based learning.  Theoretical Short, semester lecture using mid-year and			teetn	•	
computer-based learning.  5 Knowledge understanding. Teeth Computer-based learning.  Theoretical Short, semester lecture using mid-year and				•	
19 S Knowledge i. Arrangement Of Artificial Theoretical Short, semester understanding. Teeth lecture using mid-year and				· ·	
19 5 Knowledge understanding. Teeth i. Arrangement Of Artificial Theoretical Short, semester lecture using mid-year and				_	
understanding. Teeth lecture using mid-year and	10	F 17 1 1			Cl
1 interpretation of the state o	19		_		
				_	_
subject-specific ii. • Guideline of artificial Power point,   final exams	1	sacject specific	ii. • Guideline of artificial	Power point.	tinal exams

iii. arrangement iv. □ Arrangement of anterior teeth v.□ Arrangement of anterior teeth v.□ Arrangement of upper anterior teeth v.□ Arrangement of upper anterior teeth v.□ Arrangement of upper based learning.  20		1 '11	1	_ ,, ,	
Iv.		skills	teeth	Problem-based	
anterior teeth  v. □ Arrangement of upper anterior review, practical research, computer-based learning.  20				<u>o</u> .	
V.   Arrangement of upper anterior teeth   Arrangement of upper paractical research, computer-based learning.			_	•	
anterior teeth				•	
Teeth			v. ☐ Arrangement of upper	_	
20			anterior		
20			teeth	review,	
20				practical	
Standedge understanding-subject-specific skills   Standedge understanding-subject-specific skills   Curve of Spee   Compensatory curves   Arrangement of lower posterior teeth   Arrangement of upper posterior teeth   Common errors in arrangement of teeth   Computer-based learning   Short, semester moderstanding-subject-specific skills   Computer based learning   Computer-based learning   Computer-bas				research,	
Standarding subject-specific skills				computer-	
understanding, subject-specific skills  Teeth Curve of Spee  • Compensatory curves • Arrangement of lower posterior teeth • Common errors in arrangement of upper posterior teeth • Common errors in arrangement of upper posterior teeth • Common errors in arrangement of upper posterior teeth • Common errors in arrangement of upper posterior teeth • Common errors in arrangement of upper posterior teeth • Common errors in arrangement of review, practical research, computer-based learning.  ■ Maxing □ Definition □ Requirements of waxing the polish surfaces □ The procedure of waxing □ Definition □ Restablishing the posterior palatalseal area □ Advantages of posterior palatalseal area □ Advantages of posterior palatalseal □ • Ceclusion □ Concepts of skills  ■ Knowledge understanding subject-specific skills  ■ Complete Denture Occlusion □ Theoretical lecture using Power point final exams  ■ Theoretical review, practical research, computer-based learning.  ■ Complete Denture Occlusion □ Theoretical lecture using Power point final exams  ■ Theoretical review, practical research, computer-based learning.  ■ Complete Denture Occlusion □ Theoretical lecture using Power point, Problem-based learning.  ■ Complete Denture Occlusion □ Theoretical lecture using Power point, Problem-based learning.  ■ Concepts of complete Denture Occlusion □ Theoretical lecture using Power point, Problem-based learning.  ■ Concepts of complete Denture Occlusion □ Theoretical lecture using Power point, Problem-based learning.  ■ Concepts of complete Denture Occlusion □ Theoretical lecture using Power point, Problem-based learning.  ■ Concepts of complete Denture Occlusion □ Theoretical lecture using Power point, Problem-based learning.  ■ Concepts of complete Denture Occlusion □ Theoretical lecture using Power point, Problem-based learning.  ■ Concepts of complete Denture Occlusion □ Theoretical l				based learning.	
subject-specific skills  Curve of Spe	20 5		Arrangement Of Posterior	Theoretical	Short, semester
Subject-specific skills  Curve of Spee  • Compensatory curves • Arrangement of lower posterior teeth • Arrangement of upper posterior teeth • Common errors in arrangement of eeth • Common errors in arrangement of upper posterior teeth • Common errors in arrangement of upper posterior teeth • Common errors in arrangement of upper posterior teeth • Common errors in arrangement of upper posterior palatalseal was elearning.  Short, semester lecture using posterior palatalseal area platelaseal area platelaseal area platelaseal elearning upper posterior palatalseal elearning upper posterior palatalse			Teeth	lecture using	mid-year and
Skills   Compensatory curves   Arrangement of lower posterior teeth   Arrangement of upper posterior teeth   Common errors in arrangement of teeth   Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning. Short, semester lecture using power point, skills   Waxing   Definition   Requirements of waxing   Definition   Power point, skills   Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning. Short, semester lecture using power point final exams    22			Curve of Spee		
Arrangement of lower posterior teeth   Arrangement of upper posterior teeth   Arrangement of upper posterior teeth   Common errors in arrangement of teeth   Common errors in arrangement of teeth   Posterior teeth   Common errors in arrangement of teeth   Posterior teeth   Posterior teeth   Posterior palatalseal area   Definition   Requirements of waxing   Establishing the posterior palatalseal area   Advantages of posterior palatalseal   Posterior palatal		skills		-	
posterior teeth Arrangement of upper posterior teeth Common errors in arrangement of teeth Common errors in arrangement of teeth  Skills  Knowledge understanding. subject-specific skills  Waxing And Carving Waxing And Carving Waxing And Carving Definition Requirements of waxing the polish surfaces The procedure of waxing posterior palatal seal area Advantages of posterior palatalseal research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, denture  22  5 Knowledge understanding subject-specific skills  Complete Denture Occlusion Concepts of complete denture occlusion Concepts of complete denture occlusion Try -in appointment  Complete Denture occlusion Concepts of					
Arrangement of upper posterior teeth  Common errors in arrangement of teeth  Waxing And Carving Waxing Befinition Requirements of waxing the polish surfaces The procedure of waxing the polish surfaces The procedure of waxing the polish surfaces The procedure of waxing the polish surfaces Advantages of posterior palatal seal area Advantages of posterior palatalseal Establishing the posterior palatalseal Complete Denture Occlusion Waxing Befinition Requirements of waxing the polish surfaces I arring, collaboration, discussion, debriefing, information review, practical research, computer-based learning. Complete Denture Occlusion Ure  Short, semester mid-year and final exams  Short, semester mid-year and proven point.  Short, semester mid-year and final exams  Complete Denture Occlusion Complete denture occlusion Try -in appointment  Theoretical lecture using Power point.  Short, semester mid-year and final exams  Short, semester mid-year and final exams  Short, semester mid-year and final exams  Complete denture occlusion Complete denture occlusion Try -in appointment  Theoretical lecture using Power point.  Problem-based learning.  Short, semester mid-year and final exams				_	
Definition   Stable			•		
• Common errors in arrangement of teeth  • Computer-based learning.  • Waxing And Carving  • Waxing Between the polish surfaces  • Waxing Definition  • Waxing Power point, Problem-based learning, collaboration, debriefing, information review, practical lecture using Power point, Problem-based learning, collaboration, debriefing, information review, practical lecture using Power point, Problem-based learning, collaboration, debriefing, information review, practical lecture using problem-based learning.  • Knowledge understanding, subject-specific skills  • Knowledge understanding, subject-specific skills  • Knowledge understanding subject-specific skills  • Knowledge understanding subject-specific skills  • Complete Denture Occlusion lecture using Power point final exams  • Complete Denture Occlusion lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, lecture using Power point, problem-based learning, collaboration, discussion, debriefing, lecture using Power point, problem-based learning, collaboration, discussion, debriefing, lecture using Power point, problem-based learning, collaboration, discussion, debriefing, lecture using Power point, problem-based learning, collaboration, discussion, debriefing, lecture using Power point, problem-based learning, collaboration, discussion, debriefing, lecture using Power point, problem based learning, collaboration, discussion, debriefing, lecture using Power point, problem beauty probl					
21			-	<u>o</u> .	
Standard					
Sknowledge understanding. subject-specific skills			_	-	
S			teeth	-	
Standard				· ·	
Stort, semester wild-year and final exams					
understanding. subject-specific skills  - Waxing	21	Vnowledge	Waying And Caming		Chart compater
subject-specific skills    Definition	21 5				
Requirements of waxing the polish surfaces   The procedure of waxing   Problem-based   learning, collaboration, discussion, debriefing, information   review, practical   research, computer-based learning.		_	_	_	-
polish surfaces  The procedure of waxing Establishing the posterior palatal seal area  posterior palatal seal area posterior palatal seal area Advantages of posterior palatalseal Esthetic consideration in comp denture  Complete Denture Occlusion subject-specific skills  Complete Denture Occlusion denture  Short, semester mid-year and final exams  Short, semester mid-year and final exams  Complete Denture Occlusion Theoretical lecture using Power point final exams  Short, semester mid-year and final exams  Complete Denture Occlusion Theoretical lecture using Power point Froblem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based lecture using Power point Froblem-based learning, collaboration, discussion, debriefing,				-	final exams
☐ The procedure of waxing					
□ Establishing the posterior palatal seal area □ Advantages of posterior palatalseal • Esthetic consideration in comp denture  22  5 Knowledge understanding subject-specific skills  Complete Denture Occlusion denture  Complete Denture Occlusion denture  23  5 Knowledge understanding subject-specific skills  Complete Denture Occlusion denture  Complete Denture Occlusion lecture using Power point  Complete Denture Occlusion lecture using Power point  Eccentric occlusion   Theoretical lecture using Power point final exams  Short, semester mid-year and final exams  Complete Denture Occlusion lecture using Power point, Problem-based learning, collaboration, discussion, debriefing,			•	_	
palatalseal area    palatalseal area   debriefing, information review, practical research, computer-based learning   Sknowledge understanding. subject-specific skills     Skills   Complete Denture Occlusion   Occlusion   Decention     Complete Denture Occlusion   Theoretical lecture using Power point     Complete Denture Occlusion   Short, semester mid-year and final exams     Complete Denture Occlusion   Decention   Decention   Decention   Decention     Concepts of complete Denture Occlusion   Decention   Decention					
22   S   Knowledge understanding. subject-specific skills   Complete Denture Occlusion   Complete Denture Occlusion   Complete Denture Occlusion   Decentration   Complete Denture Occlusion   Short, semester mid-year and final exams   Complete Denture Occlusion   Complete Denture Understanding   Short, semester mid-year and final exams   Short, semester mid-year and final exams   Complete Denture Occlusion   Concepts of concepts of complete denture occlusion   Concepts of complete			☐ Establishing the posterior	•	
posterior palatal seal area			palatalseal area	<u>o</u> .	
Advantages of posterior palatalseal   Esthetic consideration in componenture					
palatalseal • Esthetic consideration in comp denture  22  5 Knowledge understanding. subject-specific skills  6 Complete Denture Occlusion enture  7 Complete Denture Occlusion 6 Occlusion 6 denture  7 Complete Denture Occlusion 7 Complete Understanding enture occlusion 8 Complete Denture Occlusion 9 Concepts of Concept					
Power point  Short, semester mid-year and final exams  **Short, semester mid-year and final exams  **Theoretical lecture using Power point  **Complete Denture Occlusion  **Esthetic consideration in comp denture  **Complete Denture Occlusion  **Eccentric occlusion  **Complete Denture Occlusion  **Eccentric occlusion  **Concepts of complete denture occlusion  **Try -in appointment  **Try -in appointment  **Try -in appointment  **Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing,				_	
denture   based learning   22   5   Knowledge   understanding   subject-specific skills   denture			palatalseal	-	
Short, semester   Short, se			• Esthetic consideration in comp	-	
understanding. subject-specific skills  Short, semester mid-year and final exams  Short, semester lecture using Power point  Short, semester lecture using Power point  Theoretical lecture using Power point  Theoretical lecture using Power point  Theoretical lecture using Power point, Power point, Power point, Problem-based learning, collaboration, discussion, debriefing,			denture	based learning.	
understanding. subject-specific skills  Short, semester mid-year and final exams  Short, semester lecture using power point  Short, semester lecture using power point  Theoretical lecture using power point  Theoretical lecture using power point, problem-based learning, collaboration, discussion, debriefing,	22 5		Complete Denture Occlusion	Theoretical	Short, semester
subject-specific skills  denture  relation  5 Knowledge understanding. subject-specific skills  Complete Denture Occlusion Eccentric occlusion  Beccentric occlusion  Concepts of complete denture occlusion  Theoretical lecture using Power point, Froblem-based learning, collaboration, discussion, debriefing,		_		lecture using	
denture  relation  Skills  denture  relation  Theoretical lecture using power point, skills  Concepts of complete denture occlusion  Try -in appointment  denture  relation  Complete Denture Occlusion  Eccentric occlusion  Concepts of complete denture occlusion  Try -in appointment  denture  relation  Theoretical lecture using power point, problem-based learning, collaboration, discussion, debriefing,				_	-
Theoretical lecture using power point, skills  Complete Denture Occlusion Eccentric occlusion □ Concepts of complete denture occlusion □ Try -in appointment  Complete Denture Occlusion □ Concepts of lecture using power point, problem-based learning, collaboration, discussion, debriefing,		skills	denture	•	
Theoretical lecture using power point, skills  Complete Denture Occlusion Eccentric occlusion □ Concepts of complete denture occlusion □ Try -in appointment  Complete Denture Occlusion □ Concepts of lecture using power point, problem-based learning, collaboration, discussion, debriefing,					
Theoretical lecture using power point, skills  Complete Denture Occlusion Eccentric occlusion □ Concepts of complete denture occlusion □ Try -in appointment  Complete Denture Occlusion □ Concepts of lecture using power point, problem-based learning, collaboration, discussion, debriefing,			relation		
understanding. subject-specific skills  Eccentric occlusion  □ Concepts of complete denture occlusion □ Try -in appointment  □ Concepts of complete denture occlusion □ discussion, discussion, debriefing,    Deture using Power point, Problem-based   Deture using Power point, Proble	23 5	Knowledge		Theoretical	Short, semester
subject-specific skills  Concepts of complete denture occlusion  Try -in appointment  Power point, Problem-based learning, collaboration, discussion, debriefing,			-		
skills complete denture occlusion  Try -in appointment learning, collaboration, discussion, debriefing,		_		_	
☐ Try -in appointment learning, collaboration, discussion, debriefing,		skills		-	IIII CAUIII
collaboration, discussion, debriefing,			-		
discussion, debriefing,			□ 1 ty -m appointment		
debriefing,				-	
intermedian					
information				monnation	

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				review,	
				practical	
				research,	
				computer-	
				based learning.	
24	5	Knowledge	Processing Of The Denture	Theoretical	Short, semester
		understanding.	(Flasking)	lecture using	mid-year and
		subject-specific	<ul> <li>Flasking of the denture □Flask</li> </ul>	Power point,	final exams
		skills	techniques	Problem-based	
			_	learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based learning.	
25	5	Knowledge	Occlusal Correction	Theoretical	Short, semester
23	J	understanding.	• Causes of errorsin	lecture using	mid-year and
		subject-specific	occlusion	Power point,	final exams
		skills	• Selective grinding	Problem-based	imai exams
			Correction of occlusal	learning,	
			errors	collaboration,	
			• Disadvantages of intra –	discussion,	
			oral correction	debriefing,	
				information	
			• Advantages of extra – oral correction	review,	
				practical	
			• Rulesfor selective grinding	research,	
				computer-	
				based learning.	
26	5	Knowledge	Finishing And Polishing Of	Theoretical	Short, semester
20	3	understanding.			´ 1
		subject-specific	Complete Denture	lecture using Power point,	mid-year and final exams
		skills		Problem-based	IIIIai exailis
			• Procedure of finishing		
			• Grinding and cutting	learning, collaboration,	
			instruments	•	
			<ul> <li>Polishing of complete</li> </ul>	discussion,	
			denture	debriefing, information	
			• Principles of polishing		
			<ul> <li>Procedures of polishing</li> </ul>	review,	
				practical	
				research,	
				computer-	
27	_	IZ 1 1	Description 1	based learning.	Chara
27	5	Knowledge	Repair Of Complete	Theoretical	Short, semester
		understanding. subject-specific	Denture	lecture using	mid-year and
		skills	• Types of material used in	Power point,	final exams
		SKIIIS	repair	Problem-based	
			<ul> <li>Causes of denture fracture</li> </ul>	learning,	
			<ul> <li>Types of repair</li> </ul>	collaboration,	
			• Laboratory procedure for repair	discussion,	
]			. =	debriefing,	

				fractured denture base	information	
				fractured defiture base	review,	
					practical	
					research,	
					computer-	
					based learning.	
28		5	Knowledge	Panair Of Complete	Theoretical	Chart comester
20		3	understanding.	Repair Of Complete Denture		Short, semester
			subject-specific		lecture using Power point,	mid-year and final exams
			skills	• Replacement of broken or	Problem-based	IIIIai exailis
				missing tooth	learning,	
				• Replacement of missing or	collaboration,	
				lost part	discussion,	
				• Requirement of repair	debriefing,	
					information	
					review,	
					practical	
					research,	
					computer-	
					based learning.	
29		5	Knowledge	Relining And Rebasing	Theoretical	Short, semester
2)		J	understanding.	• Indication for relining or	lecture using	mid-year and
			subject-specific	rebasing	Power point,	final exams
			skills	Relining	Problem-based	
				<ul> <li>Contraindications of relining</li> </ul>	learning,	
				and rebasing	collaboration,	
				<ul> <li>The impression techniques</li> </ul>	discussion,	
				relining and rebasing	debriefing,	
					information	
					review,	
					practical	
					research,	
					computer-	
					based learning.	
30		5	Knowledge	Relining And Rebasing	Theoretical	Short, semester
			understanding.	<ul> <li>Laboratory procedures for</li> </ul>	lecture using	mid-year and
			subject-specific	relining	Power point,	final exams
			skills	<ul> <li>Rebasing</li> </ul>	Problem-based	
				• The chair – side reline techniqu	O.	
					collaboration,	
					discussion,	
					debriefing,	
					information	
					review,	
					practical	
					research,	
					computer-	
		_			based learning.	
Lab num	ıber	Study unit title				
1		Clin	ical and labora	tory steps of complete denture c	onstruction	
2		Taki	ing primary imp	pression on metal mold by impre	ession compound	d and beading
		and	boxing and po	uring by dental plaster		
and boxing and podring by dental plaster						

3	Pouring on rubber mold (upper and lower primary cast)
4	Description of anatomical landmarks (maxillary and mandibular arch)
5	Demonstration of making upper and lower special tray by cold cure Acrylic
6	Finishing and polishing of special tray and evaluation
7	Demonstration of taking final impression and construction of master cast
8	Evaluation of record base construction, finishing and polishing
9	Bite rims construction (upper and lower arch)
10	Demonstration of face bow and fox bite and description of types of jaw Relation
11	Description about the methods of recording vertical jaw relation
12	Description about the methods of recording horizontal jaw relation
13	Demonstration about the types of articulators, parts, its uses and action
14	Mounting of upper and lower casts on articulators
15	Mounting of upper and lower casts on articulators (continue) and evaluation of the student work
16	Description the methods of selection of anterior and posterior teeth for complete denture
17	Demonstration about arrangement of upper and lower anterior teeth
18	Arrangement of upper and lower anterior teeth (continue) and evaluation of the student work
19	Demonstration about arrangement of upper and lower posterior teeth
20	Arrangement of upper and lower posterior teeth( continue).
21	Arrangement of posterior teeth and carving of posterior palatal seal and evaluation of the student work
22	Demonstration about carving and waxing of upper complete denture.
23	Carving and waxing of lower complete denture (continue) and evaluation of the student work
24	Flasking and investment of the denture
25	Wax elimination, packing and curing of heat cure acrylic
26	Deflasking ,finishing and polishing of upper complete denture
27	eflasking ,finishing and polishing of lower complete denture (continue)
28	Demonstration of selective grinding
29	Repair of fracture denture
30	Repair of missing tooth

10 degrees of first semester: 8 degrees of short and semester exams and two degrees of oral exam

10 degrees of second semester: 8 degrees of short and semester exams and two degrees of oral

20 degrees of mid-year 60 degrees of final exam

12.	Learning	and	Teaching	Resources
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12. Learning and Teaching Resource	es
Required textbooks (curricular books, if any)	
Main references (sources)	. Textbook of complete denture 6th edition updated 2009 2. Zarb, George A., Rhonda Jacob, and Ste Eckert. Prosthodontic treatment for edentul patients, 13/e. Elsevier India, 2012.
Recommended books and references (scientific journals, reports)	
Electronic References, Websites	

#### 1. Course Name:

physiology

2. Course Code:

214 PH

3. Semester / Year:

2 semester/ Second stage

4. Description Preparation Date:

#### 2024-2025

5. Available Attendance Forms:

Lectures and laboratory

6. Number of Credit Hours (Total) / Number of Units (Total)

120 hours/6 unite

# 7. Course administrator's name (mention all, if more than one name)

Name: Fadiel Abbas Hamad Email: fadielalquraishe@mu.edu.is

#### 8. Course Objectives

**Course Objectives** 

 An introduction to physiology to teach the student how to perform the functions of the various organs of the body

# 9. Teaching and Learning Strategies

#### Strategy

- Knowledge and understanding
- Skill goals
- Stimulus and response method
- Long, short and semester exams
- Thinking skill

#### 10. Course Structure

Week	Hours	Required	Unit or subject name	Learning	Evaluation
		Learning	Theoretical	method	method
		Outcomes			
1	2	Knowledge and understanding. subject-specific skills			Short, semester mid-year and final exams

					1
1				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
2	2		<b>Body fluid</b> (Type of body	Problem-	Short, semester
		understanding.	fluids, Intracellular and	based	mid-year and
		subject-specific skills	extracellular, Daily intake of	learning,	final exams
		SKIIIS	water, Daily loss of body water,	collaboratio	
			Constituents of extracellular and	n,	
			intracellular fluids, Major	discussion,	
			factors contribute to the	debriefing,	
			movement of fluid, Specialized	information	
			, <u>+</u>	review,	
			Fluids of the Body)	practical	
			Edema (Types of Edema, Cau		
			of edema, Measurement of b	computer-	
			fluid volume, Dehydration, Types	based	
			dehydration, Classification, Cau	learning.	
			Signs and Symptoms		
			Dehydrations)		
3	2	Knowledge	Homeostasis and Transport	Problem-	Short, semester
	_	understanding.	across cell membrane	based	mid-year and
		3	aci oss cen incinio ane		illia y cai alla
II.		subject-specific		learning,	
		subject-specific skills	(Diffusion	learning, collaboratio	final exams
			(Diffusion (passive), Carrier-mediated transp	collaboratio	
			(Diffusion (passive), Carrier-mediated transp (passive or active), Vesic	collaboratio n,	
			(Diffusion (passive), Carrier-mediated transp	collaboratio n, discussion,	
			(Diffusion (passive), Carrier-mediated transp (passive or active), Vesic	collaboratio n,	
			(Diffusion (passive), Carrier-mediated transp (passive or active), Vesic	collaboratio n, discussion, debriefing,	
			(Diffusion (passive), Carrier-mediated transp (passive or active), Vesic	collaboratio n, discussion, debriefing, information	
			(Diffusion (passive), Carrier-mediated transp (passive or active), Vesic	collaboratio n, discussion, debriefing, information review,	
			(Diffusion (passive), Carrier-mediated transp (passive or active), Vesic	collaboratio n, discussion, debriefing, information review, practical	
			(Diffusion (passive), Carrier-mediated transp (passive or active), Vesic	collaboratio n, discussion, debriefing, information review, practical research,	
			(Diffusion (passive), Carrier-mediated transp (passive or active), Vesic	collaboratio n, discussion, debriefing, information review, practical research, computer-	
4	2	skills	(Diffusion (passive), Carrier-mediated transp (passive or active), Vesic transport).	collaboratio n, discussion, debriefing, information review, practical research, computer- based	final exams
4	2	skills	(Diffusion (passive), Carrier-mediated transpose (passive or active), Vesic transport).  ORAL CAVITY and Salivary	collaboratio n, discussion, debriefing, information review, practical research, computer- based learning.	final exams  Short, semester
4	2	Knowledge understanding. subject-specific	(Diffusion (passive), Carrier-mediated transpossive or active), Vesic transport).  ORAL CAVITY and Salivary Glands (Functions of Mouth,	collaboratio n, discussion, debriefing, information review, practical research, computer- based learning. Problem- based	final exams
4	2	Knowledge understanding.	(Diffusion (passive), Carrier-mediated transpossive or active), Vesic transport).  ORAL CAVITY and Salivary Glands (Functions of Mouth, Salivary Glands (Structure,	collaboratio n, discussion, debriefing, information review, practical research, computer- based learning.  Problem- based learning,	Short, semester mid-year and
4	2	Knowledge understanding. subject-specific	(Diffusion (passive), Carrier-mediated transpose (passive or active), Vesic transport).  ORAL CAVITY and Salivary Glands (Functions of Mouth, Salivary Glands (Structure, Development, Major glands,	collaboratio n, discussion, debriefing, information review, practical research, computer- based learning. Problem- based	Short, semester mid-year and
4	2	Knowledge understanding. subject-specific	(Diffusion (passive), Carrier-mediated transpossive or active), Vesic transport).  ORAL CAVITY and Salivary Glands (Functions of Mouth, Salivary Glands (Structure, Development, Major glands, Minor glands, Clinical	collaboratio n, discussion, debriefing, information review, practical research, computer- based learning. Problem- based learning, collaboratio n,	Short, semester mid-year and
4	2	Knowledge understanding. subject-specific	(Diffusion (passive), Carrier-mediated transpossive or active), Vesic transport).  ORAL CAVITY and Salivary Glands (Functions of Mouth, Salivary Glands (Structure, Development, Major glands, Minor glands, Clinical correlations, Regulation of	collaboratio n, discussion, debriefing, information review, practical research, computer- based learning.  Problem- based learning, collaboratio n, discussion,	Short, semester mid-year and
4	2	Knowledge understanding. subject-specific	(Diffusion (passive), Carrier-mediated transpossive or active), Vesic transport).  ORAL CAVITY and Salivary Glands (Functions of Mouth, Salivary Glands (Structure, Development, Major glands, Minor glands, Clinical correlations, Regulation of Salivary Secretion, Factors	collaboratio n, discussion, debriefing, information review, practical research, computer- based learning. Problem- based learning, collaboratio n,	Short, semester mid-year and
4	2	Knowledge understanding. subject-specific	(Diffusion (passive), Carrier-mediated transp (passive or active), Vesic transport).  ORAL CAVITY and Salivary Glands (Functions of Mouth, Salivary Glands (Structure, Development, Major glands, Minor glands, Clinical correlations, Regulation of Salivary Secretion, Factors Influencing Salivary Flow and	collaboratio n, discussion, debriefing, information review, practical research, computer- based learning.  Problem- based learning, collaboratio n, discussion, debriefing, information	Short, semester mid-year and
4	2	Knowledge understanding. subject-specific	(Diffusion (passive), Carrier-mediated transp (passive or active), Vesic transport).  ORAL CAVITY and Salivary Glands (Functions of Mouth, Salivary Glands (Structure, Development, Major glands, Minor glands, Clinical correlations, Regulation of Salivary Secretion, Factors Influencing Salivary Flow and Composition) (Mastication,	collaboratio n, discussion, debriefing, information review, practical research, computer- based learning.  Problem- based learning, collaboratio n, discussion, debriefing, information review,	Short, semester mid-year and
4	2	Knowledge understanding. subject-specific	(Diffusion (passive), Carrier-mediated transpossive or active), Vesic transport).  ORAL CAVITY and Salivary Glands (Functions of Mouth, Salivary Glands (Structure, Development, Major glands, Minor glands, Clinical correlations, Regulation of Salivary Secretion, Factors Influencing Salivary Flow and Composition) (Mastication, Deglutition, Bolus Formation	collaboratio n, discussion, debriefing, information review, practical research, computer- based learning.  Problem- based learning, collaboratio n, discussion, debriefing, information review, practical	Short, semester mid-year and
4	2	Knowledge understanding. subject-specific	(Diffusion (passive), Carrier-mediated transp (passive or active), Vesic transport).  ORAL CAVITY and Salivary Glands (Functions of Mouth, Salivary Glands (Structure, Development, Major glands, Minor glands, Clinical correlations, Regulation of Salivary Secretion, Factors Influencing Salivary Flow and Composition) (Mastication,	collaboratio n, discussion, debriefing, information review, practical research, computer- based learning.  Problem- based learning, collaboratio n, discussion, debriefing, information review, practical research,	Short, semester mid-year and
4	2	Knowledge understanding. subject-specific	(Diffusion (passive), Carrier-mediated transpossive or active), Vesic transport).  ORAL CAVITY and Salivary Glands (Functions of Mouth, Salivary Glands (Structure, Development, Major glands, Minor glands, Clinical correlations, Regulation of Salivary Secretion, Factors Influencing Salivary Flow and Composition) (Mastication, Deglutition, Bolus Formation	collaboratio n, discussion, debriefing, information review, practical research, computer- based learning.  Problem- based learning, collaboratio n, discussion, debriefing, information review, practical research, computer-	Short, semester mid-year and
4	2	Knowledge understanding. subject-specific	(Diffusion (passive), Carrier-mediated transp (passive or active), Vesic transport).  ORAL CAVITY and Salivary Glands (Functions of Mouth, Salivary Glands (Structure, Development, Major glands, Minor glands, Clinical correlations, Regulation of Salivary Secretion, Factors Influencing Salivary Flow and Composition) (Mastication, Deglutition, Bolus Formation for Swallowing, Digestion),	collaboratio n, discussion, debriefing, information review, practical research, computer- based learning.  Problem- based learning, collaboratio n, discussion, debriefing, information review, practical research,	Short, semester mid-year and

			Control, Applied Physiology)		
5	2	_	Salivary functions and	Problem-	Short, semester
		understanding.	Regulation of Salivary	based	mid-year and
		subject-specific	Secretion (Composition of	learning,	final exams
		skills	Saliva, Saliva Components,	collaboratio	
			Properties of Saliva, Functions	n,	
			of Saliva, Effect of Drugs and	discussion,	
			Chemicals on Salivary	debriefing,	
			Secretion, Maintenance of	information	
			Tooth Integrity, The Diagnostic	review,	
			Applications of Saliva and	practical	
			forensic uses of saliva,	research,	
			Disadvantages/Limitations	computer-	
			Saliva)	based	
	2	Knowledge and	, , , , , , , , , , , , , , , , , , ,	learning.	Cl
	2	understanding.	<b>BLOOD</b> ( Composition of blo		Short, semester
6		subject-specific	Hematocrit, Plasma, Function	based	mid-year and final exams
		skills	blood ), Red blood cells (Ge	learning, collaboratio	IIIIai Exaiiis
			of R.B.C, polycythemia, Aner		
			Destruction of R.B.C.s)	n, discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
7	2		White Blood Cells (Types	Problem-	Short, semester
		understanding.	of W.B.C., Genesis of the	based	mid-year and
		subject-specific skills	leukocytes, Life span of the W.B	learning,	final exams
		SKIIIS	Phagocytosis, Inflammati	collaboratio	
			Leukemia's, Leukopenia)	n,	
			· · · · · · · · · · · · · · · · · · ·	discussion,	
				debriefing,	
				information	
				review, practical	
				research,	
				computer-	
				based	
				learning.	
8	2	Knowledge	Hemoglobin (Formation	Problem-	Short, semester
	_	understanding.	Hemoglobin , Iron Metabolism ,	based	mid-year and
		subject-specific	Compounds, Destruction of H	learning,	final exams
		skills	The common causes of jaundice)	collaboratio	
			The common eauses of jaunutee)	n,	
				discussion,	
				debriefing,	
				information	
				review,	
1		l		practical	
		ļ l			I
				research, computer-	

				based	
				learning.	
9	2	Knowledge understanding. subject-specific skills	Blood groups (Agglutination, Agglutinins, The Rh Group, Formation of Anti-Rh, agglutinins, Erythrobastosis Fetalis, Effect of the Mother's Antibodies on Fetus, Transfusion Reacti resulting from mismatched Bl Types, Nature of Antibodies)	Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semester mid-year and final exams
10	2	Knowledge understanding. subject-specific skills	Hemostasis and blood coagulation (Vascular Spasm, Formation o Platelet Plug, Mechanism of Platelet Plug, Mechanism of Bl Coagulation, Prevention of Clott in the Normal Vascular Syste Prevention of Blood Coagulat outside the Body, Blood Disease)	Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semester, mid-year and final exams
11	2	Knowledge understanding. subject-specific skills	Cardiovascular system: Blood vessels (Heart: Layers, Valves, Actions of heart, Blood Vessels, Division of circulation, Properties of Cardiac Muscle, Action Potential and Ionic Basis, Conductive system of Human Heart)	Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semester, mid-year and final exams
12	2	Knowledge understanding. subject-specific skills	Cardiovascular system: Blood pressure (Cardiac Cycle, Heart Sour Cardiac Output, Heart Rate Regulation, Arterial Blood Press and Regulation of ABP Ven Pressure and Capillary Press Arterial Pulse and Venous Pu Regional Circulation)	Problembased learning, collaboration, discussion, debriefing, information review, practical research,	Short, semester mid-year and final exams

				computer-	
				based	
				learning.	
13	2	Knowledge	Cardiovascular system	Problem-	Short, semester
		understanding.	(Electrocardiogram,	based	mid-year and
		subject-specific skills	Hemorrhage,	learning,	final exams
		SKIIIS	Circulatory Shock and Heart Fail	collaboratio	
			Cardiovascular Adjustments dur	n,	
			Exercise)	discussion,	
			,	debriefing,	
				information	
				review,	
				practical research,	
				computer-	
				based	
				learning.	
14	2	Knowledge	Respiratory system (Types		Short, semester
	~	understanding.		based	mid-year and
		subject-specific	Respiration, Stages of Respirati	learning,	final exams
		skills	Respiratory tract, Non respirat	collaboratio	
			functions of respiratory tr	n,	
			Mechanics of Pulmon	discussion,	
			Ventilation, Types of Respirat	debriefing,	
			pressures, Factors causing	information	
			preventing collapsing tendency	review,	
			lungs)	practical	
				research, computer-	
				based	
				learning.	
15	2	Knowledge	Respiratory system: Lung	Problem-	Short, semester
		understanding.	volumes and capacities	based	mid-year and
		subject-specific	<u> </u>	learning,	final exams
		skills	(Compliance, Variation in	collaboratio	
			Compliance, The resistance and	n,	
			the work of breathing, Dead	discussion,	
			space, Lung volume and Lung	debriefing,	
			capacity, Ventilation,	information	
			Respiratory Protective Reflexes	review, practical	
			, Pulmonary function	research,	
			tests, Regulation of Respiration,	computer-	
			relationship between oral health	based	
			respiratory disease)	learning.	
16	2	Knowledge	Half-year Break	Problem-	Short, semester
	_	understanding.		based	mid-year and
		subject-specific		learning,	final exams
		skills		collaboratio	
				n,	
				discussion,	
				debriefing,	
				information review,	

				practical	
				research,	
				computer-	
				based	
				learning.	
17	2	Knowledge	SPECIAL SENSATION:	Problem-	Short, semester
		understanding.	Vision, Hearing, taste &	based	mid-year and
		subject-specific	<b>smell</b> (Structure of Eye, Visual	learning,	final exams
		skills	Process and Field of Vision,	collaboratio	
			Visual Pathway Pupillary	n,	
			Reflexes, Color Vision, and	discussion,	
			Errors of Refraction. Structure	debriefing,	
				information	
			of Ear and Auditory Pathway	review,	
			,Mechanism of Hearing and	practical	
			Auditory Defects, Sensation of Ta	research,	
			and Smell)	computer-	
				based	
10	2	V.,		learning.	Cl
18	2	Knowledge understanding.	Temperature of the Bo	Problem- based	Short, semester
		subject-specific	(Normal body Temperatu	learning,	mid-year and final exams
		skills	Physiological Variations of b	collaboratio	IIIIai exailis
			temperature, Heat Balance, H	n,	
			gain or heat production in the bo	discussion,	
			Heat loss from the body, Insul	debriefing,	
			System of the Body, Blood flow	information	
			the skin from the body core provi	review,	
			heat transfer, Regulation of b	practical	
			temperature, Mechanisms	research,	
			decrease or increase b	computer-	
			temperature, Sympath	based	
			"Chemical" Excitation of h	learning.	
			production)		
19	2	Knowledge	Urinary system (Parts of	Problem-	Short, semester
		understanding.	Renal system, The Kidney,	based	mid-year and
		subject-specific skills	Functions of kidneys,	learning,	final exams
		SKIIIS	• /	collaboratio	
			Components of kidney,	n,	
			Parenchyma of kidney, Nephron	discussion,	
			and Juxtaglomerular Apparatus,	debriefing,	
			Renal corpuscle, Structure of	information	
			renal	review,	
			corpuscle, Tubular portion	practical research,	
			nephron, Collecting duct)	computer-	
				based	
				learning.	
20	2	Knowledge	Urinary system: Urine	Problem-	Short, semester
		understanding.	<u> </u>	based	mid-year and
		subject-specific	formation (Mechanism of	learning,	final exams
		skills	urine formation, Glomerular	collaboratio	
			Filtration, Pressure determining	n,	
			filtration, Tubular	discussion,	
j	t		·		

I	ı	1		11.0	1
			Reabsorption, Tubular secretion 2	debriefing, information review,	
			48 Micturition, Nerve supply to uring bladder and sphincters, Reference of the second between the second bladder and sphincers.	practical research, computer- based	
			renal disease & oral health)	learning.	
21	2	Knowledge understanding. subject-specific skills	Endocrine System (Introduction, Endocrine glands, Hormones, Nature of Hormones, Classification of hormones, Hormone Secretors, Hormonal action Hormone receptors, Synthesis storage of hormones, Mechanism hormonal function, Measurement Hormone Concentrations in Blood)	Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semester mid-year and final exams
22	2	Knowledge understanding. subject-specific skills	Major Endocrine Glands (Oral manifestations of endocr dysfunction, Control Syste Involving Hypothalamus Pituitary glands, The pituitary glands Thyroid gland, Pancreas glands Adrenal glands)	information review, practical research, computerbased learning.	Short, semester mid-year and final exams
23	2	Knowledge understanding. subject-specific skills	Digestive system (The Functions of the digestive, Structural layers of digestive, Stomach, Secretions of the Stomach, Regulation of Stomach Secretion Mixing of Stomach Contestions of Emptying	Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semester mid-year and final exams
24	2	Knowledge understanding. subject-specific skills	<b>Digestive system</b> (small intestine, Secretions of the Small Intestine, Movement in the	Problem- based learning, collaboratio n,	Short, semester mid-year and final exams

	1	C11 T	J:	
25	2 Knowledge understanding. subject-specific skills	Small Intestine, Liver, Functions of the Liver, Pancreatic Secretions, Regulation of Pancreatic Secreti Large Intestine, Movment in Large Intestine Digesti Absorption, and Transport)  Muscular system: Muscle structure (Types, Structure, Microsco Structure, Muscle Physiolo Properties, Contraction contractile elements, To Electrical and Molecular Chan	discussion, debriefing, information review, practical research, computer- based learning.  Problem- based learning, collaboratio n, discussion, debriefing, information	Short, semester mid-year and final exams
		during Muscular Contraction)	review, practical research, computer- based learning.	
26	2 Knowledge understanding. subject-specific skills	Muscular system: Tone, contraction (Molecular Changes Dur Muscular Contracti Neuromuscular Juncti Neuromuscular Transmission Blockers, Nutrition and Metabol (Energy Requirements))	Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semester mid-year and final exams
	2 Knowledge understanding. subject-specific skills	(Nervous System Divisi Cranial nerves, Neuron a Neuroglia, Receptors, Ne impulse, Synapse a Neurotransmitters)	Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semester mid-year and final exams
28	2 Knowledge understanding. subject-specific skills	Nervous System (Reflex Activity, Somatosens System and Somatomotor Syst	Problem- based learning, collaboratio	Short, semester mid-year and final exams

			1	Dhysialasy of Dain)					
				Physiology of Pain)	n, discussion,	ı			
					-	1			
					debriefing, information	ı			
						ı			
					review,	ı			
					practical	ı			
					research,	ı			
					computer-	ı			
					based	ı			
Ļ	30		IVladge		learning.	Cl			
4	29	2	Knowledge understanding.	Reproductive system: Aging	1	Short, semester			
			subject-specific	reproductive system (M	1	mid-year and			
			skills	Reproductive System Fen	11-1	final exams			
				Reproductive System, Meio		ı			
				Aging and Reproductive system.	n, discussion,	ı			
					discussion, debriefing,	ı			
					information	ı			
						ı			
					review,	ı			
					practical	ı			
					research,	ı			
					computer- based	ı			
						i			
F	20		Knowledge	A	learning.	Chart compator			
3	30	2	understanding.	Aviation and Deep physiology	Problem-	Short, semester			
			subject-specific	(Body Response in high	based	mid-year and final exams			
			skills	altitudes, physiological Changes	learning, collaboratio	Illiai exams			
				in the Sea deep).		ı			
				Nutrition and metabolism (d	n, discussion,	ı			
				energy requirement, obesity	discussion, debriefing,	ı			
				fitness)	information	ı			
					review,	ı			
					practical	ı			
					research,	ı			
					computer-	ı			
					based	ı			
					learning.	ı			
T	T ab mum	Lan	1	Ctude unit title		1			
L	Lab num	lber		Study unit title					
L	1 Mid		Microscope						
L	2 Col		Collection of Blood Samples						
L	3	Blo	Blood Smears						
L	4 Fur		Functions of Saliva & Taste Sensation						
L	5 Stim		nulation and co	llection of salivary secretion					
Ī	6 Sep		Separation of blood samples						
L									
L	7	Diff	ferential WBCs						
-	7 8		ferential WBCs cal Count of WBC	Cs					

9	Total Count of RBCs
10	
10	Blood groups
11	Estimation of Hemoglobin
12	Bleeding and clotting time
13	Self-Monitoring of blood glucose test
14	Measurement of blood pressure &pulse rate
15	Effect of exercise on blood pressure and respiratory rate
16	Mid Exam
17	Physiology of vision test
18	Physiology of hearing test
19	Physiology of Smell sensation
20	Measurement of body temperature
21	Thyroid function (Body mass index)
22	Thyroid function (Body mass index)
23	Resuscitation & Artificial respiration
24	Resuscitation & Artificial respiration
25	Physiology of Skeletal muscles
26	Physiology of Skeletal muscles
27	hysiology of Skeletal muscles
28	Examination of reflexes (Motor Function)
29	Seminars and examinations
30	Seminars and examinations

- 10 degrees of first semester: 8 degrees of short and semester exams and two degrees of oral exam
- $10\ degrees$  of second semester:  $8\ degrees$  of short and semester exams and two degrees of oral exam
- 20 degrees of mid-year
- 60 degrees of final exam

# 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	Guyton and Hall Medical physiology 12th edition
Recommended books and references (scientific	
journals, reports)	
Electronic References, Websites	

#### 1. Course Name:

#### **Baath crimes**

#### 2. Course Code:

#### 3. Semester / Year:

# Two semesters – second year

# 4. Description Preparation Date:

#### 2024-2025

#### 5. Available Attendance Forms:

All students attend the classroom

6. Number of Credit Hours (Total) / Number of Units (Total)

30h/2unites

# 7. Course administrator's name (mention all, if more than one name)

Name: Ghassan kadhim Ghayd

Email::Ghassan.kadhim@mu.edu.iq

#### 8. Course Objectives

Course Objectives	<ul> <li>Introducing the crimes of the Baath Party</li> </ul>
	Rejecting deviant thought
	<ul> <li>Spreading a culture of moderation</li> </ul>

# 9. Teaching and Learning Strategies

#### Strategy

Knowledge and understanding

- Thinking and deduction.
- Stimulus and response method
- Long, short and semester exams thinking skills

# 10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	1	Rejecting deviant thought and practices	Chapter one A general introduction to the importance of the topic of Baath crimes	Problem-based learning, collaboration, discussion, debriefing, information review, practic research, computer-base	

	<u> </u>	1	<u> </u>	1 ,	
				learning.	
2	1	Rejecting	Baath cri	Problem-based	Direct questions
		deviant	according to	learning,	-Rapid exams
		thought and	law of the Ir	collaboration,	-Reports.
		practices	Supreme Crim	discussion,	-Monthly exams
			Court	debriefing,	- Mid-year exam
			2005	information	
				review, pract	
				research,	
				computer-base	
				learning.	
3	1	Rejecting	The concept	Problem-based	Direct questions
3	1	deviant	of crimes and	learning,	-Rapid exams
		thought and	their types	collaboration,	-Reports.
		practices	then types	discussion,	-Monthly exams
		practices		debriefing,	- Mid-year exam
				information	- Mid-year exam
				review, pract	
				research,	
				computer-base	
				learning.	
4	1	Rejecting	<b>Definition</b> of	Problem-based	Direct questions
4	1	deviant	crime	learning,	-Rapid exams
		thought and	Crimic	collaboration,	-Reports.
		practices		discussion,	-Monthly exams
		practices		debriefing,	- Mid-year exam
				information	Miu-yeai exaiii
				review, pract	
				research,	
				computer-base	
				learning.	
5	1	Rejecting	Crime	Problem-based	Direct questions
3	1	deviant	departments	learning,	-Rapid exams
		thought and	acpui illiciius	collaboration,	-Reports.
		practices		discussion,	-Monthly exams
		practices		debriefing,	- Mid-year exam
				information	Iu yeui exaiii
				review, pract	
				research,	
				computer-base	
				learning.	
	1	Daigatin =	Dooth aut		Divost questions
6	1	Rejecting	Baath crimes	Problem-based	Direct questions
		deviant	according to	learning,	-Rapid exams
		thought and	documentatio	collaboration,	-Reports.
		practices	n by the Iraqi	discussion,	-Monthly exams
			Supreme	debriefing,	- Mid-year exam

			1	Ţ	
			Criminal	information	
			Court	review, pract	
			Types of	research,	
			international	computer-base	
			crimes	learning.	
7	1	Rejecting	Decisions	Problem-based	Direct questions
-		deviant	issued by the	learning,	-Rapid exams
		thought and	Iraqi	collaboration,	-Reports.
		practices	Supreme	discussion,	-Monthly exams
			Criminal	debriefing,	- Mid-year exam
			Court	information	· ·
				review, pract	
				research,	
				computer-base	
				learning.	
				icai iiiig.	
8	1	Rejecting	Chapter II	Problem-based	Direct questions
O	1	deviant	Psychological	learning,	-Rapid exams
		thought and	and social	collaboration,	-Reports.
		practices	crimes and	discussion,	-Monthly exams
		practices	their effects	debriefing,	- Mid-year exam
			men enecs	information	- Miu-yeai exalli
				review, pract	
				research,	
				computer-base	
		77.4		learning.	
9	1	Rejecting	The most	Problem-based	_
		deviant	prominent	learning,	-Rapid exams
		thought and	violations of	collaboration,	-Reports.
		practices	the Baath	discussion,	-Monthly exams
			Party	debriefing,	- Mid-year exam
				information	
				review, pract	
				research,	
				computer-base	
				learning.	
10	1	Rejecting	Psychological	Problem-based	Direct questions
_ ~		deviant	crimes	learning,	-Rapid exams
		thought and		collaboration,	-Reports.
		practices		discussion,	-Monthly exams
				debriefing,	- Mid-year exam
				information	-
				review, pract	
				research,	
				computer-base	
				learning.	
11	1	Rejecting	Mechanisms	Problem-based	Direct questions
11	1	deviant	of	learning,	-Rapid exams
		thought and	psychological	collaboration,	-Reports.
		practices	crimes	discussion,	-Monthly exams
		practices	Cimies	-	
				debriefing,	- Mid-year exam
				information	
				review, pract	
				rocoarch	
				research, computer-base	

				learning.	
				3	
12	1	Rejecting	Psychological	Problem-based	Direct questions
12	1	deviant	effects of	learning,	-Rapid exams
		thought and	crimes	collaboration,	-Reports.
		practices		discussion,	-Monthly exams
				debriefing,	- Mid-year exam
				information	
				review, pract research,	
				computer-base	
				learning.	
13	1	Rejecting	Social crimes	Problem-based	-
		deviant		learning,	-Rapid exams
		thought and practices		collaboration, discussion,	-Reports. -Monthly exams
		practices		debriefing,	- Mid-year exam
				information	May year exam
				review, pract	
				research,	
				computer-base	
				learning.	
14	1	Rejecting deviant	Militarization	Problem-based	Direct questions
		thought and	of society	learning, collaboration,	-Rapid exams -Reports.
		practices		discussion,	-Monthly exams
				debriefing,	- Mid-year exam
				information	
				review, pract	
				research, computer-base	
				learning.	
15	1	Rejecting	The Baath	Problem-based	Direct questions
	_	deviant	regime's	learning,	-Rapid exams
		thought and	position on	collaboration,	-Reports.
		practices	religion	discussion,	-Monthly exams - Mid-year exam
				debriefing, information	- Mid-year exam
				review, pract	
				research,	
				computer-base	
4.6	4	D : 4:	<b>T7° 1</b> 4°	learning.	Discort and discort
16	1	Rejecting deviant	Violating Iraqi laws	Problem-based learning,	Direct questions -Rapid exams
		thought and	11 aqı laws	collaboration,	-Rapid exams -Reports.
		practices		discussion,	-Monthly exams
		_		debriefing,	- Mid-year exam
				information	
				review, pract	

		I			
				research,	
				computer-base	
				learning.	
17	1	Rejecting	<b>Examples</b> of	Problem-based	Direct questions
		deviant	human rights	learning,	-Rapid exams
		thought and	violations and	collaboration,	-Reports.
		practices	crimes of	discussion,	-Monthly exams
			power	debriefing,	- Mid-year exam
				information	
				review, pract	
				research,	
				computer-base	
				learning.	
18	1	Rejecting	Examples of	Problem-based	<del>-</del> -
		deviant	decisions	learning,	-Rapid exams
		thought and	regarding	collaboration,	-Reports.
		practices	political and	discussion,	-Monthly exams
			military	debriefing,	- Mid-year exam
			violations of	information	
			the regime	review, pract	
			Resurrection	research,	
				computer-base	
				learning.	71
19	1	Rejecting	Prison and	Problem-based	-
		deviant	detention	learning,	-Rapid exams
		thought and	places of the	collaboration,	-Reports.
		practices	Baath regime	discussion,	-Monthly exams
				debriefing,	- Mid-year exam
				information	
				review, pract	
				research,	
				computer-base	
20	1	Dejecting	Chapter III	learning.	Direct questions
20	1	Rejecting deviant	Environment		-
		thought and	al crimes of	learning,	-Rapid exams
		practices	the Baath	collaboration, discussion,	-Reports. -Monthly exams
		practices	regime in	debriefing,	- Mid-year exam
			Iraq	information	Miu-yeai exam
				review, pract	
				research,	
				computer-base	
				learning.	
21	1	Rejecting	Military and	Problem-based	Direct questions
41	1	deviant	radioactive	learning,	-Rapid exams
		thought and	contaminatio	collaboration,	-Reports.
		practices	n and mine	discussion,	-Monthly exams
		Practices	explosions	debriefing,	- Mid-year exam
			OIL DIGITO	information	I'd year exam
				review, pract	
				research,	
				computer-base	
				learning.	
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22	1	Rejecting deviant thought and practices	Destruction of cities and villages (scorched earth policy)	learning, collaboration, discussion, debriefing, information review, pract research, computer-base learning.	
23	1	Rejecting deviant thought and practices	Drying the marshes	Problem-based learning, collaboration, discussion, debriefing, information review, pract research, computer-base learning.	
24	1	Rejecting deviant thought and practices	Razing palm groves, trees and crops	Problem-based learning, collaboration, discussion, debriefing, information review, pract research, computer-base learning.	-Rapid exams -Reports. -Monthly exams - Mid-year exam
25	1	Rejecting deviant thought and practices	the fourth chapter Mass grave crimes	Problem-based learning, collaboration, discussion, debriefing, information review, pract research, computer-base learning.	
26	1	Rejecting deviant thought and practices	The events of the genocide graves committed by the Baathist regime	Problem-based learning, collaboration, discussion, debriefing, information review, pract research, computer-base learning.	-Rapid exams -Reports. -Monthly exams - Mid-year exam

27	1	Rejecting deviant thought and practices	Chronological classification of genocide graves for the period from 1966-2003	Problem-based learning, collaboration, discussion, debriefing, information review, pract research, computer-base learning.	Direct questions -Rapid exams -ReportsMonthly exams - Mid-year exam
28	1	Rejecting deviant thought and practices	A general view of the classification of Baathist violations and crimes	Problem-based learning, collaboration, discussion, debriefing, information review, pract research, computer-base learning.	Direct questions -Rapid exams -ReportsMonthly exams - Mid-year exam
29	1	Rejecting deviant thought and practices	Lessons learned from the medical approach of the Baath regime	Problem-based learning, collaboration, discussion, debriefing, information review, pract research, computer-base learning.	Direct questions -Rapid exams -ReportsMonthly exams - Mid-year exam
30	1	Rejecting deviant thought and practices	Ways to achieve peace and prevent the recurrence of the negatives of Baathist rule	Problem-based learning, collaboration, discussion, debriefing, information review, pract research, computer-base learning.	Direct questions -Rapid exams -ReportsMonthly exams - Mid-year exam -final exam

Score distribution out of 100:

(5 marks) First semester: (2.5 marks) short exams and attendance, (2.5 marks) reports.

(20 marks) Mid-year exam.

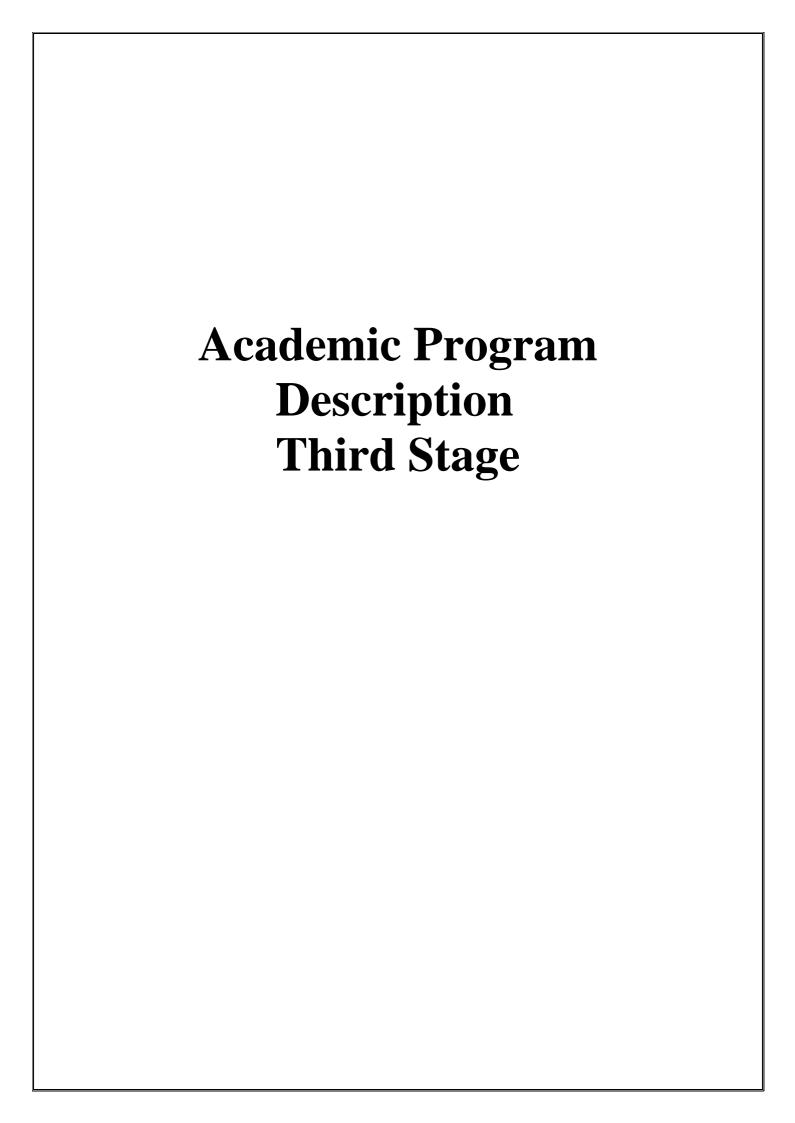
(5 marks) Second semester: (2.5 marks) short exams and attendance, (2.5 marks) reports.

(70 marks) Final exam

# 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Judge for the crimes of the Baath Party regime in Iraq/ Issued by the Ministry of Higher Education
Main references (sources)	-Ali Hanoush, Iraq: Present Problems and Options the future. 2- Qais Nasser et al., The cognitive foundation

	of a studyCrimes, Baath Party, Dar Al-Kafeel, Karbala, 2023.
Recommended books and references (scientific journals, reports)	Miranda Sissons, Abdul Razzaq Al-Saadi, Arth Murr Lessons from the de-Baathification process 2004-2012,Issued by the International Center for Transitional Justice 2013.
Electronic References, Websites	Website: The Iraqi Center for Documentation Extremist Crimes: https://iraqicenter-fdec.org/archives/5018



Course Name:					
Community de					
Course Code:					
318CM					
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2024-2025	reparation Date:				
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90 hours/4 u		) / Number of Office (Total)			
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	nts information ac achieve the goal	out identifying and measuring oral	uiseases in the		
		hrough preventive programs			
r revenuing ans	scases in society t	mough preventive programs			
Course Object	tives			ı	
Weeks	Hours	Unit or subject name	Required	Learning	Evolution
Weeks	Hours	Unit or subject name	Learning	Learning method	Evolution method
Weeks	Hours	Unit or subject name			
Weeks	Hours	Unit or subject name	Learning		
Weeks	Hours	Unit or subject name	Learning		
Weeks	Hours	Unit or subject name	Learning		
Weeks			Learning Outcomes	method	method
	Hours 3	- Dental public health	Learning Outcomes Knowledge and	method	method Short,
		- Dental public health -Public health	Learning Outcomes  Knowledge and understanding.	method	Short, semester,
		- Dental public health -Public health definition.	Learning Outcomes  Knowledge and understanding. subject-specific	method  Theoretical lecture using	Short, semester, mid-year an
		- Dental public health -Public health definitionDental Public health	Learning Outcomes  Knowledge and understanding.	method	Short, semester, mid-year ar final
		- Dental public health -Public health definition.	Learning Outcomes  Knowledge and understanding. subject-specific	method  Theoretical lecture using	Short, semester, mid-year an
		- Dental public health -Public health definitionDental Public health	Learning Outcomes  Knowledge and understanding. subject-specific	Theoretical lecture using Power point,	Short, semester, mid-year ar final
		- Dental public health -Public health definitionDental Public health definition - Community Dentistry.	Learning Outcomes  Knowledge and understanding. subject-specific	Theoretical lecture using Power point, Problembased	Short, semester, mid-year ar final
		- Dental public health -Public health definitionDental Public health definition - Community Dentistry Dental public health	Learning Outcomes  Knowledge and understanding. subject-specific	Theoretical lecture using Power point, Problembased learning,	Short, semester, mid-year ar final
		- Dental public health -Public health definitionDental Public health definition - Community Dentistry Dental public health practitioners.	Learning Outcomes  Knowledge and understanding. subject-specific	Theoretical lecture using Power point, Problembased learning, collaboration,	Short, semester, mid-year ar final
		- Dental public health -Public health definitionDental Public health definition - Community Dentistry Dental public health practitioners Public health impact	Learning Outcomes  Knowledge and understanding. subject-specific	Theoretical lecture using Power point, Problembased learning, collaboration, discussion,	Short, semester, mid-year ar final
		- Dental public health -Public health definitionDental Public health definition - Community Dentistry Dental public health practitioners Public health impact of dental disease.	Learning Outcomes  Knowledge and understanding. subject-specific	Theoretical lecture using Power point, Problembased learning, collaboration, discussion, debriefing,	Short, semester, mid-year ar final
		- Dental public health -Public health definitionDental Public health definition - Community Dentistry Dental public health practitioners Public health impact of dental disease Tools of dental public	Learning Outcomes  Knowledge and understanding. subject-specific	Theoretical lecture using Power point, Problembased learning, collaboration, discussion, debriefing, information	Short, semester, mid-year ar final
		- Dental public health -Public health definitionDental Public health definition - Community Dentistry Dental public health practitioners Public health impact of dental disease Tools of dental public health	Learning Outcomes  Knowledge and understanding. subject-specific	Theoretical lecture using Power point, Problembased learning, collaboration, discussion, debriefing, information review,	Short, semester, mid-year ar final
		- Dental public health -Public health definitionDental Public health definition - Community Dentistry Dental public health practitioners Public health impact of dental disease Tools of dental public	Learning Outcomes  Knowledge and understanding. subject-specific	Theoretical lecture using Power point, Problembased learning, collaboration, discussion, debriefing, information review, practical	Short, semester, mid-year ar final
		- Dental public health -Public health definitionDental Public health definition - Community Dentistry Dental public health practitioners Public health impact of dental disease Tools of dental public health	Learning Outcomes  Knowledge and understanding. subject-specific	Theoretical lecture using Power point, Problembased learning, collaboration, discussion, debriefing, information review,	Short, semester, mid-year ar final
		- Dental public health -Public health definitionDental Public health definition - Community Dentistry Dental public health practitioners Public health impact of dental disease Tools of dental public health 1-Epidemiology. 2-Biostatistics.	Learning Outcomes  Knowledge and understanding. subject-specific	Theoretical lecture using Power point, Problembased learning, collaboration, discussion, debriefing, information review, practical	Short, semester, mid-year ar final
		- Dental public health -Public health definitionDental Public health definition - Community Dentistry Dental public health practitioners Public health impact of dental disease Tools of dental public health 1-Epidemiology. 2-Biostatistics. 3-Social sciences.	Learning Outcomes  Knowledge and understanding. subject-specific	Theoretical lecture using Power point, Problembased learning, collaboration, discussion, debriefing, information review, practical research, computer-	Short, semester, mid-year ar final
		- Dental public health -Public health definitionDental Public health definition - Community Dentistry Dental public health practitioners Public health impact of dental disease Tools of dental public health 1-Epidemiology. 2-Biostatistics. 3-Social sciences. 4-Principles of	Learning Outcomes  Knowledge and understanding. subject-specific	Theoretical lecture using Power point, Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased	Short, semester, mid-year ar final
		- Dental public health -Public health definitionDental Public health definition - Community Dentistry Dental public health practitioners Public health impact of dental disease Tools of dental public health 1-Epidemiology. 2-Biostatistics. 3-Social sciences.	Learning Outcomes  Knowledge and understanding. subject-specific	Theoretical lecture using Power point, Problembased learning, collaboration, discussion, debriefing, information review, practical research, computer-	Short, semester, mid-year ar final

2	2	Dationt's setting 0	Va ovul od so on d	ml	Cl
2	3	Patient's setting &	Knowledge and understanding.		Short,
		examination- <b>Dental</b>	subject-specific	lecture using	semester,
		public care	skills		mid-year ar
		<ul> <li>Steps in planning</li> </ul>		Problem-	final
		dental care for the		based	exams
		patient		learning,	
		- Steps in planning		collaboration,	
		dental care for the		discussion,	
		community		debriefing,	
		- Similarities between		information	
		personal and		review,	
		•		practical	
		community health care:		research,	
		- Differences between		computer-	
		private dental		based	
		practice and public		.learning	
		health dentistry			
3	3	Clinical examination	Knowledge and		Short,
		Epidemiology	understanding.	lecture using	semester,
		.Objectives of epidemiology - Components of -	subject-specific		mid-year ar
		epidemiological study	skills	Problem-	final
		Essential steps in an -		based	exams
		epidemiological		learning,	
		study		collaboration,	
		.Hypothesis -		discussion,	
		Population at risk		debriefing,	
		Morbidity		information	
		Measurements of disease -		review,	
		.frequency .Epidemiological approach		practical	
		- Measurement tools in		research,	
		epidemiology.		computer-	
		epiderniology.		based	
				.learning	
4	3	Epidemiological studies	Knowledge and		Short,
		Types of	understanding.	lecture using	semester,
		Epidemiological studies:	subject-specific	Power point,	mid-year ar
		Observational studies Types	skills	Problem-	final
		of		based	exams
		observational studies		learning,	
		- Descriptive studies.		collaboration,	
		-Analytical studies.		discussion,	
		Case control studies Cohort		debriefing,	
		studies		information	
				review,	
				practical	
				research,	
				computer-	
				based	
				.learning	
5	3	Experimental studies	Knowledge and		Short,
		-Intervention Types of	understanding.		semester,
		experimental studies	subject-specific	Power point,	mid-year ar
			skills	Problem-	final
				based	exams
				learning,	
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Periodontal Disease understanding. lecture using semest	er,
Periodontal Diseases- subject-specific Power point, mid-ye	ar ar
definition skills Problem- final	
tissues based exams	
Epidemiology-	
-Etiology of periodontal collaboration,	
discussion,	
debriefing,	
information	
review,	
practical	
research,	
computer-	
based	
learning	
	ort,
First of the first	
Constituents of tobacco	ar ar
smoke   Problem- Innai	
-Potentially malignant based exams	
lesions learning,	
-Levels of prevention for oral collaboration,	
cancer discussion,	
- Rehabilitation after Oral debriefing,	
Cancer   information	
review,	J
practical	
research,	

				computer- based .learning	
9	3	Indices used for assessment of periodontal disease - Oral Hygiene Indices: - Gingival inflammation indices - Periodontal indices	Knowledge and understanding. subject-specific skills	lecture using	Short, semester, mid-year ar final exams
10	3	Dental indices - Index - Uses of dental index - Classification of indices	Knowledge and understanding. subject-specific skills	Theoretical	Short, semester, mid-year ar final exams
11	3	Indices used for assessment of dental caries -DMF index -Principles in recording DMF index - Calculation of DMFT/DMFS - Dental caries severity index - dmf index	Knowledge and understanding. subject-specific skills	Theoretical lecture using	Short, semester, mid-year ar final exams

12	3	Dental fluorosis Indices for	Unaveladas and	Therestical	Clasart
12	3	assessment of	Knowledge and understanding.		Short,
		dental fluorosis	subject-specific		semester,
		dental hadrosis	skills	1 0 Wer point,	mid-year ar
			Simis	Problem-	final
				based	exams
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				.learning	
13	3	Biostatistics	Knowledge and		Short,
		- Data	understanding.		semester,
		<ul><li>Types of data</li><li>Methods of Data Collection</li></ul>	subject-specific	Tower points,	mid-year ar
		-Sampling Technique	skills	Problem-	final
		-Types of sample design		based	exams
		Types of sample assign		learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				.learning	
141	3	Data presentation	Knowledge and		Short,
		- Methods of data	understanding.	lecture using	semester,
		presentation -The tabulation of data.	subject-specific skills	Power point,	mid-year ar
		-The graphical	SKIIIS	Problem-	final
		representation of data		based	exams
		Springer of Gara		learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
1 =		Maria	**	.learning	27
15	3	Measures of central	Knowledge and		Short,
		tendency & dispersion -Measures of central	understanding.		semester,
		tendency	subject-specific skills	rower points,	mid-year ar
		-Measures of dispersion.	381113	Problem-	final
				based	exams
				learning,	
				collaboration,	

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				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				.learning	
16	3	Fluoridation as a public	Knowledge and		Short,
	-	health measure	understanding.	lecture using	semester,
		- History:	subject-specific	Dower noint	mid-year ar
		- Sources of Fluoride	skills	Problem-	final
		-Water fluoridation		based	
		-Types of fluoride			exams
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				.learning	
17	3	Fluoridation Mechanism and	Knowledge and		Short,
		Effects	understanding.	lecture using	semester,
		Mechanism of action	subject-specific	Power noint	mid-year ar
		-Anti-caries effects of	skills	Problem-	final
		fluoride.		based	exams
		Metabolism of fluoride.		learning,	CAUIIIS
		Dental Fluorosis		collaboration,	
		-Side effects of fluoride		· ·	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				.learning	
18	3	Occupational hazards in	Knowledge and		Short,
		dentistry	understanding.	lecture using	semester,
		- Major occupational hazards	subject-specific	Power point,	mid-year ar
		-Biological health hazards	skills	Problem-	final
		Physical hazards		based	exams
		-Chemical hazards		learning,	
		-Musculoskeletal disorders		collaboration,	
		and diseases of		discussion,	
		the peripheral nervous		debriefing,	
		system		information	
		-Hearing loss			
1		-Radiation exposure		review,	
l l					
		-Stress		practical	
				research, computer-	

19 3 Environment and health - Environment - Physical environment: - Biological environment: - Psychological environment - Environment indicators  - Environment - Problem- based learning, collaboration, discussion, debriefing, information review, practical research, computer- based learning  20 3 Effects of air pollution on health  - Environment and health - Environment - Environment: - Rivironment and health - Environment - Environment: - Rivironment - Environment - Environ			-Other risks		la a a a d	
19 3 Environment and health - Environment - Physical environment: - Biological environment: - Psychological environment: - Psychological environment - Environment - Environment al indicators  - Environment - Environmental indicators  20 3 Effects of air pollution on health - Prevention and control of air pollution - Effects of radiation - Noise pollution - Noise pollution - Robert feets of radiation - Noise pollution - Environmental indicators  -			-Other risks			
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- Environment -Physical environment: -Biological environment: -Psychological environment - Environment a indicators  - Environmental indicator	19	3	Environment and health	Knowledge and	Theoretical	Short.
-Physical environment: -Biological environment: -Psychological environment - Environmental indicators  20 3 Effects of air pollution on health -Prevention and control of air pollution - Effects of radiation -Noise pollution -Noise pollution -Noise pollution -Noise pollution - Rowledge and understanding subject-specific skills - Prevention and control of air pollution - Rowledge and understanding subject-specific skills - Problem-based learning - Problem-based learning - Problem-based learning - Rower point, Problem-based learning - Problem-based learning - Problem-based learning - Rower point, Problem-based learning - Problem-based learning - Rower point, odiscussion, debriefing, information review, practical research, computer-based				understanding.	lecture using	
-Biological environment: -Psychological environment - Environmental indicators  20 3 Effects of air pollution on health -Prevention and control of air pollution - Effects of radiation -Noise pollution - Noise pollution - Beffects of air pollution - Reflects of radiation - Noise pollution - Reflects of radiation - Reflects of air pollution on dearning, collaboration, discussion, debriefing, information review, practical research, computer-based			-Physical environment:	subject-specific	Power point.	
-Psychological environment - Environmental indicators  20 3 Effects of air pollution on health -Prevention and control of air pollution - Effects of radiation -Noise pollution			<u> </u>	skills	Problem-	-
environment - Environmental indicators  environmental indicators  - Environmental indicators  environmental indicators  learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning - Effects of air pollution on health - Prevention and control of air pollution - Effects of radiation - Noise pollution  - Noise pollution  - Noise pollution  enview, practical research, computer-based    Collaboration, discussion, debriefing, information review, practical research, computer-based						
- Environmental indicators  - Collaboration, discussion, debriefing, information review, practical research, computer-based  - Effects of air pollution on health - Prevention and control of air pollution - Effects of radiation - Noise pollution  - Noise pollution  - Noise pollution  - Noise pollution  - Effects of radiation - Noise pollution - Effects of radiation - Noise pollution  - Effects of radiation - Noise pollution  - Effects of radiation - Noise pollution  - Effects of radiation - Noise pollution  - Effects of radiation - Noise pollution  - Effects of radiation - Noise pollution - Effects of radiation - Noise pollution  - Effects of radiation - Noise pollution - Effects of radiation - Noise pollution - Effects of air pollution on dunderstanding lecture using subject-specific power point, Problem-based - Problem-based - Environmental review, problem-based - Effects of air pollution on dunderstanding lecture using subject-specific power point, Problem-based - Environmental review, problem-based - Effects of air pollution on dunderstanding lecture using subject-specific power point, Problem-based - Environmental review, problem-based - Effects of air pollution on dunderstanding lecture using subject-specific power point, Problem-based - Environmental review, problem-based - Effects of air pollution on dunderstanding lecture using subject-specific power point, Problem-based - Environmental review of the Effects of air power p					learning,	
discussion, debriefing, information review, practical research, computer-based learning  20 3 Effects of air pollution on health -Prevention and control of air pollution - Effects of radiation -Noise pollution  -Noise pollution  Browledge and understanding, subject-specific skills  Short, semester, mid-year a final exams  Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based			- Environmental indicators		_	
20 3 Effects of air pollution on health -Prevention and control of air pollution - Effects of radiation -Noise pollution  - Noise pollution  - Noi					-	
20 3 Effects of air pollution on health -Prevention and control of air pollution - Effects of radiation -Noise pollution  -Noise pollution						
20 3 Effects of air pollution on health -Prevention and control of air pollution - Effects of radiation -Noise pollution  -Noise pollution					_	
20 3 Effects of air pollution on health -Prevention and control of air pollution - Effects of radiation -Noise pollution -Noi					review,	
20 3 Effects of air pollution on health -Prevention and control of air pollution - Effects of radiation -Noise pollution -Noi						
20 3 Effects of air pollution on health -Prevention and control of air pollution - Effects of radiation -Noise pollution -Noi					research,	
20 3 Effects of air pollution on health -Prevention and control of air pollution - Effects of radiation -Noise pollution -Noi					computer-	
20 3 Effects of air pollution on health -Prevention and control of air pollution - Effects of radiation -Noise pollution -Noi					based	
health -Prevention and control of air pollution - Effects of radiation -Noise pollution  Noise pollution - In the pollution of air pollution of air pollution - In the pollution of air pollution of air pollution - In the pollution of air pollution of air pollution - In the pollution of air pollution of air pollution - In the pollution of air pollution of air pollution - In the pollution of air pollution of air pollution - In the pollution of air pollution of air pollution - In the pollution of air pollution of air pollution - In the pollution of air pollution of air pollution - In the pollution of air pollution of air pollution of air pollution - In the pollution of air po						
-Prevention and control of air pollution - Effects of radiation - Noise pollution  -Noise pollution  -	20	3				Short,
- Effects of radiation -Noise pollution  Froblem- based learning, collaboration, discussion, debriefing, information review, practical research, computer- based  Froblem- based final exams				understanding.	lecture using	
- Effects of radiation -Noise pollution  - Noise pollution  - Roblem-  based    exams    - Effects of radiation    - Dased    -				subject-specific	Power point,	mid-year ar
-Noise pollution  -Noise pollution    based learning, collaboration, discussion, debriefing, information review, practical research, computer-based				SKIIIS		final
learning, collaboration, discussion, debriefing, information review, practical research, computer- based						exams
discussion, debriefing, information review, practical research, computer- based			r totoo ponanon		_	
debriefing, information review, practical research, computerbased					-	
information review, practical research, computer-based						
review, practical research, computer- based						
practical research, computer-based						
research, computer-based						
computer- based					-	
based						
	21	3	RiomechanicsSchool Dental	Knowledge and		Short,
Health Program    Continue of the continue of	<u> </u>	3				
Downson of Colorable 11 1 12						mid-year ar
Program Skills Problem final			Program		1 ower points,	-
- Guidelines for an ideal hased evams						
School dental learning						
program - School dental survey collaboration,					_	
- phases in school oral discussion,					-	
health program debriefing,					•	
information			. 5		_	
review,					review,	
practical					practical	
research,					research,	
computer-					computer-	
based						
learning .learning						

22	2		77 1 1 1	mı ı ı	G1 .
22	3	Treatment need and	Knowledge and		Short,
		demand - Need	understanding.		semester,
		<ul> <li>categories of need</li> </ul>	subject-specific skills	1 over point,	mid-year ar
		- Demand	SKIIIS	Problem-	final
		- Factors affecting		based	exams
		dental demands		learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				.learning	
23	3	Dental manpower	Knowledge and		Short,
		- Manpower definition	understanding.	lecture using	semester,
		- Dental manpower	subject-specific	Power point	mid-year ar
		- Manpower definition	skills	Problem-	final
		wampower dermitton		based	exams
				learning,	CHAINS
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
24	3		Knowledge and		Short,
2 1	3	thics in dentistry	understanding.		semester,
		-Definition of ethics	subject-specific	Dower point	mid-year ar
		- Dentistry as a profession	skills	Problem-	final
		- Ethical principles		based	
		Zunear principies			exams
				learning, collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
25	2	1 14 6	77 1 1	.learning	GI.
25	3	health care for	Knowledge and		Short,
		special populations	understanding.	lecture using	semester,
		Elderly people:	subject-specific skills		mid-year ar
		The main oral	SKIIIS	Problem-	final
		ffects of aging		based	exams
		Pregnant women		learning,	
		Special Care		collaboration,	

entistry - Patients with special health care needs information review, practical research, computer-	
health care needs information review, practical research,	
review, practical research,	
practical research,	
research,	
research,	
based	
learning	
	Chart
(TAAL	Short,
	semester,
al-illa l'ower point, in	mid-year ar
Problem-   II	final
based ex	exams
learning,	
collaboration,	
discussion,	
debriefing,	
information	
review,	
practical	
research,	
computer-	
based	
learning	
27 3 forensic dentistry Knowledge and Theoretical	Short,
-Introduction understanding. lecture using se	semester,
-Application of forensic subject-specific Power point, m	mid-year ar
	final
-Person identification. based ex	exams
-Dental identification.	
collaboration,	
discussion,	
debriefing,	
information	
review,	
practical	
research,	
computer-	
based	
.learning	
28 3 Dental auxiliary personal Knowledge and Theoretical	Short,
-Introduction. understanding. lecture using se	semester,
	mid-year ar
	final
* Operatory auxiliary. based ex	exams
-Four handed learning,	
-i our rianded	
relationship. collaboration, discussion,	
debriefing,	
information	
review,	
practical	
practical research, computer-	I

				based .learning	
30	3	Computed tomography(indications ,strength, limitations)	Knowledge and understanding, subject-specific skills	lecture using	

Lab number	Study unit title
1	Seminar 1 (Community dentistry)
2	Seminar 2 (Patient's setting & examination)
3	Seminar 3 (Clinical examination)
4	Seminar 4 (Basic tooth numbering)
5	Seminar 5 (Clinical examination)
6	Seminar 6 (Indices)
7	Dental caries
8	Theories of caries formation
9	Dental caries indices
10	Clinical examination
11	Clinical examination
12	Deciduous teeth
13	Clinical examination
14	Clinical examination
15	Prevention of dental caries / part 1
16	Prevention of dental

	caries / part 2
17	Fluoride
18	Periodontal diseases
19	Indices for plaque assessment
20	Clinical examination
21	Clinical examination
22	Indices for calculus assessment
23	Clinical examination
24	Clinical examination
25	Gingival disease indices
26	Clinical examination
27	Clinical examination
28	Periodontal diseases prevention
29	Tooth brushing
30	Clinicassistant

#### 11. Course Evaluation:

degrees of first semester 10 degrees of second semester 10 degrees of mid-year 20 degrees of final exam 60

### 12. Learning and Teaching Resources

	Required textbooks (curricular books, if any)
Preventive and Community Dentistry Public Health DentistryThird Edition A Textbook of Public Healt Dentistry, CM Marya, JAYPEE BROTHERS MEDIC PUBLISHERS (P) LTD,2011	Main references (sources)
	Recommended books and references (scientific journals, reports)
	Electronic References, Websites

Course Name:					
Oral and maxill	ofacial radiolog	у			
Course Code:					
320 RL					
Semester / Year					
2 Semester/ thir					
Description Pre	paration Date:				
Available Atten	dance Forms:				
Theoretical lect		al labratory			
		) / Number of Units (Total)			
90 hours/4 un		, radioci of emis (rotal)			
		ention all, if more than one name)			
Name: Ahmed I					
Email: Ahmed.		u.ig			
		ualify dentists who are able to read a	and diagnose		
radiographs and		•	<i>S</i>		
		rectly and how to deal with radiation	n risks		
Course Objective	ves				
Weeks	Hours	Unit or subject name	Required	Learning	Evolution
			Learning	method	method
			Outcomes		
1	3	Production of radiation(x-ray	Knowledge and	Theoretical	Short,
•		machine, interaction of x-ray		lecture using	semester,
		with matter)	subject-specific	Decruie using	
		composition of matter	skills	1 ower point,	mid-year ar
		composition of matter	SKIIIS	Problem-	final
				based	exams
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
2	2	Films in a spin or (town a set or or	77 1 1	.learning	63
2	3	Film imaging (types of x-ray	Knowledge and		Short,
		films, processing cycle,dark	understanding.	U	semester,
		room, intensifying screen	subject-specific	1 over point,	mid-year ar
			skills	Problem-	final
				based	exams
				learning,	
				collaboration,	
			1	conaboration,	

	ı		1	1	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
	2			.learning	
3	3	Factors controlling x-ray	Knowledge and		Short,
		beam, - dosimetry and invers	understanding. subject-specific	lecture using	semester,
		-	skills	ronor points,	mid-year ar
		square low	Similar	Problem-	final
				based	exams
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer- based	
				learning.	
4	3	Projection jeometry	Knowledge and		Short,
1	3	(sharpness,	understanding.	lecture using	semester,
		distortion, image characterstic	subject-specific	Power point,	mid-year ar
		and	skills	Problem-	final
		- artifacts)		based	exams
		artifacts)		learning,	011011110
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				.learning	
5	3	Projection jeometry	Knowledge and		Short,
		(sharpness,	understanding.	lecture using	semester,
		distortion, image characterstic and	subject-specific skills	1 ower points,	mid-year ar
		artifacts)	SKIIIS	Problem-	final
				based	exams
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
İ	1		1	computer-	

				1 1	1
				based	
				.learning	
6	3	Safety and Protection (source	Knowledge and	Theoretical	Short,
		of exposure	understanding.	lecture using	semester,
		dose limits , exposure and ,	subject-specific	Power point,	mid-year ar
		risk and	skills	Problem-	final
		<ul> <li>reducing dental exposure)</li> </ul>		based	exams
				learning,	CAdilis
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review, practical	
				research,	
				computer-	
				based	
				learning	
7	3	intraoral projection	Knowledge and	Theoretical	Short,
/	3	(periapical, bitwing,	understanding.		-
		and occlusal radiography)	subject-specific	lecture using Power point,	semester,
		-	skills	Problem-	mid-year ar
					final
				based	exams
				learning,	
				collaboration,	
				discussion,	
				debriefing, information	
				review,	
				practical	
				research,	
				computer- based	
8	3	Digital radiography (strength,	Knowledge and	.learning Theoretical	Short,
	5	limitations	understanding.		
		, comparing with conventional	subject-specific	lecture using Power point,	semester, mid-year ar
		radiography and indications	skills	Problem-	final
				based	exams
				learning,	CXAIIIS
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning	

9	3	Patient's	Knowledge and	Theoretical	Chart
9	J	management(mangement of	understanding.		Short,
		pt.child, contrast media &	subject-specific		semester,
		localization	skills	Tower points,	mid-year ar
		technique	SKIIIS	Problem-	final
		toomiquo		based	exams
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				.learning	
10	3	Cephalometric imaging	Knowledge and		Short,
		(technique,	understanding.	lecture using	semester,
		indications, evaluation of	subject-specific	Power point,	mid-year ar
		the Image	skills	Problem-	final
				based	exams
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
11	3		Knowledge and		Short,
		Panoramic radiography	understanding.		semester,
		(principels,	subject-specific	Power noint	mid-year ar
		technique ,positin and	skills	Problem-	final
		interpretation)		based	exams
		, ,		learning,	CAUIIS
				collaboration,	,
				discussion,	,
				debriefing,	
				information	,
				review,	,
				practical	,
				research,	,
				computer-	
				based	,
12	3	Craniofacial imaging (types	Unovelodes and	.learning	Cl+
14	3	Craniofacial imaging (types, indication	Knowledge and understanding.		Short,
		and interpretation)	subject-specific		semester,
		and interpretation)	skills	Tower points,	mid-year ar
			SKIIIS	Problem-	final
		1	1	based	exams
1					CAGIIIS
				learning, collaboration,	CAUTIS

	1				
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				.learning	
13	3	CBCT (principles,	Knowledge and		Short,
		components, strength	understanding.	lecture using	semester,
		and limitations).	subject-specific	Power point,	mid-year ar
			skills	Problem-	final
				based	exams
				learning,	Chamb
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
4.41	2	ODOT / I'm to lead to the control of	** 1 1	.learning	<u> </u>
141	3	CBCT (clinical applications in	Knowledge and		Short,
		maxillofacial region, anatomy and	understanding.	lecture using	semester,
		interpretations)	subject-specific skills	rower points,	mid-year ar
		interpretations)	SKIIIS	Problem-	final
				based	exams
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				.learning	
15	3	Radiographic anatomy part1	Knowledge and	Theoretical	Short,
		(teeth,	understanding.	lecture using	semester,
		supporting dentoalv	subject-specific	Power point,	mid-year ar
		structures, maxilla	skills	Problem-	final
		and mid facial bones)		based	exams
				learning,	
				collaboration,	
				discussion,	
1					
				genrieting	l l
				debriefing, information	
				information	
				information review,	
				information review, practical	
				information review,	

Raddigraphic anatomy part 2(mandible, Tmj, base of skull, air way, restorative materials)	П	1			1 1	1
16 3 Raddigraphic anatomy part 2(mandible, Tmj, base of skull, air way, restorative materials)  17 3 Advanced imaging modalities (CT, MRI AND ULTRASOUND)  18 3 Radiography & Emplantology (modalities, indications)  19 4 Advanced imaging subject-specific skills  10 5 Advanced imaging subject-specific skills  10 6 Advanced imaging subject-specific skills  10 6 Advanced imaging subject-specific skills  10 7 Advanced imaging subject-specific skills  10 8 Advanced imaging subject-					based	
2(mandible, Tmj, base of skull, air way, restorative materials)  2 Advanced imaging modalities (CT, MRI AND ULTRASOUND)  3 Advanced imaging modalities (CT, MRI AND ULTRASOUND)  4 Radiography & Implantology (modalities, indications)  4 Radiography & Implantology (modalities, indications)  5 Radiography & Implantology (modalities, indications)  6 Radiography & Implantology (modalities, indications)  7 Radiography & Implantology (modalities, indications)  8 Radiography & Implantology (modalities, indications)  9 Radiography & Impla					.learning	
2(mandible, Tmj, base of skull, air way, restorative materials)  2 Advanced imaging modalities (CT, MRI AND ULTRASOUND)  3 Advanced imaging modalities (CT, MRI AND ULTRASOUND)  4 Radiography & Implantology (modalities, indications)  4 Radiography & Implantology (modalities, indications)  5 Radiography & Implantology (modalities, indications)  6 Radiography & Implantology (modalities, indications)  7 Radiography & Implantology (modalities, indications)  8 Radiography & Implantology (modalities, indications)  9 Radiography & Impla						
2(mandible, Tmj, base of skull, air way, restorative materials)  2 Advanced imaging modalities (CT, MRI AND ULTRASOUND)  3 Advanced imaging modalities (CT, MRI AND ULTRASOUND)  4 Radiography & Implantology (modalities, indications)  4 Radiography & Implantology (modalities, indications)  5 Radiography & Implantology (modalities, indications)  6 Radiography & Implantology (modalities, indications)  7 Radiography & Implantology (modalities, indications)  8 Radiography & Implantology (modalities, indications)  9 Radiography & Impla						
2(mandible, Tmj, base of skull, air way, restorative materials)  2 Advanced imaging modalities (CT, MRI AND ULTRASOUND)  3 Advanced imaging modalities (CT, MRI AND ULTRASOUND)  4 Radiography & Implantology (modalities, indications)  4 Radiography & Implantology (modalities, indications)  5 Radiography & Implantology (modalities, indications)  6 Radiography & Implantology (modalities, indications)  7 Radiography & Implantology (modalities, indications)  8 Radiography & Implantology (modalities, indications)  9 Radiography & Impla						
2(mandible, Tmj, base of skull, air way, restorative materials)  2 Advanced imaging modalities (CT, MRI AND ULTRASOUND)  3 Advanced imaging modalities (CT, MRI AND ULTRASOUND)  4 Radiography & Implantology (modalities, indications)  4 Radiography & Implantology (modalities, indications)  5 Radiography & Implantology (modalities, indications)  6 Radiography & Implantology (modalities, indications)  7 Radiography & Implantology (modalities, indications)  8 Radiography & Implantology (modalities, indications)  9 Radiography & Impla	16	3	Raddigraphic anatomy part	Knowledge and	Theoretical	Short
Tmj, base of skull, air way, restorative materials)  It is a materials)  Advanced imaging modalities(CT, MRI AND ULTRASOUND)  Advanced imaging modalities(CT, MRI AND ULTRASOUND)  Radiography & Implantology(modalities, indications)  Radiography						
way, restorative materials)    Skills   Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning information review, practical research, computer-based learning, collaboration, discussion, debriefing, indications)    Radiography & Indications   Knowledge and understanding, learning collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, described by the problem of the probl				subject-specific	O	
materials)    based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, indications)    Radiography & Knowledge and understanding, information review, practical research, computer-based learning, collaboration, discussion, debriefing, indications)    Radiography & Knowledge and understanding, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, debriefing, information review, practical research, computer-based lear			way,restorative		rower points,	-
learning, collaboration, discussion, debriefing, information review, practical research, computer-based Jearning.  Advanced imaging modalities(CT, MRI AND ULTRASOUND)  It arring a subject-specific skills  Radiography & Knowledge and understanding, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  Knowledge and understanding information review, practical research, computer-based learning.  Knowledge and understanding subject-specific skills  Knowledge and understanding subject-specific skills  Knowledge and understanding subject-specific skills  Froblem-based learning, collaboration, debriefing, information review, practical research, computer-based learning, collaboration, debriefing, information review, practical research, computer-based learning.			materials)			
collaboration, discussion, debriefing, information review, practical research, computer-based learning  Advanced imaging modalities (CT, MRI AND ULTRASOUND)  Remarks and the problem skills with the						CAUTIS
discussion, debriefing, information review, practical research, computer-based learning  17 3 Advanced imaging modalities(CT, MRI AND ULTRASOUND)  Rower point, semester, mid-year an final exams  18 3 Radiography & Indications)  Radiography & Indications  Radiography & Indications  Rowledge and understanding, subject-specific power point, semester, mid-year an final exams  Rowledge and understanding, information review, practical research, computer-based learning. Short, semester, mid-year an final exams  Rowledge and understanding, information review, practical guiderstanding, subject-specific power point, semester, mid-year an final exams  Rowledge and understanding, information review, practical learning, collaboration, discussion, debriefing, information review, practical research, computer-with the problem of the property of the p						
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Is 3 Radiography & Implantology(modalities, indications)  Radiography & Implantology(modalities, indications)  Radiography & Implantology(modalities, indications)  Research, computer-based learning.  Short, semester, mid-year are final exams  Radiography & Implantology(modalities, indications)  Radiography & Implantology(modalities, indications)  Radiography & Implantology(modalities, indications)  Research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.						
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learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning  18 3 Radiography & Knowledge and understanding subject-specific skills    Radiography & Knowledge and understanding subject-specific skills   Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-						
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indications)  subject-specific skills  Problembased learning, collaboration, discussion, debriefing, information review, practical research, computer-			&Implantology(modalities,	understanding.	lecture using	
skills Problembased based exams learning, collaboration, discussion, debriefing, information review, practical research, computer-						mid-year ar
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					based	
.learning					.learning	

19	3	Infection control(infection control in radiography clinic, protection of pt., protection of workers)	Knowledge and understanding. subject-specific skills	lecture using Power point, Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased .learning	Short, semester, mid-year ar final exams
20	3	Prescibing diagnostic imaging(radiologic examination and guide lines for ordering imaging)	Knowledge and understanding, subject-specific skills	lecture using	Short, semester, mid-year ar final exams
21	3	Radiographical interpretations of common diseases(interpretation of dental caries, and periodontal disease	Knowledge and understanding. subject-specific skills	Theoretical	Short, semester, mid-year ar final exams
22	3	Cysts of the jaw( odontogenic and non odontogenic cysts)	Knowledge and understanding. subject-specific skills	Theoretical lecture using	Short, semester, mid-year ar final exams

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				discussion,	
				debriefing,	
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				review,	
				practical	
				research,	
				computer-	
				based	
				.learning	
23	3	Dental anomalies(acquired	Knowledge and		Short,
		and	understanding.	lecture using	semester,
		developmental)	subject-specific	Power point,	mid-year ar
		,	skills	Problem-	final
				based	exams
				learning,	
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				discussion,	
				debriefing,	
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				practical	
				research,	
				computer-	
				based	
				.learning	
24	3		Knowledge and	Theoretical	Short,
		Inflammatory conditions of	understanding.	lecture using	semester,
		the	subject-specific	Power point,	mid-year ar
		jaws(periapical inf disease,	skills	Problem-	final
		osteomylitis,		based	exams
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25	3	Trauma(dento alveolar	Knowledge and		Short,
		trauma , dental	understanding.	lecture using	semester,
		fructures and bone fructues	subject-specific	rower point,	mid-year ar
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26 3 TMJ abnormalities (anatomy of TMJ, application)  27 3 Salivary gland disease (imaging modelities, interpretation)  28 3 Craniofacial anomalies (Cleft lip and palat)  28 3 Craniofacial anomalies (Cleft lip and palat)  29 3 Craniofacial anomalies (Cleft lip and palat)  29 3 Craniofacial anomalies (Cleft lip and palat)  29 3 Craniofacial anomalies (Cleft lip and palat)  20 3 Craniofacial anomalies (Cleft lip and palat)  21 3 Craniofacial anomalies (Cleft lip and palat)  22 3 Craniofacial anomalies (Cleft lip and palat)  23 Craniofacial anomalies (Cleft lip and palat)  24 Craniofacial anomalies (Cleft lip and palat)  25 Craniofacial anomalies (Cleft lip and palat)  26 Cleft lip and lip a					1 3	
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of TMJ, application)  applicat						
of TMJ, application)  applicat						
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of TMJ, application)  approaction  application	26	3	TMJ abnormalities( anatomy	Knowledge and	Theoretical	Short.
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27 3 Salivary gland disease (imaging modalities, interpretation)  Salivary gland disease (imaging modalities, interpretation)  Salivary gland disease (imaging modalities, interpretation)  Short, semester, power point, skills  Poblem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning subject-specific skills  Short, semester, mid-year at final exams  Short, semester, mid-year at final exams  Rnowledge and understanding subject-specific skills  Theoretical semester, mid-year at final exams  Short, semester, mid-year at final exams  Craniofacial anomalies (Cleft lip and understanding subject-specific skills  Short, semester, mid-year at final exams  Craniofacial exams  Short, semester, mid-year at final exams  Craniofacial exams  Short, semester, mid-year at final exams  Poblem-based  Learning collaboration, discussion, debriefing, information review, practical research, computer-based						
Salivary gland disease (imaging modalities, interpretation)  Salivary gland disease (imaging modalities, interpretation)  Short, semester, mid-year at final exams  Craniofacial anomalies (Cleft lip and palat)  Short, semester, mid-year at final exams  Short, semester, mid-year at final exams  Short, semester, mid-year at final exams  Short, semester, computer-based learning, subject-specific skills  Short, semester, mid-year at final exams  Short, semester, mid-year at final exams  Short, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based					-	
Salivary gland disease (imaging modalities, interpretation)  Salivary gland disease (imaging modalities, interpretation)  Short, semester, skills subject-specific skills shared learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, subject-specific skills  Craniofacial anomalies (Cleft lip and palat)  Short, semester, mid-year an final exams  Short, semester, mid-year an discussion, debriefing, information subject-specific skills  Knowledge and understanding-subject-specific skills  Nowledge and understanding-subject-specific skills  Short, semester, mid-year an final exams lecture using subject-specific skills  Craniofacial anomalies (Cleft short)  Short, semester, mid-year an final exams lecture using subject-specific skills  Short, semester, mid-year an final exams lecture using subject-specific skills  Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based						
(imaging modalities, interpretation)  (imaging modalities, interpretation)  (imaging subject-specific skills skills shared learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning subject-specific skills shared palat)  (imaging subject-specific skills shared learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based	27	3	Salivary gland disease	Knowledge and		Short
modalities, interpretation)  subject-specific skills  Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning subject-specific skills  28 3 Craniofacial anomalies (Cleft lip and palat)  Craniofacial anomalies (Cleft lip and palat)  Short, semester, mid-year an final exams  Theoretical lecture using subject-specific skills  Problembased learning  Theoretical lecture using power point, semester, mid-year an final exams  Short, semester, mid-year an final exams  Theoretical lecture using power point, semester, mid-year an final exams  Short, semester, mid-year an final exams  Theoretical lecture using subject-specific skills  Problembased  Learning  Short, semester, mid-year an final exams  Short, semester, mid-year an final exams  Theoretical lecture using subject-specific skills  Problembased  Learning  Short, semester, mid-year an final exams  Theoretical lecture using subject-specific skills  Problembased  Learning  Short, semester, mid-year an final exams				understanding.		
28 3 Craniofacial anomalies (Cleft lip and palat)  Craniofacial anomalies (Cleft skills)  Problembased learning, collaboration, debriefing, information review, practical research, computerbased learning subject-specific skills  Problembased learning collaboration, debriefing, information review, practical research, computer-based learning collaboration, debriefing, information review, practical research, computer-based learning collaboration, debriefing, information review, practical research, computer-based			modalities, interpretation)			
28 3 Craniofacial anomalies (Cleft lip and palat)  Short, semester, mid-year an final exams    Rowledge and understanding subject-specific skills				skills	-	
28 3 Craniofacial anomalies (Cleft lip and palat)  Short, semester, mid-year an final exams    Rowledge and understanding subject-specific skills						
28 3 Craniofacial anomalies (Cleft lip and palat)  Example 1						
discussion, debriefing, information review, practical research, computer-based learning  28 3 Craniofacial anomalies (Cleft lip and palat)  Short, semester, mid-year an final exams  Froblem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based					_	
debriefing, information review, practical research, computer-based learning subject-specific skills  Theoretical palat)  Short, semester, mid-year and final exams  Problembased learning, collaboration, discussion, debriefing, information review, practical research, computer-based  In a computer based learning subject-specific skills  Short, semester, mid-year and final exams					•	
28 3 Craniofacial anomalies (Cleft lip and palat)  Short, semester, mid-year an final exams    Problembased learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based						
28 3 Craniofacial anomalies (Cleft lip and palat)  Short, semester, mid-year an final exams  Problembased learning, collaboration, discussion, debriefing, information review, practical research, computer-based  In a computer based learning subject-specific skills  Short, semester, mid-year an final exams  In a computer based learning, collaboration, discussion, debriefing, information review, practical research, computer-based						
28 3 Craniofacial anomalies (Cleft lip and palat)  Example 29 3 Craniofacial anomalies (Cleft lip and palat)  Example 29 3 Craniofacial anomalies (Cleft lip and palat)  Example 29 3 Craniofacial anomalies (Cleft lip and understanding subject-specific skills  Example 29 3 Craniofacial anomalies (Cleft lip and understanding subject-specific skills  Example 29 4 5 6 7 7 8 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8						
28 3 Craniofacial anomalies (Cleft lip and palat)  Craniofacial anomalies (Cleft lip and palat)  Knowledge and understanding, subject-specific skills  Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased  Rowledge and understanding, semester, mid-year at final exams						
28 3 Craniofacial anomalies (Cleft lip and palat)  Short, semester, mid-year at final exams  Problembased learning, collaboration, discussion, debriefing, information review, practical research, computer-based  Short, semester, mid-year at final exams						
28 3 Craniofacial anomalies (Cleft lip and palat)  Short, semester, mid-year an final exams  Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased						
28 3 Craniofacial anomalies (Cleft lip and palat)  Short, semester, mid-year an final exams  Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased						
28 3 Craniofacial anomalies (Cleft lip and palat)  Short, semester, mid-year an final exams  Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased  Short, semester, mid-year an final exams						
lip and palat)  understanding, subject-specific skills  lecture using Power point, Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased  lip and understanding, subject-specific Power point, Problembased semester, mid-year and final exams  semester, mid-year and final exams  review, practical research, computerbased	28	3	Craniofacial anomalies (Cleft	Knowledge and		Short.
palat)  subject-specific skills  Problembased exams  learning, collaboration, discussion, debriefing, information review, practical research, computerbased  problembased  learning, collaboration review, practical research, computerbased			lip and	understanding.	lecture using	
skills Problembased based learning, collaboration, discussion, debriefing, information review, practical research, computerbased			palat)			
learning, collaboration, discussion, debriefing, information review, practical research, computer- based				skills		-
learning, collaboration, discussion, debriefing, information review, practical research, computer- based						
collaboration, discussion, debriefing, information review, practical research, computer- based						
discussion, debriefing, information review, practical research, computer- based					_	
debriefing, information review, practical research, computer- based						
information review, practical research, computer- based						
practical research, computerbased						
research, computer-based					review,	
research, computer-based					practical	
computer- based						
based						
learning					-	
					.learning	

30	3	Computed	Knowledge and	Theoretical	Short,
		tomography(indications	understanding.	lecture using	semester,
		,strength, limitations)	subject-specific	Power point,	mid-year ar
			skills	Problem-	final
				based	exams
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	

Lab number	Study unit title
1	Seminar 1 ( Fundamentals of radiology:component of x- ray machine and production of X-ray)
2	Seminar 2 ( X-ray film (types and indication))
3	Seminar 3 (Intraoral techniques(periapical, bite-wing and occlusal films))
4	Ideal radiograph
5	Seminar 5 ( Land marks(maxilla, mandible))
6	Seminar 6 ( Dental panoramic radiography(indication and anatomy)
7	CBCT (indication and anatomy)
8	Cephalometric (indication and anatomy)
9	Common disease (caries , PDL)
10	Cyst(odontogenic and nonodontogenic)
11	Clinical work
12	Clinical work
13	Clinical work
14	Clinical work
15	Clinical work
16	Clinical work
17	Clinical work
18	Clinical work
19	Clinical work
20	Clinical work
21	Clinical work
22	Clinical work
23	Clinical work
24	Clinical work
25	Clinical work
26	Clinical work
27	Clinical work
28	Clinical work
29	Clinical work
30	Clinical work

11.Course Evaluation: degrees of first semester 10 degrees of second semester 10 degrees of mid-year 20 degrees of final exam 60

#### 12. Learning and Teaching Resources

12. Loanning and Todoming Robotatoo	
Required textbooks (curricular books, if any)	Oral radiology principle and interpretation (white and pharaoh)
Main references (sources)	Oral radiology principle and interpretation (white and pharaoh )
Recommended books and references (scientific	Text book of oral radiology
journals, reports)	
Electronic References, Websites	Pubmed, WOS, IEEE,

#### 1. Course Name:

General pathology

#### 2. Course Code:

#### PA321

#### **3.** Semester / Year:

#### 2 semester/ third stage

#### 4. Description Preparation Date:

#### 2024-2025

#### 5. Available Attendance Forms:

Lectures and laboratory

#### 6. Number of Credit Hours (Total) / Number of Units (Total)

120 hours / 6 unite

#### 7. Course administrator's name (mention all, if more than one name)

Name: Marwa Mohammed Ali

Email: marwa.mohammed@mu.edu.iq

#### 8. Course Objectives

#### Course Objectives •

- To identify the general causes of diseases and link them to the structural,
   physiological and chemical changes that occur as a result of disease
- Describe the visible changes that occur in pathological tissues and how to analyze them to reach potential diagnoses.
- • How to deal with various surgical and cytological pathological samples
- Understanding the role of the pathologist as an individual who works within integrated team to diagnose pathological conditions and reach the correct treatment.

#### 9. Teaching and Learning Strategies

#### Strategy

- Knowledge and understanding
- Skill goals
- Stimulus and response method
- Long, short and semester exams
- Thinking skills

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- 1	ι.	$\lambda \lambda \lambda \lambda$	ルって	. ) (   (		1 –

Week	Hours	Required	Unit or subject name	Learning	Evaluation
		Learning	Theoretical	method	method
		Outcomes	Theoretical	method	method
1	2		Introduction to pathology Clir	Problem-	Short, semeste
1	2	understanding. subject-specific skills	pathology Molecular pathology Cell	based learning, collaboratio n, discussion, debriefing, information	mid-year and final exams
				review, practical research, computer- based learning.	
2	2	Knowledge understanding. subject-specific skills	damage reversible cell injury	Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semeste mid-year and final exams
3	2	Knowledge understanding. subject-specific skills	Irreversible cell injury	Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semeste mid-year and final exams
4	2	Knowledge understanding. subject-specific skills		Problem- based learning, collaboratio	Short, semeste mid-year and final exams

		T			
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
	-	77 1 1	Description 1 of a control of	learning.	<b>G</b> 1
5	2		Deposits and pigmentation	Problem-	Short, semeste
		understanding.		based	mid-year and
		subject-specific		learning,	final exams
		skills		collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				-	
				practical	
				research,	
				computer-	
				based	
				learning.	
	2	Knowledge and	External and internal pigmentation	Problem-	Short, semeste
6		understanding.		based	mid-year and
		subject-specific		learning,	final exams
		skills		collaboratio	mar exams
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
7	2	Knowledge	Inflammation	Problem-	Short, semeste
'		understanding.			
		subject-specific		based	mid-year and
		skills		learning,	final exams
				collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
8	2		Acute inflammation	Problem-	Short, semeste
		understanding.		based	mid-year and
		subject-specific		learning,	final exams

		skills		collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
9	2	Knowledge	Chronic pathology	Problem-	Short, semeste
		understanding.		based	mid-year and
		subject-specific		learning,	final exams
		skills		collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
10	2	Knowledge	Chemical mediators	learning.	Clarata areas
10	2	understanding.	Chemical mediators	Problem-	Short, semeste
		subject-specific		based	mid-year and
		skills		learning,	final exams
				collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
11	2		Healing and repair	Problem-	Short, semeste
		understanding.		based	mid-year and
		subject-specific		learning,	final exams
		skills		collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
12	2	Knowledge	Healing of skin wound Healing of bone	Problem-	Short, semeste
	[	understanding.		based	mid-year and
	ı		<u> </u>		J

		T		Г -	
		subject-specific		learning,	final exams
		skills		collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
13	2		Hemodynamic Disorders	Problem-	Short, semeste
		understanding.		based	mid-year and
		subject-specific		learning,	final exams
		skills		collaboratio	
				n,	
				discussion,	
				debriefing, information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
14	2	Knowledge	Thromboembolic Disease, and Shock	Problem-	Short, semeste
	2	understanding.	,	based	mid-year and
		subject-specific		learning,	final exams
		skills			IIIIai exaiiis
				collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
15	2	Knowledge	Genetic	Problem-	Short, semeste
13	Z	understanding.	Genetic		· ·
		subject-specific		based	mid-year and
		skills		learning,	final exams
				collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
4.6	.=	77 1 1	<b>D</b> : 6 3 7 ~	learning.	G1
16	2	Knowledge	Diseases of the Immune Sys	Problem-	Short, semeste
10					

		1 . **	TT	, .	.,
		understanding.	Hypersensitivity	based	mid-year and
		subject-specific		learning,	final exams
		skills		collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				_	
				research,	
				computer-	
				based	
		Y7 1 1	A	learning.	
17	2		Autoimmune	Problem-	Short, semeste
		understanding.		based	mid-year and
		subject-specific skills		learning,	final exams
		SKIIIS		collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
18	2	Knowledge	diseases Transplantation	Problem-	Short, semeste
10	۷	understanding.	alboubob Humbpiumunom	based	
		subject-specific			mid-year and final exams
		skills		learning,	final exams
				collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
19	2	Knowledge	Neoplasia	Problem-	Short, semeste
	_	understanding.		based	mid-year and
		subject-specific		learning,	final exams
		skills		collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
,					
				computer-	
				computer- based learning.	

20	2	Knowledge	benign and malignant	Problem-	Chart comosto
20		understanding.	beingh and manghant	based	Short, semeste
		subject-specific			mid-year and
		skills		learning,	final exams
				collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
21	2	Knowledge	tumors	Problem-	Short, semeste
	_	understanding.		based	mid-year and
		subject-specific		learning,	final exams
		skills		collaboratio	mar chamb
				n,	
				discussion,	
				debriefing,	
				•	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
22	2		molecular basis of tumors	Problem-	Short, semeste
		understanding.		based	mid-year and
		subject-specific skills		learning,	final exams
		SKIIIS		collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
23	2	Knowledge	infections Bacterial and viral	Problem-	Short, semeste
43					
		understanding.		haged	min-waarana i
		understanding. subject-specific		based learning	mid-year and
		subject-specific skills		learning,	final exams
		subject-specific		learning, collaboratio	
		subject-specific		learning, collaboratio n,	
		subject-specific		learning, collaboratio n, discussion,	
		subject-specific		learning, collaboratio n, discussion, debriefing,	
		subject-specific		learning, collaboratio n, discussion, debriefing, information	
		subject-specific		learning, collaboratio n, discussion, debriefing, information review,	
		subject-specific		learning, collaboratio n, discussion, debriefing, information review, practical	
		subject-specific		learning, collaboratio n, discussion, debriefing, information review,	
		subject-specific		learning, collaboratio n, discussion, debriefing, information review, practical	

				learning.	
24	2	Knowledge	infection	Problem-	Short, semeste
		understanding.		based	mid-year and
		subject-specific		learning,	final exams
		skills		collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
25	2	Knowledge	Environmental and Nutritional	Problem-	Chart compate
25		understanding.	Environmental and Nutritional	based	Short, semeste
		subject-specific			mid-year and
		skills		learning,	final exams
		omino .		collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
26	2		Diseases	Problem-	Short, semeste
		understanding.		based	mid-year and
		subject-specific		learning,	final exams
		skills		collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
27	2	Knowledge	Blood Vessels	Problem-	Short, semeste
<i>_</i> ,		understanding.		based	mid-year and
		subject-specific		learning,	final exams
		skills		collaboratio	iiiai Caaiiis
				n,	
				discussion,	
				debriefing, information	
				review,	
				practical	
				research,	
				computer-	

					based	
					learning.	
28		2	Knowledge understanding. subject-specific skills	The Heart	Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semeste mid-year and final exams
29		2	Knowledge understanding. subject-specific skills	Red Blood Cell and Bleeding	Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semeste mid-year and final exams
30		2	Knowledge understanding. subject-specific skills	Disorders	Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semeste mid-year and final exams
Lab num	ber			Study unit title		
1		Intr	oduction to gen	eral pathology and biopsy		
2			er points slides			
3		Pow clou	ver points and h	istopathological slides demonstratir	ng fatty changes	s in liver and
4				istopathological slides of coagulative	e necrosis in he	art muscles and
				. 3		

	caseous necrosis in lung With explanation of gross appearence
	Power points and histopathological slides of anthracosis of lung and
	hemosiderosis in liver With explanation of gross appearence
	Power points and histopathological slides of amyloidosis in kidney, H
	With explanation of gross appearence E. and congo-red stain
	Power points and histopathological slides of acute appendicitis
	(appendix),acute ossteomylitis and lobar pneumonia (lung ,)
	Power points and histopathological slides of chronic cholecystits in gall bladder and With explanation of gross appearence osteomylitis in bone
	Power points and histopathological slides of keloid in skin and
	granulation tissue
	Power points and histopathological slides of TB in lung and
	actinomycosis With explanation of gross appearance
	Power points and histopathological slides of Sarcoidosis With
	explanation of gross appearance
	Power points slides of CVC in lung and liver With explanation of
	gross appearance Power points slides of blood vessels thrombosis
	<u>`</u>
	Power points and histopathological slides of lipoma, S.C papilloma of skin With explanation of gross appearance
15	Power points and histopathological slides of osteoma of the bone
16	Power points and histopathological slides of S.C. carcinoma and
	adeno carcinoma of the colon With explanation of gross appearence
17	Power points and histopathological slides of thyrotoxicosis of thyroid
	and hashimotisis thyroiditis in thyroid With explanation of gross appearence
18	Data show slides
19	Data show slides
	Power points and histopathological slides of myocardial infarction of heart and
	atherosclerosis in blood vessels With explanation of gross
21	appearence Power points and histopathological slides of chronic gastritis in
21	stomach and peptic ulcer With explanation of gross appearance
22	Power points and histopathological slides of liver cirrhosis and
	hepatocellular carcinoma With explanation of gross appearence
23	Power points and histopathological slides of emphysema in lung and
	chronic bronchitis in bronchus With explanation of gross appearence
24	Data show
25	Data show
26	Data show
27	ata show
28	Data show

29	Power points slides
30	Power points slides

#### 11. Course Evaluation

- 10 degrees of first semester: 8 degrees of short and semester exams and two degrees of oral exam
- 10 degrees of second semester: 8 degrees of short and semester exams and two degrees of oral exam
- 20 degrees of mid-year
- 60 degrees of final exam

#### 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)						
Main references (sources)	<ol> <li>Robbins basic pathology. Kumar, Abbas and Aster.</li> <li>10th edition. 2018, Elsevier.</li> </ol>					
	2) Stevens, Alan, James S. Lowe, and Ian Scott.					
	Core pathology. 2008, Elsevier Health Sciences.					
Recommended books and references						
(scientific journals, reports)						
Electronic References, Websites						

## 1. Course Name: Prosthodontics 2. Course Code:

310 PR

#### 3. Semester / Year:

#### 2 Semester/ Third Stage

#### **4.** Description Preparation Date:

#### 2024-2025

#### 5. Available Attendance Forms:

Theoretical lectures and practical laboratory

6. Number of Credit Hours (Total) / Number of Units (Total)

#### 120 hours / 5 unite

#### 7. Course administrator's name (mention all, if more than one name)

Name: Mohammed Abdulaziz Reda Alsmael Email: mohammed\_alsmael@mu.edu.iq

#### 8. Course Objectives

# Preparing the student at a high level of scientific with regard to prosthodontics Identifying the types of prosthodontic appliances, prosthodontic terms and the solutions for partial loss of teeth

#### 9. Teaching and Learning Strategies

#### Strategy

- Acquire knowledge about the treatment for teeth loss and prosthodontic appliances
- Identify the types of prosthesis
- Learn how to make partial denture for edentulous patients

#### 10. Course Structure

Week	Hours	Required	Unit or subject name	Learning	Evaluation
		Learning	Theoretical	method	method

		Outcomes			
1	4	understanding. subject-specific skills	- Introduction to Remova Partial Dentures	Theoretical lecture using Power point, Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semeste mid-year and final exams
2	4	understanding. subject-specific skills	Classification of PartiallyEdentul Arches	Theoretical lecture using Power point, Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semeste mid-year and final exams
3	4	Knowledge understanding. subject-specific skills	Surveying	Theoretical lecture using Power point, Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semeste mid-year and final exams
4	4	Knowledge understanding. subject-specific skills	Surveying (continue)	Theoretical lecture using Power point, Problem- based	Short, semeste mid-year and final exams

				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
5	4	Knowledge	Component Parts of a Remova	Theoretical	Short, semeste
		understanding.	Partial Denture	lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-	
				based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
	4	Knowledge and	Maxillary MajorConnectors	Theoretical	Short, semeste
6		understanding.		lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-	
				based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
7	4		Mandibular MajorConnectors	Theoretical	Short, semeste
		understanding.		lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-	
				based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				1	

	1				
				research,	
				computer-	
				based	
				learning.	
8	4		Minor Connectors	Theoretical	Short, semeste
		understanding.		lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-	
				based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
9	4		Rests and Rest SeatsSeats	Theoretical	Short, semeste
		understanding.		lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-	
				based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
10	4		Retention and Removable Par	Theoretical	Short, semeste
		understanding. subject-specific	Denture Retainers clasp design	lecture using	mid-year and
		skills		Power point,	final exams
				Problem-	
				based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
		77		learning.	
11	4	Knowledge	Extra Coronal Direct Retain	Theoretical	Short, semeste
		understanding. subject-specific	(Types of claspassemblies)	lecture using Power point,	mid-year and final exams

<b>_</b>	T	1 .11	7		
		skills		Problem-	
				based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
12	4	Knowledge	Intracoronal Direct Retain	Theoretical	Short, semeste
12	•	understanding.	(Internal Attachments,	lecture using	mid-year and
		subject-specific	(Internal/Attachments,	Power point,	final exams
		skills		Problem-	imai caams
				based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
12	4	Vasadadas	Ctures Durelle as (Ctures Eurollie au	learning.	Classic
13	4	Knowledge understanding.	Stress-Breakers (StressEqualizers		Short, semeste
		subject-specific		lecture using	mid-year and
		skills		Power point,	final exams
				Problem-	
				based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
14	4		Indirect Retainers	Theoretical	Short, semeste
		understanding.		lecture using	mid-year and
		subject-specific skills		Power point,	final exams
		SKIIIS		Problem-	
				based	
				learning,	
				collaboration,	
				discussion,	
i .		i .	1	· ·	
				debriefing,	
				debriefing, information	

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				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
15	4	Knowledge	Indirect Retainers(continue)	Theoretical	Short, semeste
		understanding.		lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-	
				based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
16	4	Knowledge	Laboratory procedures in R		Short, semeste
		understanding.	construction: Blockout and Relief		mid-year and
		subject-specific	2011011 2100110 210 410 411 4110 110110	Power point,	final exams
		skills		Problem-	
				based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
17	4	Knowledge	Laboratory procedures in R		Short, semeste
	أ	understanding.	construction: Duplication	lecture using	mid-year and
		subject-specific	RefractoryCast Construction	Power point,	final exams
		skills	Tionactory cust Constitution	Problem-	_
				based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
įl		77 1 1			
18	4	Knowledge	Laboratory procedures in	Theoretical	Short, semeste

		understanding	DDD W	la atomic of	
		understanding. subject-specific	RPD construction: Wax	lecture using	mid-year and
		skills	Pattern	Power point,	final exams
		SKIIIS		Problem-	
				based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
19	4	Knowledge	Laboratory procedures in	Theoretical	Short, semeste
	أ	understanding.	RPD construction: Casting	lecture using	mid-year and
		subject-specific	and	Power point,	final exams
		skills	und .	Problem-	
				based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
20	4	Knowledge	Denture Base in RPD	Theoretical	Short, semeste
20	Т	understanding.	Bentare Base in Ki B	lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-	iiiai caaiiis
				based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
21	4	Knowledge	Record Bases, OcclusionRims,	Theoretical	Short, semeste
41	4	understanding.	Record Dases, Occiusionixinis,	lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-	IIIIai Exallis
				based	
				learning,	
				collaboration,	
1				discussion,	

	1				
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
22	4	Knowledge	Biomechanics of	Theoretical	Short, semeste
	1	understanding.	Removable Partial	lecture using	mid-year and
		subject-specific	Dentures	Power point,	final exams
		skills	Dentures	Problem-	mar exams
				based	
				learning,	
				collaboration,	
				-	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
23	4		Stress-Breakers (StressEqualizers	Theoretical	Short, semeste
		understanding.		lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-	
				based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
24	4		Indirect Retainers	Theoretical	Short, semeste
		understanding.		lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-	
				based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
i	I			บลงนั้น	

				learning.	
25	4	Knowledge	Indirect Retainers(continue)	Theoretical	Short, semeste
	-	understanding.		lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-	mar chamb
				based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
26	4	Knowledge	Laboratory procedures in R	Theoretical	Short, semeste
		understanding.	construction: Blockout and Relief	lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-	
				based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
27	4	Knowledge	Laboratory procedures in R		Short, semeste
		understanding.	construction: Duplication	lecture using	mid-year and
		subject-specific skills	RefractoryCast Construction	Power point,	final exams
		SKIIIS		Problem-	
				based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
28	4	Knowledge	Flexible Removable Partial	Theoretical	Short, semeste
20	4	understanding.	Dentures	lecture using	mid-year and
		subject-specific	Demuies	Power point,	final exams
		skills		Problem-	iiiiai ExalliS
				based	
				learning,	

				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
29	4		Repairs and Additions to Remova	Theoretical	Short, semeste
		understanding.	Partial Dentures	lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-	
				based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
30	4	Knowledge	Digitally Designed &	Theoretical	Short, semeste
		understanding.	Fabrication	lecture using	mid-year and
		subject-specific	Duo anno of DDD Enomorrouly		C 1
			Process of RPD Framework	Power point,	final exams
		skills		Problem-	final exams
			Using	Problem- based	nnai exams
				Problem- based learning,	nnai exams
			Using	Problem- based learning, collaboration,	nnai exams
			Using	Problem- based learning, collaboration, discussion,	nnai exams
			Using	Problem- based learning, collaboration, discussion, debriefing,	nnai exams
			Using	Problem- based learning, collaboration, discussion, debriefing, information	nnai exams
			Using	Problembased learning, collaboration, discussion, debriefing, information review,	nnai exams
			Using	Problem- based learning, collaboration, discussion, debriefing, information review, practical	nnai exams
			Using	Problem- based learning, collaboration, discussion, debriefing, information review, practical research,	nnai exams
			Using	Problembased learning, collaboration, discussion, debriefing, information review, practical research, computer-	nnai exams
			Using	Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased	nnai exams
			Using	Problembased learning, collaboration, discussion, debriefing, information review, practical research, computer-	nnai exams
Lab numbe	er		Using	Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased	nnai exams
			Using CAD/CAM System  Study unit title	Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased	nnai exams
Lab numbe	In	skills troduction to R	Using CAD/CAM System  Study unit title	Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased	nnai exams
	In <sup>.</sup> Par	skills troduction to R tial Dentures	Using CAD/CAM System  Study unit title emovable	Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased	nnai exams
1	In <sup>·</sup> Par Ken	troduction to R tial Dentures	Using CAD/CAM System  Study unit title emovable	Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased	nnai exams
2	In Par Ken Cas	skills troduction to R tial Dentures	Using CAD/CAM System  Study unit title emovable	Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased	nnai exams

6

Wire Bending

8	A an dia Dana anakia Dantial
	Acrylic Removable Partial
	Denture Design
9	Acrylic Removable PartialDenture Laboratory Procedures
10	Acrylic Removable PartialDenture Laboratory Procedures
11	Flexible Partial DentureDesign
12	Flexible Partial DentureLaboratory Procedures
13	Flexible Partial Denture Laboratory Procedures
14 I	Flexible Partial Denture Laboratory Procedures
15	Principles of 2D Design forthe Removable Partial  Denture s
16	Principles of 2D Design forthe Removable Partial Denture s
17	Principles of Drawing 2DDesign for the RemovablePartial Dentures
18	2D Design for Mandibular & Maxillary Arches
19	2D Design for Mandibular & Maxillary Arches
20	2D Design for Mandibular & Maxillary Arches
21	Drawing Removable PartialDenture 3D Design & CAD/CAM
22	Drawing Removable PartialDenture 3D Design &
	CAD/CAM
23	Types of Rests
24	Rest Seat Preparation
25	Block Out and Relief
26	Block Out and Relief
27	Duplication Of the Master
	ast
28	Wax Pattern for the Removable Partial Denture
	Framework
29	Wax Pattern for the Removable Partial Denture
	Framework
30	Framework Fabrication

# 11. Course Evaluation

- 10 degrees of first semester: 8 degrees of short and semester exams and two degrees of oral exam
- 10 degrees of second semester: 8 degrees of short and semester exams and two degrees of oral exam
- 20 degrees of mid-year
- 60 degrees of final exam

# 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	1.Carr, A.B. Brown, D.T. (2011) McCracken's Removable Partial Prosthodontics.12th ed. St. Louis, Missouri: Mosby, Inc., Elsevier Inc.  Robert, W. L. (2018) Removable Partial Denture Manual. Dalhousie University. Phoenix, D. R. Cagna, R. D. Charles, F. D. (2008) Stewart's Clinical Removable Partial Prosthodontics. 4th ed. Quintessence Publishing Co, Inc. GPT9 2017.  The Glossary of Prosthodontic Terms. J Prosth. Dent 2016;25:580-4.
Recommended books and references	
(scientific journals, reports)	
Electronic References, Websites	

#### 1. Course Name:

**Oral Surgery** 

#### 2. Course Code:

322OS

## **3.** Semester / Year:

## 2 semester/ third stage

## 4. Description Preparation Date:

#### 2024-2025

#### 5. Available Attendance Forms:

Lectures and laboratory

## 6. Number of Credit Hours (Total) / Number of Units (Total)

90 hours/4 unite

# 7. Course administrator's name (mention all, if more than one name)

Name: Ahmed Talib Gadban Email: Ahmed.talib@mu.edu.iq

## 8. Course Objectives

#### **Course Objectives**

 Preparing the student at a high level of knowledge regarding oral surgery and identifying surgical instruments Specific to his work in surgery, in addition to gaining knowledge of the types of loca anesthesia, its methods and problems And associate complications

# 9. Teaching and Learning Strategies

#### Strategy

- Knowledge and understanding
- Skill goals
- Stimulus and response method
- Long, short and semester exams
- Thinking skills

#### 10. Course Structure

Week	Hours	Required	Unit or subject name	Learning	Evaluation
		Learning	Theoretical	method	method

		Outcomes			
1	3	understanding. subject-specific skills	Diagnosis in oral surgery  ➤ History taking  • Demographic data  • Chief complaint  • History of present complaint  • Past dental and medical history  • Social and family history	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
2	3	Knowledge understanding. subject-specific skills	Diagnosis in oral surgery  ➤ Examination  • Extra-oral examination  • Intra-oral examination  ➤ Differential diagnosis  ➤ Diagnosis of pain, lump, and ulcer  ➤ Consent	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
3	3	Knowledge understanding. subject-specific skills	Infection Control in Surgical Practice  ➤ Communicable pathogenic organisms  ➤ Aseptic techniques  • Terminology  • Concepts  • Techniques of Instrument Sterilization; Sterilization with Heat; Sterilization with Gas  • Techniques of Instrum Disinfection	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
4	3	Knowledge understanding. subject-specific skills	Infection Control in Surgical Practice  • Maintenance of Sterility  • Surgical Field Maintenance  • Operatory Disinfection  • Surgical Staff Preparation  • Postsurgical Asepsis	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical	Short, semester mid-year and final exams

				research,	
				computer-	
				based learning.	
5	3	Knowledge	Extraction of teeth and	Theoretical	Short, semester
	5	understanding.	Contra indications of	lecture using	mid-year and
		subject-specific	extraction	Power point,	final exams
		skills	• Extraction of teeth	Problem-based	
			(exodontia).	learning,	
			<ul><li>Definition.</li></ul>	collaboration,	
				discussion,	
			• Methods of extraction.	debriefing,	
			• Indications of teeth extraction	information	
			✓ Severe caries.	review,	
			✓ Severe periodontal	practical	
			disease.	research,	
			✓ Pulp pathology.	computer-	
			✓ Apical pathology.	based learning.	
			✓ Orthodontic reasons.		
			✓ Prosthetic considerations.		
			✓ Impacted teeth.		
			✓ Supernumerary teeth.		
			✓ Tooth in the line of		
			fracture of the jaws.		
			✓ Teeth in relation with		
			pathological conditions.		
			✓ Retained roots.		
			✓ Prior to irradiation.		
			✓ Focal sepsis.		
			✓ Aesthetic.		
	3	Knowledge and	Extraction of teeth and	Theoretical	Short, semester,
6		understanding. subject-specific	Contra indications of	lecture using	mid-year and
		skills	extraction	Power point,	final exams
			<ul> <li>Contra-indications of teeth</li> </ul>	Problem-based	
			extraction.	learning, collaboration,	
			Local contra-indications.	discussion,	
			Systemic contra-	debriefing,	
			indications.	information	
			• Pre-extraction evaluation.	review,	
			Clinical preoperative	practical	
			evaluation.	research,	
			✓ General evaluation.	computer-	
			✓ Local evaluation.	based learning.	
			Radiological evaluation.		
			Objectives and benefits		
7	3	Knowledge	General arrangement for	Theoretical	Short, semester
		understanding. subject-specific	extraction and Dental	lecture using	mid-year and
		skills	forceps (types)	Power point,	final exams
		-	• Light.	Problem-based	
			• Position of the operator.	learning,	
			<ul> <li>Position of the patient.</li> </ul>	collaboration, discussion,	
			• Height of the dental chair.	debriefing,	
			• Parts of dental forceps.	uebi lellilg,	

8	3	Knowledge understanding.	<ul> <li>Forceps for the maxillary teeth.</li> <li>✓ Forceps of upper anterior teeth.</li> <li>✓ Forceps of upper premolars.</li> <li>✓ Forceps of upper molars.</li> <li>✓ Bayonet of upper poste teeth.</li> <li>General arrangement for extraction and Dental</li> </ul>	information review, practical research, computerbased learning.  Theoretical lecture using	Short, semester, mid-year and
		subject-specific skills	<ul> <li>forceps (types)</li> <li>Forceps for the mandibular teeth.</li> <li>✓ Forceps of lower anterior teeth.</li> <li>✓ Forceps of lower premolars.</li> <li>✓ Forceps of lower molars.</li> <li>✓ Bayonet of lower posterior teeth.</li> <li>Mechanical principle of forceps (traditional) extraction.</li> <li>1</li> <li>76</li> <li>Physic forceps.</li> <li>✓ Parts.</li> <li>✓ Mechanical principle technique</li> </ul>	Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer- based learning.	final exams
9	3	Knowledge understanding. subject-specific skills	Techniques of forceps extraction and post- operative instructions • Soft tissue retraction. • Handling of the forceps. • Cheek retraction and support (the use of the non- working hand). • The application of the forceps blades to the tooth (tooth grasp). • The displacement of the tooth from its socket. • Post-operative care to the extraction socket. • Instruction to the patient.	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	
10	3	Knowledge understanding. subject-specific skills	<ul> <li>Elevators</li> <li>Line of withdrawal.</li> <li>Point of application.</li> <li>Parts of dental elevators.</li> </ul>	Theoretical lecture using Power point, Problem-based learning,	Short, semester mid-year and final exams

11	3	Knowledge understanding. subject-specific skills	<ul> <li>Mechanical principles of using dental elevators.</li> <li>Wheel and axil.</li> <li>Fulcrum.</li> <li>Wedging.</li> <li>Combination of mechan principles.</li> </ul> Elevators <ul> <li>Clinical uses of elevators.</li> <li>Straight elevators.</li> <li>Coupland's chisel.</li> <li>Cryer's elevator.</li> <li>Winter's elevator.</li> <li>Apexo elevator.</li> <li>Guiding principles for using dental elevators.</li> <li>Complications of using de</li> </ul>	collaboration, discussion, debriefing, information review, practical research, computer- based learning. Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research,	Short, semester, mid-year and final exams
11	3	understanding.	Elevators	based learning. Theoretical lecture using	mid-year and
		skills	<ul> <li>Coupland's chisel.</li> <li>Cryer's elevator.</li> <li>Winter's elevator.</li> <li>Apexo elevator.</li> <li>Warwick-James elevator.</li> <li>Guiding principles for using dental elevators.</li> </ul>	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	final exams
12	3	Knowledge understanding. subject-specific skills	<ul> <li>Complications of dental extraction</li> <li>Failure to secure anesthesia.</li> <li>Failure to remove the tooth with either forceps or elevator.</li> <li>Fracture (#) of crowns and roots, alveolar bone, maxillary tuberosity, adjacent or opposing tooth, mandible.</li> <li>Dislocation of the tempromandibular joint (T.M.J.).</li> <li>Displacement of a root into soft tissue and tissue spaces the maxillary antrum.</li> </ul>	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
13	3	Knowledge understanding. subject-specific skills	Complications of dental extraction  • Excessive bleeding after extraction.  • Damage to the surrounding soft tissues.	Theoretical lecture using Power point, Problem-based learning, collaboration,	Short, semester mid-year and final exams
			<ul> <li>Post -operative pain.</li> <li>Post-operative swelling.</li> <li>Creation of an oro-anrtal communication.</li> <li>Trismus.</li> </ul>	discussion, debriefing, information review, practical research, computer- based learning,	
14	3	Knowledge	Basic surgical instruments	Theoretical	Short, semester,

<ul> <li>understanding. subject-specific skills</li> <li>Instruments of basic oral surgery.</li> <li>Instruments to incise tissues.</li> <li>Instruments for elevating mucoperiosteum.</li> </ul>	t, final exams
skills  Instruments to incise tissues. Instruments for elevating mucoperiosteum.  Instruments for elevating collaboration.	′ I
• Instruments for elevating mucoperiosteum learning, collaboration	
mucoperiosteum	
Indeoperiosteum.   ,	n,
l discussion	
• Instruments for controlling debriefing	
hemorrhage. informatio  ✓ Hemostat (artery review	1
review,	
praecion	
<ul> <li>Instruments to grasp tissues.</li> <li>✓ Toothed-tissue forceps.</li> <li>research,</li> <li>computer-</li> </ul>	
✓ Allis tissue forceps. based learni	ng
• Instruments for removing	<b>'</b> 6'
bone.	
✓ Rounger forceps (bone	
cutter and bone nibbler).	
✓ Chisel and mallet.	
✓ Bone file.	
✓ Surgical burs and	
handpiece.	
• Instruments to remove soft	
tissues from bony defects.	
✓ Surgical curette.	
Instruments for suturing	
mucosa.	
✓ Needle holder.	
✓ Needles.	
✓ Suture materials	
✓ Scissors.	
• Instruments for retraction of	
soft tissues.	
✓ Cheek retractor.	
✓ Mucoperiosteal flap	
retractor.	
• Instruments for irrigation	
and for providing suction.	
● Instrument of draping  15 3 Knowledge Introduction to local Theoretical	Short comester
15 3 Knowledge understanding. Introduction to local lecture using lectur	1 1
subject-specific Neurophysiology Power poin	
• Mode and site of action of Problem-base	·
local anesthetic learning,	
A ctive forms of local anesthet collaboration	·
discussion	
debriefing informatio	
review,	1
practical	
research,	
computer	
based learni	ng.

16	3	Knowledge understanding. subject-specific skills	Pharmacology of local anesthesia  • Pharmacokinetics of local anesthetics  • Metabolism  • Systemic actions of local anesthetics	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research,	Short, semester, mid-year and final exams
17	3	Knowledge understanding.	Pharmacology of local anesthesia	computer- based learning. Theoretical lecture using	Short, semester, mid-year and
		subject-specific skills	<ul> <li>Vasoconstrictors</li> <li>Mode of action</li> <li>Dilutions of vasoconstrictors</li> <li>Specific agents</li> </ul>	Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer- based learning.	final exams
18	3	Knowledge understanding. subject-specific skills	Surgical anatomy in local anesthesia  • Trigeminal nerve:  ✓ Ophthalmic branch  ✓ Maxillary branch  ✓ Mandibular branch	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
19	3	Knowledge understanding. subject-specific skills	Surgical anatomy in local anesthesia  Osteology of the maxilla  Osteology of the mandible	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-	Short, semester, mid-year and final exams

			based learning.	
20	3 Knowledge	Surgical anatomy in local	Theoretical	Short, semester
	understanding.	anesthesia	lecture using	mid-year and
	subject-specific	• Osteology of the maxilla	Power point,	final exams
	skills	1	Problem-based	
		Osteology of the mandible	learning,	
			collaboration,	
			discussion,	
			debriefing,	
			information	
			review,	
			practical	
			research,	
			computer-	
	2 77 1 1		based learning.	- C1
21	3 Knowledge	Techniques of local	Theoretical	Short, semester
	understanding. subject-specific	anesthesia	lecture using	mid-year and
	skills	Basic injection techniques	Power point,	final exams
	SKIIIS	• Techniques of maxillary	Problem-based	
		anesthesia	learning,	
		✓ Local infiltration.	collaboration,	
		✓ Posterior superior	discussion,	
		alveolar nerve block	debriefing,	
			information	
		1	review,	
		nerve block	practical	
		✓ Anterior superior alveolar	research,	
		nerve block (infraorbital	computer-	
		nerve block)	based learning.	
		✓ Greater palatine nerve		
		block		
		✓ Nasopalatine nerve block		
		✓ Maxillary nerve block		
22	3 Knowledge	Techniques of local	Theoretical	Short, semester
22	understanding.	_	lecture using	mid-year and
	subject-specific	anesthesia	Power point,	final exams
	skills	• Techniques of local	Problem-based	
		anesthesia	learning,	
		✓ Techniques of	collaboration,	
		mandibular anesthesia	discussion,	
		✓ Inferior alveolar nerve		
		block	debriefing, information	
		✓ Buccal nerve block		
		✓ Mandibular nerve block:	review,	
		The Gow-Gates technique	practical	
		✓ Vazirani-Akinosi closed-	research,	
		mouth mandibular block	computer-	
			based learning.	
		✓ Mental nerve block		
		✓ Incisive nerve block		
23	3 Knowledge	Techniques of local	Theoretical	Short, semester
	understanding.	anesthesia	lecture using	mid-year and
	subject-specific	Supplemental injection	Power point,	final exams
	skills	techniques	Problem-based	
		✓ Intraosseous injection	learning,	
		muaosseous injection		

T	1	I	( D ) 1   1   1   1   1   1   1   1   1   1	11 1 .	
			✓ Periodontal ligament	collaboration,	
			injection	discussion,	
			✓ Intraseptal injection	debriefing,	
			✓ Intrapulpal injection	information	
				review,	
				practical	
				research,	
				computer- based learning.	
24	3	Knowledge	Complications of local	Theoretical	Short, semester
		understanding.	anesthesia	lecture using	mid-year and
		subject-specific	Local Complications	Power point,	final exams
		skills	✓ Needle breakage	Problem-based	
			✓ Prolonged anesthesia	learning,	
			<u> </u>	collaboration,	
			(paresthesia)	discussion,	
			✓ Facial nerve paralysis	debriefing,	
			✓ Ocular complications	information	
			✓ Trismus	review,	
			✓ Soft tissue injury	practical	
			✓ Hematoma	research,	
				computer-	
				based learning.	
25	3	Knowledge	Complications of local	Theoretical	Short, semester
		understanding.	anesthesia	lecture using	mid-year and
		subject-specific	✓ Pain on injection	Power point,	final exams
		skills	✓ Burning on injection	Problem-based	
			✓ Infection	learning,	
			✓ Edema	collaboration,	
				discussion,	
			✓ Sloughing of tissues ✓ Postanesthetic intra	debriefing,	
				information	
			lesions	review,	
				practical	
				research,	
				computer-	
				based learning.	
26	3	Knowledge	Complications of local	Theoretical	Short, semester
		understanding.	anesthesia	lecture using	mid-year and
		subject-specific	• Systemic complications	Power point,	final exams
		skills	✓ Overdose	Problem-based	
			✓ Allergy	learning,	
			mergy	collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based learning.	
27	3	Knowledge	Advances in local anesthesia	Theoretical	Short, semester
		understanding.	<ul> <li>Computer controlled local</li> </ul>	lecture using	mid-year and
		subject-specific	anesthetic delivery	Power point,	final exams
		skills		Problem-based	

				<u>,</u>	
20		Vermilada	<ul> <li>Articaine hydrochloride</li> <li>Local anesthesia reversal</li> <li>Buffering of local anesthetic solution</li> <li>Nasal local anesthetic mist maxillary nonmolar teeth</li> </ul>	learning, collaboration, discussion, debriefing, information review, practical research, computer- based learning.	
28	3	Knowledge understanding. subject-specific skills	<ul> <li>Conscious sedation</li> <li>Sedation techniques: Oral, sublingual, transdermal, intranasal, intramuscular, intravenous and inhalational</li> <li>Nitrous oxide</li> <li>Complications and medicole considerations</li> </ul>	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
29	3	Knowledge understanding. subject-specific skills	Fundamentals of general anesthesia  Types of general anesthesia used in dentistry  Advantages  Disadvantages  Indications  Contraindications	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
30	3	Knowledge understanding. subject-specific skills	Medical emergencies during dental treatment  • Overview of medical emergencies  • Basic measures, equipment and drugs  • Common emergencies  ✓ Collapse  ✓ Anaphylaxis  ✓ Cardiac arrest  ✓ Diabetic collapse due to hypoglycemia  ✓ Fits and convulsions  ✓ Adrenal crisis  ✓ Acute severe asthma	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semester, mid-year and final exams

		✓ Chest pair		

## Laboratory sessions & Clinical requirements

- History taking: Includes patient communication skills, chief complaint, past dental history, medical history and family history, risk assessment associated with common medical conditions with regards to dental extraction.
- Clinical examination and diagnosis: Components of clinical examination with demonstration of extra oral and intra oral examination (lymph node palpation, TMJ palpation with the focus on the accused tooth/teeth), diagnosis of cases in patients case sheet with regards to dental extraction
- Basic surgical instruments I: Instrument to incise tissue, instrument for control of hemorrhage, instrument for grasping tissues, instruments for reflection of mucoperiosteal flap, instrument for cutting the bone
- Basic surgical instruments II: Instruments of retracting the cheek and mucosa, instruments of suturing, types of suture materials, types of suturing needles, instrument for suction, instruments of irrigation, instruments of patient draping and cable management.
- Dental forceps I: Indication of using dental forceps, part of a dental forceps, forceps of maxillary teeth.
- Dental forceps II: Forceps of mandibular teeth, physics forceps.
- Dental elevators I: Indications, mechanical principles of using elevators, straight elevators,
   Coupland chisel, Winters elevator
- Dental elevators II: Cryers elevator, apixo elevator, Warwick-James elevator, periotomes, guiding principles of using dental elevators.
- Local anesthetics (instruments & materials). Demonstartion of local anesthetic dental syringe, dental injection needles, types of different local anesthetics, topical measures of injection pain reduction, automized injectors
- Maxillary injection techniques: Hands on demonstration on special manikin of Infiltration of upper anterior teeth, infiltration of premolars and molars, nerve block of long sphenopalatine and greater palatine nerves, periodontal ligament injection.
- Mandibular injection techniques. Hands on demonstration on special manikin of infiltration injections, and inferior alveolar nerve block, long buccal nerve block and mental nerve block, periodontal ligament injection and intra-bony injections.
- Maxillary teeth extraction: Hand on demonstration on manikin of maxillary teeth extraction with dental forceps.
- Mandibular teeth extraction: Hands on demonstration on manikin of mandibular teeth extraction with dental forceps.
- Basic life support and CPR: Demonstration of how to perform emergency evaluation of fainted patients (A,B,C,D,& E), administration of oxygen, establishing IV line, IM injection, Heimlich maneuver, and cardiopulmonary resuscitation.

#### 11. Course Evaluation

- 10 degrees of first semester: 8 degrees of short and semester exams and two degrees of oral exam
- 10 degrees of second semester: 8 degrees of short and semester exams and two degrees of oral exam
- 20 degrees of mid-year
- 60 degrees of final exam

## 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	Hand book of local anesthesia 7th edition Stanely F. Malamed Elsevier.2019
Recommended books and references (scientific journals,	
reports)	
Electronic References, Websites	

#### 1. Course Name:

## Pharmacology

#### 2. Course Code:

#### 317PC

## 3. Semester / Year:

## 2 semester/ third stage

## **4.** Description Preparation Date:

#### 2024-2025

#### 5. Available Attendance Forms:

Lectures and laboratory

## 6. Number of Credit Hours (Total) / Number of Units (Total)

120 hours / 6 unite

## 7. Course administrator's name (mention all, if more than one name)

Name: Huda Nahi Tehewel Email: hudanahi@mu.ed.iq

## 8. Course Objectives

Course Objectives | Preparing a student at a high level of scientific and accuracy in dealing with medicines that have a stick in his subspecialty as a dentist and other specialties (medicine in general) in ord not to cause any kind of interference

# 9. Teaching and Learning Strategies

#### Strategy

- Knowledge and understanding
- Skill goals
- Stimulus and response method
- Long, short and semester exams
- Thinking skill

## 10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name Theoretical	Learning method	Evaluation method
1	2	Knowledge and understanding. subject-specific skills	Pharmacology: General concepts	Problem- based learning, collaboration, discussion,	Short, semester, mid-year and final exams

				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
2	2	Knowledge	Pharmacokinetics	Problem-	Short, semester
	2	understanding.	pharmacodynamics	based	mid-year and
		subject-specific	pharmacodynamics	learning,	final exams
		skills		collaboration,	illiai Caallis
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	61
3	2		Autonomic	Problem-	Short, semester
		understanding.		based	mid-year and
		subject-specific		learning,	final exams
		skills		collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
4	2	Knowledge	perspective (including choline	Problem-	Short, semester
1 1		understanding.	agonist and antagonist)	based	mid-year and
		subject-specific	agombt and antagomst)	learning,	final exams
		skills		collaboration,	THE CAUTE
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
		17	A 1	learning.	CI.
5	2		Adrenergic agonists	Problem-	Short, semester
		understanding.		based	mid-year and
		subject-specific skills		learning,	final exams
		SKIIIS		collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	

				practical	
				research,	
				computer-	
				based	
				learning.	
	2	Knowledge and	Adrenergic antagonists	Problem-	Short, semester
6		understanding.	Training untagonists	based	mid-year and
0		subject-specific		learning,	final exams
		skills		collaboration,	illiai Cxailis
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
7	2	Vnowledge	Antihymantanairra dan -	learning.	Ch out
7	2	Knowledge understanding.	Antihypertensive drugs	Problem-	Short, semester
		subject-specific		based	mid-year and
		skills		learning,	final exams
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
8	2	Knowledge	Management of angina and h	Problem-	Short, semester
		understanding.	failure	based	mid-year and
		subject-specific skills		learning,	final exams
		SKIIIS		collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
9	2	Knowledge	Management of arrhythmia		Short, semester
	_	understanding.		based	mid-year and
		subject-specific		learning,	final exams
		skills		collaboration,	-
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				compacer	

				based learning.	
10	2	Knowledge understanding. subject-specific skills	Anticoagulants, antiplatelet and antihyperlipidemic drugs	Problem- based learning, collaboration, discussion, debriefing, information review, practical research, computer- based learning.	Short, semester mid-year and final exams
11	2	Knowledge understanding. subject-specific skills	Local Hemostatic Agents in Dentistry	Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semester mid-year and final exams
12	2	understanding. subject-specific skills	Introduction the pharmacology CNS drugs, sedative, hypnotics antiseizures drugs	Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semester mid-year and final exams
13	2	Knowledge understanding, subject-specific skills	Antipsychotic and antidepress drugs	Problem- based learning, collaboration, discussion, debriefing, information review, practical research, computer- based	Short, semester mid-year and final exams

		T			
				learning.	
14	2		Local and general anaesthetics	Problem-	Short, semester
		understanding.		based	mid-year and
		subject-specific		learning,	final exams
		skills		collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
15	2	Knowledge	Drug of abuse and opioid analges	Problem-	Short, semester
		understanding.		based	mid-year and
		subject-specific		learning,	final exams
		skills		collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
16	2		Managements of diabetes mellitus	Problem-	Short, semester
		understanding.		based	mid-year and
		subject-specific		learning,	final exams
		skills		collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
17	2		Drugs affecting GIT	Problem-	Short, semester
		understanding.	-	based	mid-year and
		subject-specific		learning,	final exams
		skills		collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
18	2		(Drugs acting on respiratory syst	Problem-	Short, semester,
		understanding.		based	mid-year and

	subject-specific skills	(antihistamines and corticosteroid	learning, collaboration, discussion, debriefing, information review, practical research, computer- based learning.	final exams
19	Knowledge understanding. subject-specific skills	Non-steroidal anti-inflammat drugs (NSAIDs) part 1	Problem- based learning, collaboration, discussion, debriefing, information review, practical research, computer- based learning.	Short, semester, mid-year and final exams
20 2	Knowledge understanding. subject-specific skills	Non-steroidal anti-inflammat drugs (NSAIDs) part2 and Steri in Den	Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semester mid-year and final exams
21 2	Knowledge understanding. subject-specific skills	(Chemotherapeutic drugs (Princip of antimicrobial therapy	Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semester mid-year and final exams
22 2	Knowledge understanding. subject-specific skills	(Cell wall inhibitors (part 1)	Problem- based learning, collaboration,	Short, semester mid-year and final exams

				discussion, debriefing, information review, practical research, computer- based learning.	
23	2	understanding. subject-specific skills	(Cell wall inhibitors (part 2)	Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semester mid-year and final exams
24	2	Knowledge understanding. subject-specific skills	Protein synthesis inhibitors	Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semester mid-year and final exams
25	2	Knowledge understanding. subject-specific skills	Antifungal, antiviral and antiprotozoal drugs	Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semester, mid-year and final exams
26	2	Knowledge understanding. subject-specific skills	Sex hormone and contraceptive	Problem- based learning, collaboration, discussion, debriefing,	Short, semester, mid-year and final exams

Short, semeste   Shor						
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27					•	
28 2 Knowledge understanding, skills  29 2 Knowledge understanding, subject-specific skills  20 2 Knowledge understanding, subject-specific skills  20 3 2 Knowledge understanding, subject-specific skills  21 2 Knowledge understanding, subject-specific skills  22 3 2 Knowledge understanding, subject-specific skills  23 3 3 3 3 4 2 Knowledge understanding, subject-specific skills  24 3 4 5 5 6 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7					-	
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Subject-specific skills   Short, semester with the specific skills	27	2		•		
Skills   S				thyroid drugs		
28						imai exams
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28 2 Knowledge understanding, subject-specific skills  29 2 Knowledge understanding, subject-specific skills  20 30 3 2 Knowledge understanding, subject-specific skills  20 4 Anticaries and drugs used pervention of dental plaque  20 5 Chowledge understanding, subject-specific skills  20 6 Chowledge understanding, subject-specific skills  20 7 Chowledge understanding, subject-specific skills						
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28					computer-	
28					based	
Short, semeste   Shor					learning.	
Short, semeste   Shor						
subject-specific skills    Short, semeste mid-year and final exams   learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.   Short, semeste mid-year and final exams   subject-specific skills   Short, semeste mid-year and final exams   Short, semeste mid-year and final exams	28	2		Anticancer drugs		Short, semester
skills  Skills  Skills  Collaboration, discussion, debriefing, information review, practical research, computer-based learning.  Dental Pharmacology: drugs chemicals used in dental clinic skills  Computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  Raticaries and drugs used prevention of dental plaque  Short, semeste mid-year and final exams  Short, semeste dearning.  Short, semeste dearning.  Short, semeste dearning, collaboration, discussion, debriefing, information  ind-year and final exams						_
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29 2 Knowledge understanding, subject-specific skills  29 2 Knowledge understanding, subject-specific skills  29 3 2 Knowledge understanding, subject-specific skills  20 30 30 30 4 2 Knowledge understanding, subject-specific skills  20 Knowledge understanding, subject-specific skills  30 4 2 Knowledge understanding, subject-specific skills  20 Knowledge understanding, subject-specific skills  30 4 2 Knowledge understanding, subject-specific skills  30 5 6 Collaboration, discussion, debriefing, information  30 6 Collaboration, discussion, debriefing, information  30 7 Collaboration, discussion, debriefing, information						
29 2 Knowledge understanding subject-specific skills  20 2 Knowledge understanding subject-specific skills  21 2 Knowledge understanding subject-specific skills  22 2 Knowledge understanding subject-specific skills  23 30 30 4 2 Knowledge understanding subject-specific skills  30 4 2 Knowledge understanding subject-specific skills  30 5 2 Knowledge understanding subject-specific skills  30 6 2 Knowledge understanding subject-specific skills  30 7 2 Knowledge understanding subject-specific skills  30 8 2 Knowledge understanding subject-specific skills  30 9 2 Knowledge understanding subject-specific skills  30 9 2 Knowledge understanding subject-specific skills  30 0 10 2 Knowledge understanding subject-specific skills						
29 2 Knowledge understanding, subject-specific skills  29 2 Knowledge understanding, subject-specific skills  29 2 Knowledge understanding, subject-specific skills  20 2 Knowledge understanding, subject-specific skills  20 30 30 4 2 Knowledge understanding, subject-specific skills  20 4 Anticaries and drugs used understanding, subject-specific skills  20 5 Anticaries and drugs used prevention of dental plaque  20 5 Anticaries and drugs used learning, collaboration, discussion, debriefing, information  21 Knowledge understanding, subject-specific skills  22 Knowledge understanding, subject-specific skills  23 Anticaries and drugs used learning, collaboration, discussion, debriefing, information						
29 2 Knowledge understanding subject-specific skills  20 2 Knowledge understanding subject-specific skills  20 30 2 Knowledge understanding subject-specific skills  21 Knowledge understanding subject-specific skills  22 Knowledge understanding subject-specific skills  23 Knowledge understanding subject-specific skills  24 Knowledge understanding subject-specific skills  25 Knowledge understanding subject-specific skills  26 Knowledge understanding subject-specific skills  27 Knowledge understanding subject-specific skills  28 Knowledge understanding subject-specific skills  29 Computer-based learning.  20 Knowledge understanding subject-specific skills  20 Knowledge understanding subject-specific skills  20 Knowledge understanding subject-specific skills  30 debriefing information						
29 2 Knowledge understanding, subject-specific skills  20 2 Knowledge understanding, subject-specific skills  21 2 Knowledge understanding, subject-specific skills  22 2 Knowledge understanding, subject-specific skills  23 30 30 4 2 Knowledge understanding, subject-specific skills  24 4 Anticaries and drugs used prevention of dental plaque prevention of dental plaque based learning, collaboration, discussion, debriefing, information  25 4 Anticaries and drugs used prevention of dental plaque based learning, collaboration, discussion, debriefing, information  26 5 Anticaries and drugs used prevention of dental plaque based learning, collaboration, discussion, debriefing, information					•	
29 Chowledge understanding, subject-specific skills  Dental Pharmacology: drugs chemicals used in dental clinic shemicals used in dental clinic based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  30 Z Knowledge understanding, subject-specific skills  Anticaries and drugs used prevention of dental plaque  Anticaries and drugs used learning, collaboration, discussion, debriefing, information  Short, semeste mid-year and final exams  Short, semeste mid-year and final exams						
29 Chowledge understanding, subject-specific skills  Dental Pharmacology: drugs chemicals used in dental clinic shemicals used in dental clinic based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  30 Z Knowledge understanding, subject-specific skills  Anticaries and drugs used prevention of dental plaque  Anticaries and drugs used learning, collaboration, discussion, debriefing, information  Short, semeste mid-year and final exams  Short, semeste mid-year and final exams					learning.	
subject-specific skills    learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.    Short, semeste mid-year and final exams	29	2		Dental Pharmacology: drugs	Problem-	Short, semester
skills  skills  collaboration, discussion, debriefing, information review, practical research, computer-based learning.  Short, semeste mid-year and final exams  Anticaries and drugs used prevention of dental plaque  Short, semeste mid-year and final exams  subject-specific skills				chemicals used in dental clinic		_
30 2 Knowledge understanding. subject-specific skills  Anticaries and drugs used prevention of dental plaque based learning, collaboration, discussion, debriefing, information  Short, semeste mid-year and final exams						final exams
debriefing, information review, practical research, computer-based learning.  2 Knowledge understanding, subject-specific skills  Anticaries and drugs used prevention of dental plaque based learning, collaboration, discussion, debriefing, information			SKIIIS		·	
information review, practical research, computer-based learning.  2 Knowledge understanding. subject-specific skills  Anticaries and drugs used prevention of dental plaque based learning, collaboration, discussion, debriefing, information  information  Problem-based learning, collaboration, discussion, debriefing, information						
Treview, practical research, computer-based learning.  2 Knowledge understanding. subject-specific skills  Anticaries and drugs used prevention of dental plaque  Book prevention of dental plaque  Book problem-based learning, collaboration, discussion, debriefing, information						
30 2 Knowledge understanding. subject-specific skills  Anticaries and drugs used prevention of dental plaque prevention, discussion, debriefing, information  practical research, computer-based learning.  Short, semeste mid-year and final exams						
30 2 Knowledge understanding. subject-specific skills  Anticaries and drugs used prevention of dental plaque based learning, collaboration, discussion, debriefing, information						
30 2 Knowledge understanding. subject-specific skills  Anticaries and drugs used prevention of dental plaque  Problembased based prevention of dental plaque  based learning, collaboration, discussion, debriefing, information					_	
30 2 Knowledge understanding. subject-specific skills  Anticaries and drugs used prevention of dental plaque based learning, collaboration, discussion, debriefing, information						
30 2 Knowledge understanding, subject-specific skills  Anticaries and drugs used prevention of dental plaque based learning, collaboration, discussion, debriefing, information					-	
2 Knowledge understanding. subject-specific skills  Anticaries and drugs used prevention of dental plaque based learning, collaboration, discussion, debriefing, information						
understanding. subject-specific skills  prevention of dental plaque  based learning, collaboration, discussion, debriefing, information  mid-year and final exams	30	2		Anticaries and drugs used		Short, semester
subject-specific skills  learning, collaboration, discussion, debriefing, information				e l	based	
discussion, debriefing, information				1 1		
debriefing, information			SKIIIS			
information						
review						
10,10,11					review,	

	practical research, computer- based learning.
--	---

	learning.
Lab number	Study unit title
1	Pharmacology: General concepts
2	Pharmacokinetics and pharmacodynamics
3	Autonomic
4	perspective (including cholinergic agonist and antagonist)
5	Adrenergic agonists
6	Adrenergic antagonists
7	Antihypertensive drugs
8	Management of angina and heart failure
9	Management of arrhythmia
10	Anticoagulants, antiplatelet and antihyperlipidemic drugs
11	Local Hemostatic Agents in Dentistry
12	Introduction the pharmacology of CNS drugs, sedative, hypnotics and antiseizures drug
13	Antipsychotic and antidepressant drugs
14	Local and general anaesthetics
15	Drug of abuse and opioid analgesics
16	Managements of diabetes mellitus
17	Drugs affecting GIT
18	(Drugs acting on respiratory system (antihistamines and corticosteroids
19	Non-steroidal anti-inflammatory drugs (NSAIDs) part 1
20	Non-steroidal anti-inflammatory drugs (NSAIDs) part2 and Steriods in Dent
21	(Chemotherapeutic drugs (Principles of antimicrobial therapy
22	(Cell wall inhibitors (part 1
23	(Cell wall inhibitors (part 2
24	Protein synthesis inhibitors
25	Antifungal, antiviral and antiprotozoal drugs
26	Sex hormone and contraceptive
27	Thyroid hormones and anti-thyroid drugs
28	Anticancer drugs

29	Dental Pharmacology: drugs and chemicals used in dental clinic
30	Anticaries and drugs used in prevention of dental plaque

## 11. Course Evaluation

- 10 degrees of first semester: 8 degrees of short and semester exams and two degrees of oral exam
- 10 degrees of second semester: 8 degrees of short and semester exams and two degrees of oral exam
- 20 degrees of mid-year
- 60 degrees of final exam

# 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	Pharmacology (Lippincott Illustrated Reviews Series) Edition (2019) Contamorary Dentel Pharmacology: Evidence Re
	Contemporary Dental Pharmacology:Evidence-Ba Considerations 1st ed (2019)
Recommended books and references	
(scientific journals, reports)	
Electronic References, Websites	

#### 1. Course Name:

## Microbiology

#### 2. Course Code:

#### **MB315**

## 3. Semester / Year:

## 2 semester/ third stage

## 4. Description Preparation Date:

#### 2024-2025

#### 5. Available Attendance Forms:

Lectures and laboratory

## 6. Number of Credit Hours (Total) / Number of Units (Total)

120 hours/6 unite

## 7. Course administrator's name (mention all, if more than one name)

Name: Shaimaa Awadh Auda

Email: shaimaa.awadh@mu.edu.iq

## 8. Course Objectives

#### **Course Objectives**

- The microbiology lesson aims to identify the principles of microbiology and epidemic diseases
- This course aims to know the characteristics of microorganisms in general and the special characteristics of pathogenic microorganisms such as bacteria, fungi and viruses and the mechanism of disease events by these organisms and

their diagnosis and how to differentiate between each of these pathogens

 This course also aims to study immunity and the mechanism of the body's defenses and the immune response to diseases and address the methods of sterilization

# 9. Teaching and Learning Strategies

#### Strategy

- Knowledge and understanding
- Skill goals
- Stimulus and response method
- Long, short and semester exams
- Thinking skills

10. Course Structure								
Week	Hours	Required Learning	Unit or subject name	Learning	Evaluation			
		Outcomes	Theoretical	method	method			
1	2	<ul> <li>Identify microorganism beneficial to humans and harmful microorganisms</li> <li>Methods of diagnosis and transmission of microorganisms</li> <li>Identify the immunity the human body and types</li> <li>The relationship</li> </ul>	Morpholog Ultra structures, physiology metabolism of microorganisms: -	Problembased learning, collaboration discussion, debriefing, information review, practical research, computerbased learning.	Short, semeste mid-year and final exams			
2	2	<ul> <li>between microorganis and the human body</li> <li>Identify sterilization methods</li> <li>Identify modern meth for diagnosing microorganisms</li> <li>Identify microorganis that cause new epidem</li> </ul>	Microbial growth, grocurve	Problembased learning, collaboration discussion, debriefing, information review, practical research, computerbased learning.	Short, semeste mid-year and final exams			
3	2		Sterilization and Disinfect	Problembased learning, collaboration discussion, debriefing, information review, practical research, computerbased learning.	Short, semeste mid-year and final exams			
4	2		Antibiotic and chemothera		Short, semeste mid-year and final exams			

5 2		Immunology(part1)	based learning. Problem-	
5 2		Immunology(part1)		
5 2		Immunology(part1)	Droblem	
	i	- 67 (I)		Short, semeste
			based	mid-year and
			learning,	final exams
			collaboration	
			discussion,	
			debriefing,	
			information	
			review,	
			practical	
			research,	
			computer-	
			based	
			learning.	
6 2		Immunology(part2)	Problem-	Short, semeste
			based	mid-year and
			learning,	final exams
			collaboration	
			discussion,	
			debriefing,	
			information	
			review,	
			practical	
			research,	
			computer- based	
7 2	$\dashv$	Immunology(part3)	learning. Problem-	Short, semeste
7 2		minunology(parts)	based	mid-year and
			learning,	final exams
			collaboration	illiai Caills
			discussion,	
			debriefing,	
			information	
			review,	
			practical	
			research,	
			computer-	
			based	
			learning.	
8 2		Immunology(part 4)	Problem-	Short, semeste
			based	mid-year and
			learning,	final exams
			collaboration	
			discussion,	
			debriefing,	
			information	
			review,	
			practical	
			research,	
			computer-	
			based	
1			learning.	
			-2m	i i

9	2	Host-parasite relation	ionshin	Problem-	Short, semeste
,	2	Nosocomial infection		based	mid-year and
		Nosocomiai infecti	IOII	learning,	final exams
				collaboration	IIIIai Cxaiiis
				discussion,	
				debriefing, information	
				review,	
				practical	
				research,	
				computer-	
				based	
1.0		<u> </u>		learning.	01
10	2	Streptococci		Problem-	Short, semeste
				based	mid-year and
				learning,	final exams
				collaboration	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
1	2	Staphylococci		J	Short, semeste
		1 7		Problem-	mid-year and
				based	final exams
				learning,	
				collaboration	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
.2	2	G- negative diploce	occic	Problem-	Short, semeste
. 4	[	Vellionella and Mo		based	mid-year and
				learning,	final exams
		Neisseria gonorrhe	a,	collaboration	mai Caills
		N. meningitidis		discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
	i			learning.	
				1	
13	2		ctinomy ebacteri	Problem- based	Short, semeste mid-year and

	1			1
		diphtheriae & Diphtheroid		final exams
			collaboration	
			discussion,	
			debriefing,	
			information	
			review,	
			practical	
			research,	
			computer-	
			based	
			learning.	
14	2	Bacillus: B. subtilis,	Problem-	Short, semeste
		anthracis and B.ceres	based	mid-year and
			learning,	final exams
			collaboration	
			discussion,	
			debriefing,	
			information	
			review,	
			practical	
			research,	
			computer-	
			based	
			learning.	
15	2	Clostridium : C. perfringe	Problem-	Short, semeste
	_	, C. tetani, C. botulinum,	based	mid-year and
		and difficile	learning,	final exams
		and difficine	collaboration	
			discussion,	
			debriefing,	
			information	
			review,	
			practical	
			research,	
			computer-	
			based	
			learning.	
16	2	Enterobacteriaceae		Short, semeste
		E.coli, Salmonella, Shigell	Problem-	mid-year and
		, ,	based	final exams
			learning,	
			collaboration	
			discussion,	
			debriefing,	
			information	
			review,	
			practical	
			research,	
			computer-	
			based	
			learning.	
17	2	Enterobacter, Klebsiella,	Problem-	Short, semeste
		proteus, Yersinia	based	mid-year and
		process, reisima	learning,	final exams
			collaboration	

			learning.	
			computer- based	
19	2	Brucella, Haemophi	Problem-	Short, semeste
		Vibirio	based	mid-year and
			learning,	final exams
			collaboration	
			discussion,	
			debriefing,	
			information	
			review,	
			practical research,	
ĺ			research	
			computer-	
			computer- based	
20	2	Aggregatihacter	computer- based learning.	Short semeste
20	2	Aggregatibacter,	computer- based learning. Problem-	Short, semeste
20	2	porphyromonas,	computer- based learning. Problem- based	mid-year and
20	2		computer- based learning. Problem-	mid-year and final exams
20	2	porphyromonas,	computer- based learning. Problem- based learning, collaboration	mid-year and final exams
20	2	porphyromonas,	computer- based learning. Problem- based learning, collaboration discussion,	mid-year and final exams
20	2	porphyromonas,	computer- based learning. Problem- based learning, collaboration	mid-year and final exams
20	2	porphyromonas,	computer- based learning. Problem- based learning, collaboration discussion, debriefing,	mid-year and final exams
20	2	porphyromonas,	computer-based learning.  Problembased learning, collaboration discussion, debriefing, information	mid-year and final exams
20	2	porphyromonas,	computer- based learning. Problem- based learning, collaboration discussion, debriefing, information review,	mid-year and final exams
20	2	porphyromonas,	computer-based learning.  Problembased learning, collaboration discussion, debriefing, information review, practical	mid-year and final exams
20	2	porphyromonas,	computer-based learning.  Problem-based learning, collaboration discussion, debriefing, information review, practical research, computer-based	mid-year and final exams
		porphyromonas, prevotella, Bacteroids	computer-based learning.  Problem-based learning, collaboration discussion, debriefing, information review, practical research, computer-based learning.	mid-year and final exams
20	2	porphyromonas, prevotella, Bacteroids  Fusiforms and Spirochaet	computer-based learning.  Problem-based learning, collaboration discussion, debriefing, information review, practical research, computer-based learning.  Problem-	mid-year and final exams  Short, semeste
		porphyromonas, prevotella, Bacteroids	computer-based learning.  Problem-based learning, collaboration discussion, debriefing, information review, practical research, computer-based learning.  Problem-based	mid-year and final exams  Short, semeste mid-year and
		porphyromonas, prevotella, Bacteroids  Fusiforms and Spirochaet	computer-based learning.  Problem-based learning, collaboration discussion, debriefing, information review, practical research, computer-based learning.  Problem-based learning,	mid-year and final exams  Short, semeste mid-year and final exams
		porphyromonas, prevotella, Bacteroids  Fusiforms and Spirochaet	computer-based learning.  Problem-based learning, collaboration discussion, debriefing, information review, practical research, computer-based learning.  Problem-based learning, collaboration	mid-year and final exams  Short, semeste mid-year and final exams
		porphyromonas, prevotella, Bacteroids  Fusiforms and Spirochaet	computer-based learning.  Problem-based learning, collaboration discussion, debriefing, information review, practical research, computer-based learning.  Problem-based learning, collaboration discussion,	mid-year and final exams  Short, semeste mid-year and final exams
		porphyromonas, prevotella, Bacteroids  Fusiforms and Spirochaet	computer-based learning.  Problem-based learning, collaboration discussion, debriefing, information review, practical research, computer-based learning.  Problem-based learning, collaboration	mid-year and final exams  Short, semeste mid-year and final exams

			review,	
			practical	
			research,	
			computer-	
			based	
			learning.	
22   2	2	Treponema and	Problem-	Short, semeste
		Treponema	based	mid-year and
			learning,	final exams
			collaboration	
			discussion,	
			debriefing,	
			information	
			review,	
			practical	
			research,	
			computer-	
			based	
22 2	)	Marandama Chlamadia	learning. Problem-	Chart gameata
23 2	2	Mycoplasma, Chlamydia		Short, semeste
		Rickittsiae	based	mid-year and final exams
			learning, collaboration	IIIIai exaiiis
			discussion,	
			debriefing,	
			information	
			review,	
			practical	
			research,	
			computer-	
			based	
			learning.	
24 2	2	Ecology of oral flora	Problem-	Short, semeste
			based	mid-year and
			learning,	final exams
			collaboration	
			discussion,	
			debriefing,	
			information	
			review,	
			practical	
			research,	
			computer-	
			based	
DE 3	,	Migrapialagy of dental	learning. Problem-	Chart careact
25 2	۷	Microbiology of dental	based	Short, semeste
		caries	learning,	mid-year and final exams
			collaboration	mai chaills
			discussion,	
			debriefing,	
			information	
			review,	
			practical	
			research,	
L		1	,	

			computer-	
			based	
			learning.	
26	2	Microbiology of dental	Problem-	Short, semeste
		caries	based	mid-year and
			learning,	final exams
			collaboration	
			discussion,	
			debriefing, information	
			review,	
			practical	
			research,	
			computer-	
			based	
			learning.	
27	2	Microbiology of	Problem-	Short, semeste
		periodontal disease and	based	mid-year and
		Endodontics	learning,	final exams
			collaboration	
			discussion,	
			debriefing,	
			information	
			review,	
			practical	
			research, computer-	
			based	
			learning.	
28	2	Virology	Problem-	Short, semeste
	_	23	based	mid-year and
			learning,	final exams
			collaboration	
			discussion,	
			debriefing,	
			information	
			review,	
			practical	
			research,	
			computer- based	
			learning.	
29	2	viral replication	Problem-	Short, semeste
		viiai replication	based	mid-year and
			learning,	final exams
			collaboration	
			discussion,	
			debriefing,	
			information	
			review,	
			practical	
			research,	
			computer- based	
			vascu	

30 2		Oral mycology and Oral parasitology	learning.  Problembased learning, collaboration discussion, debriefing, information review, practical research, computerbased learning.	Short, semeste mid-year and final exams		
Lab number		Study unit title				
1	Orientation to the Microbi	ology laboratory				
2	The microscope					
3	Sterilisation and disinfecti	on:				
4	Bacterial growth					
5	Types of culture media	Types of culture media				
6	Sampling and transport of	Sampling and transport of test material				
7	Laboratory cultivation of microorganisms					
8	Bacterial identification:1-Macroscopical characteristics (colonial morphology and cultural characteristics).					
9	2. Microscopical examinat	2. Microscopical examination (morphology of bacterial cells).				
10	Staining					
11	Biochemical tests (part 1).					
12	Biochemical tests( part2).					
13	Biochemical tests( part3).					
14	Antibiotic sensitivity test(	part 1).				
15	Antibiotic sensitivity test( part 2).					
16	Serological tests (antigen	and antibody detection t	ests) (part 1).			
17	Serological tests (antigen )2.	and antibody detection t	ests) (part			
18	Nucleic acid assays, Anir	nal pathogenicity test				
19	Staphylococci					
20	Streptococci					
21	Corynebacterium					
22	Spore-forming Gram-pos	itive bacilli: <u>Bacillus</u> spp	).			

23	<u>Clostridium</u> spp.
24	Mycobacterium spp.
25	Enterobacteriaceae (part1)
26	Enterobacteriaceae (part2)
27	nterobacteriaceae( part3)
28	Neisseriae spp.
29	Virology
30	Mycology

# 11. Course Evaluation

10 degrees of first semester: 8 degrees of short and semester exams and two degrees of oral exam 10 degrees of second semester: 8 degrees of short and semester exams and two degrees of oral exam

20 degrees of mid-year

60 degrees of final exam

# 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	Kuby Immunology Eighth Edition ©2019
	• Essential Microbiology for Dentistry 5th Edition
	(2018)
Recommended books and references (scientific	
journals, reports)	
Electronic References, Websites	

#### 1. Course Name:

Conservative Dentistry

#### 2. Course Code:

319CV

#### 3. Semester / Year:

# 2 semester/ third stage

#### **4.** Description Preparation Date:

#### 2024-2025

#### 5. Available Attendance Forms:

Lectures and laboratory

#### 6. Number of Credit Hours (Total) / Number of Units (Total)

180 hours/8 unite

# 7. Course administrator's name (mention all, if more than one name)

Name: Hiba Ahmed Saed Email: Hiba.ahmed @mu.edu.iq

# 8. Course Objectives

# • Students are trained on artificial teeth and phantom heads in preparation for treating clinical patients The next stages

# 9. Teaching and Learning Strategies

#### Strategy

- Knowledge and understanding
- Skill goals
- Stimulus and response method
- Long, short and semester exams
- Thinking skills

#### 10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name Theoretical	Learning method	Evaluation method
1	6	Knowledge and understanding. subject-specific skills			Short, semester mid-year and final exams

				based	
				learning,	
				collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
2	6	Knowledge	Definition of operative dentistry	Theoretical	Short, semester
		understanding.		lecture using	-
		subject-specific skills		Power point,	final exams
		SKIIIS		Problem-	
				based	
				learning,	
				collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
3	6	Knowledge	Instruments and gen	Theoretical	Short, semester
	Ü	understanding.	instrumentation of cavity preparat		· · · · · · · · · · · · · · · · · · ·
		subject-specific	instrumentation of early preparat	Power point,	final exams
		skills		Problem-	
				based	
				learning,	
				collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
		Knowledge	Instance	_	Chart comests
4	6	understanding.	Instruments and gen	Theoretical	Short, semester
· ·			instrumentation of cavity preparat	lecture using Power point,	
		subject-specific		POWER BOINT	final exams
		subject-specific skills			
		subject-specific skills		Problem-	
				Problem- based	
				Problem- based learning,	
				Problem- based	

				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
		** 1 1		learning.	
5	6	Knowledge	Sterilization of operative instrume		Short, semester
		understanding.		lecture using	-
		subject-specific		Power point,	final exams
		skills		Problem-	
				based	
				learning,	
				collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
	6	Knowledge and	Sterilization of operative instrume	Theoretical	Short, semester
6		understanding.	•	lecture using	
		subject-specific		Power point,	final exams
		skills		Problem-	
				based	
				learning,	
				collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
7	6	Knowledge	Amalgam cavity preparations	Theoretical	Short, semester
'	U	understanding.	class I	lecture using	
		subject-specific	Class I	Power point,	final exams
		skills		Problem-	iiiiai exaiiis
				based	
				learning,	
				collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	

	1		,		1
				practical	
				research,	
				computer-	
				based	
		Vnovdodao	A 1	learning.	Classic
8	6	Knowledge understanding.	Amalgam cavity preparations	Theoretical	Short, semester
		subject-specific	class I	lecture using	
		skills		Power point, Problem-	final exams
				based	
				learning,	
				collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
9	6	Knowledge	Amalgam cavity preparations	Theoretical	Short, semester
		understanding.	class II	lecture using	
		subject-specific		Power point,	final exams
		skills		Problem-	
				based	
				learning,	
				collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer- based	
			1	learning.	
10	6	Knowledge	Amalgam cavity preparations	Theoretical	Short, semester
10	o	understanding.	class II	lecture using	
		subject-specific	C1a55 11	Power point,	final exams
		skills	1	Problem-	
			1	based	
				learning,	
				collaboratio	
			1	n,	
			1	discussion,	
				debriefing,	
			1	information	
			1	review,	
			1	practical	
			1	research,	
1			·		
				computer- based	

				learning.	
11	6		Amalgam cavity preparations	Theoretical	Short, semester
		understanding.	class II (MOD)	lecture using	mid-year and
		subject-specific	(	Power point,	•
		skills		Problem-	
				based	
				learning,	
				collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
12	(	Knowledge	Amalaam aavity maanamatiana		Chart gamagtan
12	6	understanding.	Amalgam cavity preparations	Theoretical	Short, semester
		subject-specific	class II (MOD)	lecture using	
		skills		Power point,	final exams
				Problem-	
				based	
				learning,	
				collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
13	6		Amalgam cavity preparations	Theoretical	Short, semester
		understanding.	class III and class V	lecture using	
		subject-specific skills		Power point,	final exams
		SKIIIS		Problem-	
				based	
				learning,	
				collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
14	6	Knowledge	Amalgam cavity preparations	Theoretical	Short, semester
		understanding.	class III and class V	lecture using	
		subject-specific		Power point,	final exams
		1	ı	r	

	1				
		skills		Problem-	
				based	
				learning,	
				collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
15	6	Knowledge	Cavity liners and cement bases (	Theoretical	Short, semester
		understanding.	1)	lecture using	
		subject-specific	<del>-</del> /	Power point,	
		skills		Problem-	
				based	
				learning,	
				collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
16	6	Knowledge	Cavity liners and cement bases (	Theoretical	Short, semester
		understanding.	1)	lecture using	
		subject-specific	1)	Power point,	_
		skills		Problem-	
				based	
				learning,	
				collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
17	6	Knowledge	Cavity liners and cement bases (	Theoretical	Short, semester
-		understanding.	2)	lecture using	
		subject-specific	<i>-,</i>	Power point,	final exams
		skills		Problem-	
				based	
				learning,	
				collaboratio	
L	]		<u> </u>		

18	6	Knowledge understanding. subject-specific skills	Cavity liners and cement bases (2)	n, discussion, debriefing, information review, practical research, computer- based learning. Theoretical lecture using Power point, Problem- based learning, collaboratio	•
				n, discussion, debriefing, information review, practical research, computer- based learning.	
19	6	understanding. subject-specific skills	Dental amalgam alloys (material)	Theoretical lecture using Power point, Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	final exams
20	6	Knowledge understanding. subject-specific skills	Dental amalgam alloys (material)	Theoretical lecture using Power point, Problembased learning, collaboratio n, discussion, debriefing, information	

				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
21	6	Knowledge	Complex amalgam restoration	Theoretical	Chart compator
41	О	understanding.	Complex amalgam restoration		Short, semester
		subject-specific		lecture using	mid-year and
		skills		Power point,	final exams
				Problem-	
				based	
				learning,	
				collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				·	
				computer-	
				based	
				learning.	
22	6		Complex amalgam restoration	Theoretical	Short, semester
		understanding.		lecture using	
		subject-specific skills		Power point,	final exams
		SKIIIS		Problem-	
				based	
				learning,	
				collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
23	6		Failures in amalgam restorations	Theoretical	Short, semester
		understanding.	_	lecture using	mid-year and
		subject-specific		Power point,	
		skills		Problem-	-
				based	
				learning,	
				collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				compacer	

27	6	Knowledge understanding. subject-specific skills  Knowledge understanding.	Tooth colored restora (composite)  Cavity preparation for ant restorations	lecture using Power point, Problembased learning, collaboratio n, discussion, debriefing, information review, practical research, computerbased learning.	final exams  Short, semester
	6	understanding. subject-specific		research, computer- based learning.  Theoretical lecture using Power point, Problem- based learning, collaboratio n, discussion, debriefing, information review, practical research, computer- based	mid-year and final exams
	6	understanding. subject-specific		research, computer- based learning.  Theoretical lecture using Power point, Problem- based learning, collaboratio n, discussion, debriefing, information review, practical research, computer-	mid-year and final exams
	6	understanding. subject-specific		research, computer- based learning.  Theoretical lecture using Power point, Problem- based learning, collaboratio n, discussion, debriefing, information review, practical research,	mid-year and final exams
	6	understanding. subject-specific		research, computer- based learning.  Theoretical lecture using Power point, Problem- based learning, collaboratio n, discussion, debriefing, information review, practical	mid-year and final exams
	6	understanding. subject-specific		research, computer- based learning.  Theoretical lecture using Power point, Problem- based learning, collaboratio n, discussion, debriefing, information	mid-year and final exams
	6	understanding. subject-specific		research, computer- based learning.  Theoretical lecture using Power point, Problem- based learning, collaboratio n, discussion, debriefing,	mid-year and final exams
	6	understanding. subject-specific		research, computer- based learning.  Theoretical lecture using Power point, Problem- based learning, collaboratio n, discussion,	mid-year and final exams
	6	understanding. subject-specific		research, computer- based learning. Theoretical lecture using Power point, Problem- based learning, collaboratio n,	mid-year and final exams
	6	understanding. subject-specific		research, computer- based learning. Theoretical lecture using Power point, Problem- based learning, collaboratio	mid-year and final exams
	6	understanding. subject-specific		research, computer- based learning.  Theoretical lecture using Power point, Problem- based learning,	mid-year and final exams
	6	understanding. subject-specific		research, computer- based learning.  Theoretical lecture using Power point, Problem-	mid-year and
	6	understanding. subject-specific		research, computer- based learning. ti Theoretical lecture using Power point,	mid-year and
	6	understanding.		research, computer- based learning.  Theoretical lecture using	mid-year and
	6			research, computer- based learning. ti Theoretical	
26		Knowledge	Tooth colored mostore	research, computer- based learning.	Chart gaves to
26				research, computer- based	
				research, computer-	
				_	
				practical	
				review,	
				information	
				discussion, debriefing,	
				n, discussion,	
				collaboratio	
				learning,	
				based	
		skills		Problem-	
		subject-specific	(composite)	Power point,	
45	О	understanding.	(composite)		mid-year and
25	6	Knowledge	Tooth colored restora	learning.	Short, semester
				based	
				computer-	
				research,	
				practical	
				review,	
				information	
				debriefing,	
				n, discussion,	
				collaboratio	
				learning,	
				based	
		skills		Problem-	
		subject-specific		Power point,	
		understanding.		lecture using	
24	6	Knowledge	Failures in amalgam restorations	_	Short, semester
				based learning.	

, ·					
		subject-specific		Power point,	final exams
		skills		Problem-	
				based	
				learning,	
				collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
28	6	Knowledge	Cavity preparation for ante	Theoretical	Short, semester
		understanding.	restorations	lecture using	
		subject-specific	105torutions	Power point,	final exams
		skills		Problem-	0
				based	
				learning,	
				collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
29	6	Knowledge	Resin material	Theoretical	Short, semester
	J	understanding.	Resin material		mid-year and
		subject-specific		Power point,	
		skills		Problem-	mai chamb
				based	
				learning,	
				collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
30	6	Knowledge	Resin material	Theoretical	Short, semester
	U	understanding.	Nosin material	lecture using	
		subject-specific		Power point,	
		skills		Problem-	mai chamb
				based	
				learning,	
<u> </u>				1041111116)	

				collaboratio n, discussion, debriefing, information review, practical research, computer- based learning.		
Lab num	ıber		Study unit title			
1		abo squ	oduction to operative dentistry, and to work in plut the rotary instrument, and how to cut geomet are, rectangle, and dove-tail), and leave lents to work under supervision.			
2	ā		Demonstration of how to use phantom head, working positions for both student and phantom head, also demonstration cavity preparation on buccal pit of lower 1st molar and palatal pit of upper lateral incisor.			
		Demonstration of principles of amalgam cavity preparation for CL I on the occlusal surface of lower 2nd premolar on the board then do demonstration of cutting on the phantom head. Quiz about the principles of CL I amalgam cavity preparation.				
4		Demonstration amalgam CL I cavity for lower $1_{\mbox{\scriptsize st}}$ premolar and Leave students to work under supervision.				
5		Demonstration amalgam CL I cavity for upper 1st molar (two separated cavities) on the phantom head and teaching the students how to work indirectly by using mirror. Leave students to work under supervision.				
6		Demonstration amalgam cavity for the palatal extension in upper 1st molar (continue with last lab in distal occlusal cavity), and Demonstration on the hand instrument groups, and teach students to differentiate between them.				
7		Practical assessment for the students in amalgam CL I cavity on lower 1st molar.  Oral quiz on the hand instrument and their groups.			ver 1 <sub>st</sub> molar.	
8		Demonstration amalgam CL II MO cavity for lower 1st premolar				
9		Demonstration amalgam CL II MO cavity for upper 1st molar				
10		mol	ctical assessment for the students in amalgam CL ar. z in amalgam CL II cavity lectures.	II MO cavity o	n lower 1 <sub>st</sub>	
11		Den	nonstration amalgam CL II MOD cavity for lower 1	Lst molar		
12		Den	nonstration amalgam CL II MOD cavity for upper 2	2 <sub>nd</sub> molar		
13			ctical assessment for the students in cavity prepart MOD cavity on lower 2nd molar.	ration of amal	gam	

14	Demonstration amalgam CL V cavity for lower $2nd$ premolar, upper $1st$ molar and upper $2nd$ premolar.
15	Demonstration amalgam CL III cavity in distal side of upper canine.
16	Demonstration of the liner and base placement, their indication, advantage, and uses.
17	Supervised students in mixing and placing zinc phosphate cement in CL II DO cavity of lower 2nd premolar.
18	Supervised students in mixing and placing zinc phosphate cement in CL II MO cavity of upper ${f 1}_{st}$ molar and CL II MOD cavity of lower ${f 2}_{nd}$ molar
19	Practical assessment for the students in zinc phosphate mixing and placement in CL II MOD cavity on lower $1_{\mbox{\scriptsize st}}$ molar.
20	Amalgam filling of CL I cavity of lower 1st premolar
21	Amalgam filling of CL II cavity of lower 2nd premolar.
22	Amalgam filling of CL II cavity of upper 1st molar.
23	Amalgam filling of CL II MOD cavity of upper 2nd molar.
24	Practical assessment on Amalgam filling of CL II MOD cavity of lower 1st molar.
25	Amalgam filling of CL V cavities of upper 1st molar and lower 2nd premolar. (part1)
26	Preparation of CL III composite cavity on upper central incisor with composite filling placement (light cure)
27	Preparation of CL III composite cavity on upper lateral incisor with omposite filling placement (light cure)
28	Preparation of CL V composite cavity on upper central incisor with composite filling placement (light cure).
29	Final practical assessment.
30	Finishing and evaluation of the practical work.

#### 11. Course Evaluation

- 10 degrees of first semester: 8 degrees of short and semester exams and two degrees of oral exam
- 10 degrees of second semester: 8 degrees of short and semester exams and two degrees of oral exam
- 20 degrees of mid-year
- 60 degrees of final exam

# 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	Conservative Operative Lect. 1- Summitt's fundamentals of operative dentistry: A contempor

	approach. 4th edition. 2- Art and science of operat dentistry 7th edition Crown Lect. 1- Fundamentals of Fixed Prosthodontics, 2012, Quintessence Pub. SHILLINGBURG, H. T. & SATHER, D. A. 2- Contemporary Fix
	Prosthodontics, 2016 Elsevi ROSENSTIEL, S. F., LAND, M
	& FUJIMOTO, J.
Recommended books and references (scientific journals,	
reports)	
Electronic References, Websites	

#### 1. Course Name:

#### Medical ethics

#### 2. Course Code:

MI 323

#### 3. Semester / Year:

#### 2 semester/ third stage

#### 4. Description Preparation Date:

#### 2024-2025

#### 5. Available Attendance Forms:

Lectures

#### 6. Number of Credit Hours (Total) / Number of Units (Total)

30 hours/2 unite

#### 7. Course administrator's name (mention all, if more than one name)

Name: Zahraa Mohammed Abdul Aziz Email: Zahraaallwzy@gmail.com

#### 8. Course Objectives

#### **Course Objectives**

It aims to teach ethics. It helps students know the issues and teaches them wa to respond to them based on the application of rules Rationally, this subject ha an important role in the doctor's relationship with society, his relationship with colleagues, and in pursuing the best paths to his aspirations. Medical Professional ethics and work values play an important role in improving performance, because the individual's behavior is considered the cornerstone which the company's behavior is built, such as his communication with others, his satisfaction with work, and his performance of his duties. It aims to regulate the activities of the profession and thus constitute a code of good conduct that defines professional identity.

# 9. Teaching and Learning Strategies

#### Strategy

- Knowledge and understanding
- Skill goals
- Stimulus and response method
- Long, short and semester exams
- Thinking skill

#### 10. Course Structure

Wee	Hours	Required	Unit or subject name	Learning	Evaluati
k		Learning	Theoretical	method	on
		Outcomes			method
1	1	Knowledge and understanding. subject-specific ski	Professional Ethics Review What is meant by "ethics? Why are ethics important? Evolution and philosophy ethics The terms moral and ethic obligation and principle	collaboration, discussion, debriefing, information review, practical research, computer-based	Short, semester, mid-year and final exams
2	1	Knowledge understanding. subject-specific ski	Professional Ethics Review  Dental ethics, professionalism, Hu Rights and Law What is a "professio What is a "professional?" What "professionalism?" Dentistry as Profession Dentistry: The Commer Picture Dentistry: The Normative Pict The Content of Professional Obligations	norriorus proatical	Short, semester, mid-year and final exams
3	1	Knowledge understanding. subject-specific ski	Professional Ethics Review What is meant by the "best interests' our patients? What is "paternalism?" good risk management good ethics? Wabout compromising quality?	Problem-based learning, collaboration,	Short, semester, mid-year and final exams
4	1	Knowledge understanding. subject-specific ski	Professional Ethics Review What are codes of ethics? Should I c more about being legal or being ethic Do we really have obligations to patier Can dentistry be both a business an profession?	Problem-based learning, collaboration,	Short, semester, mid-year and final exams
5	1	Knowledge understanding. subject-specific ski	Principal Features of Dental EthicsWhat's special about Dentistry? What's special about dental ethics? Who decides what is ethical? Does dental ethics change? Does dental ethics differ from one cour to another?	Problem-based learning, collaboration, discussion, debriefing,	Short, semester, mid-year and final exams

		Knowledge and	Dringing Leatures of Dantal Ethics	Problem-based	Chant
6	1	understanding. subj	Principal Features of Dental Ethics The role of the FDI How does the F	learning,	Short, semester,
0	1	specific skills	decide what is ethical? How do individu	collaboration,	mid-year
			decide what is ethical? How do individu	discussion,	and
				debriefing,	final
			decide what is ethical?	information	exams
				review, practical	5
				research,	
				computer-based	
				learning.	
7		Knowledge	Ethical Law and ethical Theories	Problem-based	Short,
		understanding. subj	History and basic ethical theory	learning,	semester,
		specific skills	History of medical ethics	collaboration,	mid-year
			Hammurabi's code of law ippocratic	discussion,	and
			oath Basic grounding of Ethics	debriefing,	final
			Humanities (universalstandards)	information	exams
	1		Religious& nonreligious: Political&	review, practical	
	1		dogmatic strategies of the state Other	research,	
			groundings of Ethics (theories of	computer-based	
			ethics):	learning.	
			1- Action theory:		
			2- Consequentiality theory: 3- Va		
			theory (why theory): Ethics and the		
			Sources of Ethical Views and Convictio		
8		Knowledge	Ethical Law and ethical Theories	Problem-based	Short,
0	2	understanding. subj		learning,	semester,
	1	specific skills	Thistory and basic current theory	collaboration,	mid-year
	1		History of medical ethics	discussion,	and
			Hammurabi's code of law ippocratic	debriefing,	final
			oath Basic grounding of Ethics	information	exams
			Humanities	review, practical	
			(universalstandards) Religious&	research,	
			nonreligious: Political& dogmatic	computer-based	
			strategies of the state Other	learning.	
			groundings of Ethics (theories of		
			ethics):		
			1- Action theory:		
			2- Consequentiality theory: 3- Va		
			theory (why theory): Ethics and the		
		77 1 1	Sources of Ethical Views and Convictio		01
		Knowledge understanding. subj	Fundamental Principles of dental	Problem-based	Short,
9		specific skills	Ctifics	learning,	semester,
	1	T	1- Patient autonomy	collaboration,	mid-year
			2- Non-maleficence	discussion, debriefing,	and final
ļ			3- Beneficence	0.	IIIIdl
				information	ovomo
			4- Justice	information	exams
				review, practical	exams
			4- Justice	review, practical research,	exams
			4- Justice	review, practical research, computer-based	exams
10		Knowledge	4- Justice 5- Veracity	review, practical research, computer-based learning.	
10		Knowledge understanding. subj	4- Justice 5- Veracity  Fundamental Principles of dental	review, practical research, computer-based learning. Problem-based	Short,
10	1		4- Justice 5- Veracity  Fundamental Principles of dental	review, practical research, computer-based learning.	

			2- Non-maleficence	dobniofina	final
				debriefing, information	final
			3- Beneficence		exams
			4- Justice	review, practical research,	
			5- Veracity	computer-based	
				learning.	
11		Knowledge	Duties and obligation of dentists	Problem-based	Short,
	1	understanding. subj	The Ideal Relationship between	learning,	semester,
		specific skills	Dentist and Patient Duties and	collaboration,	mid-year
			obligation of dentists Toward their	discussion,	and
			patients THE DENTIST-PATIENT	debriefing,	final
			RELATIONSHIP FOUR MODELS	information	exams
			OF THE DENTIST-PATIENT	review, practical	
			RELATIONSHIP The Guild Model	research,	
			The Agent Model The Commercial	computer-based	
			Model The Interactive Model	learning.	
12		Knowledge	Duties and obligation of dentists	Problem-based	Short,
	1	understanding. subj	Duties and obligation of dentists Tow	learning,	semester,
		specific skills	the public and the paramedical profess	collaboration,	mid-year
			The Relationship between Dentistry	discussion,	and
			the Larger Community	debriefing,	final
			,	information	exams
				review, practical	
				research,	
				computer-based	
		Knowledge	Duties and obligation of dentists	learning. Problem-based	Short,
13	•	understanding. subj	Duties of dental surgeons and	learning,	semester,
13	1	specific skills	specialists in consultations	collaboration,	mid-year
	1		specialists in consultations	discussion,	and
				debriefing,	final
				information	exams
				review, practical	
				research,	
				computer-based	
		TZ 1 1		learning.	G1 ·
14	1	Knowledge understanding. subj	Duties and obligation of dentists	Problem-based	Short,
	1	specific skills	Responsibilities of defical surgeons to	learning,	semester,
		r	another Ideal Relationships between	collaboration, discussion,	mid-year and
			professional	debriefing,	final
				information	exams
				review, practical	CAUIIIS
				research,	
				computer-based	
				learning.	
15		Knowledge	Ethical issues and challenges in dental	Problem-based	Short,
	1	understanding. subj	practice	learning,	semester,
		specific skills	Ethical Issues in Dental Practice	collaboration,	mid-year
			Ethical Questions and Legal Questions	discussion,	and
			Choosing to Re Ethical Published	debriefing,	final
			Codes of Conduct and Ethics	information	exams
			Committees Examples of ethical	review, practical research,	
			-	research	

г					
			issues and Challenges	computer-based	
			1- Access to dental care	learning.	
			2- Abuse of prescriptions by patients		
			3- Advertising		
			4- Emergency care		
			5- Financial arrangements 6- Disclos		
		Y7 1 1	and misrepresentation		
16	. 4	Knowledge	Ethical issues and challenges in dental	Problem-based	Short,
	1	understanding. subj specific skills	practice	learning,	semester,
		specific skins	Ethical Issues in Dental Practice	collaboration,	mid-year
			Ethical Questions and Legal Questions	discussion,	and final
			Choosing to Re Ethical Published	debriefing, information	
			Codes of Conduct and Ethics	review, practical	exams
			Committees Examples of ethical	research,	
			issues and Challenges	computer-based	
			1- Access to dental care	learning.	
			2- Abuse of prescriptions by patients		
			3- Advertising		
			4- Emergency care		
			5- Financial arrangements 6-		
			Disclosure and misrepresentation		
			7- Child abuse		
17	4	Knowledge	Ethical issues and challenges in dental	Problem-based	Short,
	1	understanding. subj	practice	learning,	semester,
		specific skills	8- Competence and judgment	collaboration,	mid-year
			9- Confidentiality	discussion,	and
			10- Dating patients	debriefing,	final
			11- Delegation of duties 12- Digital	information	exams
			communication and social media	review, practical research,	
			13- Harassment	computer-based	
			14- Consent	learning.	
18	1	Knowledge	Ethical issues and challenges in dental	Problem-based	Short,
	1	understanding. subj	practice	learning,	semester,
	•	specific skills	Patients with Compromised Capa	collaboration,	mid-year
			Treatment Decisions for Patients v	discussion,	and
			Compromised Capacity The Role	debriefing,	final
			Parents and Legal Guardians The Capa	information	exams
			for Autonomous Decision Making Deal	review, practical	
			with Patients with Partially Compromi	research,	
			Capacity	computer-based	
10		Knowledge		learning.	Chart
19	1	understanding. subj	The impact of business on dentistry - Conflict of interest	Problem-based	Short,
	1	specific skills		learning, collaboration,	semester, mid-year
		-	- Personal interest versus patient	discussion,	and
			interest  Dublic versus petient interest	debriefing,	final
			- Public versus patient interest	information	exams
			- Third-party interests	review, practical	21111110
			- Professional versus business ethics	research,	
1				computer-based	
				computer-baseu	
		Knowledge		learning.	

					<del></del>
	1	understanding. subj specific skills	<ul> <li>Importance of Dental Research</li> <li>Research in Dental Practice</li> <li>Ethical Requirements</li> <li>Ethics Review Committee Approva</li> </ul>	learning, collaboration, discussion, debriefing, information	semester, mid-year and final exams
				review, practical research, computer-based learning.	
21	1	Knowledge understanding. subj specific skills	Ethics and dental research - Importance of Dental Research - Research in Dental Practice - Ethical Requirements - Ethics Review Committee Approva	Problem-based learning, collaboration, discussion, debriefing, information review, practical research,	Short, semester, mid-year and final exams
22	4	Knowledge	Ethics and dental research	computer-based learning. Problem-based	Short,
	1	understanding. subj specific skills	<ul> <li>Scientific Merit</li> <li>Social Value</li> <li>Risks and Benefits</li> <li>Informed Consent</li> </ul>	learning, collaboration, discussion, debriefing, information	semester, mid-year and final exams
			<ul><li>Confidentiality</li><li>Conflict of Roles</li><li>Honest Reporting of Results:</li></ul>	review, practical research, computer-based learning.	CAUTIS
23	1	Knowledge understanding. subj specific skills	Ethics and dental research - Scientific Merit - Social Value - Risks and Benefits - Informed Consent - Confidentiality - Conflict of Roles - Honest Reporting of Results:	Problem-based learning, collaboration, discussion, debriefing, information review, practical	Short, semester, mid-year and final exams
				research, computer-based learning.	
24	1	Knowledge understanding. subject-specific ski	-A local or a global standard of care? -Transparency of care, guidelines, and protocolsShared decision-making, evidence informed decision -making, and evidence -guided decision-makingIndividualization and the standard of care based on a long -term goal for dental treatment.	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
	2	Knowledge	Ethical Decision Making and	Problem-based	Short,

					1
25	1	understanding. subject-specific ski	Conflicting Obligations Difficult Professional -Ethical Judgments A Model of Professional -Ethical Decision Making Conflicting Professional Obligations Conflicts Between Professional and Other Obligations Conscientious Disobedience of Professional Obligations	learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	semester, mid-year and final exams
26	1	Knowledge understanding. subject-specific ski	Studying a Profession's Central Values The Central Values of Dental Practice The Patient's Life and General Health The Patient's Oral Health The Patient's Autonomy The Dentist's Preferred Patterns of Practice Aesthetic Values Efficiency in the Use of Resources Ranking Dentistry's Central Values Thinking about the Case	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
27	1	Knowledge understanding. subject-specific ski	The duty to treat -Does the duty to treat depend on a prior relationship between dentist and patient? -The duty to treat: Patients of record versus prior unknown patientsRequested treatment and the duty to treat -Duty to treat and the characteristics of the patient who seeks help -Is a dentist obliged to accept a patient as a patient of record? -Terminating the relationship with a patient of record	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
28	1	Knowledge understanding. subject-specific ski	Ethical Law and ethical Theories History and basic ethical theory History of medical ethics Hammurabi's code of law ippocratic oath Basic grounding of Ethics Humanities (universalstandards) Religious& nonreligious: Political& dogmatic strategies of the state Other groundings of Ethics (theories of ethics): 1- Action theory: 2- Consequentiality theory: 3- Value theory (why theory): Ethics and the law Sources of Ethical Views and Convictions	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
29	1	Knowledge understanding. subject-specific ski	Fundamental Principles of dental ethics 1- Patient autonomy	Problem-based learning, collaboration,	Short, semester, mid-year

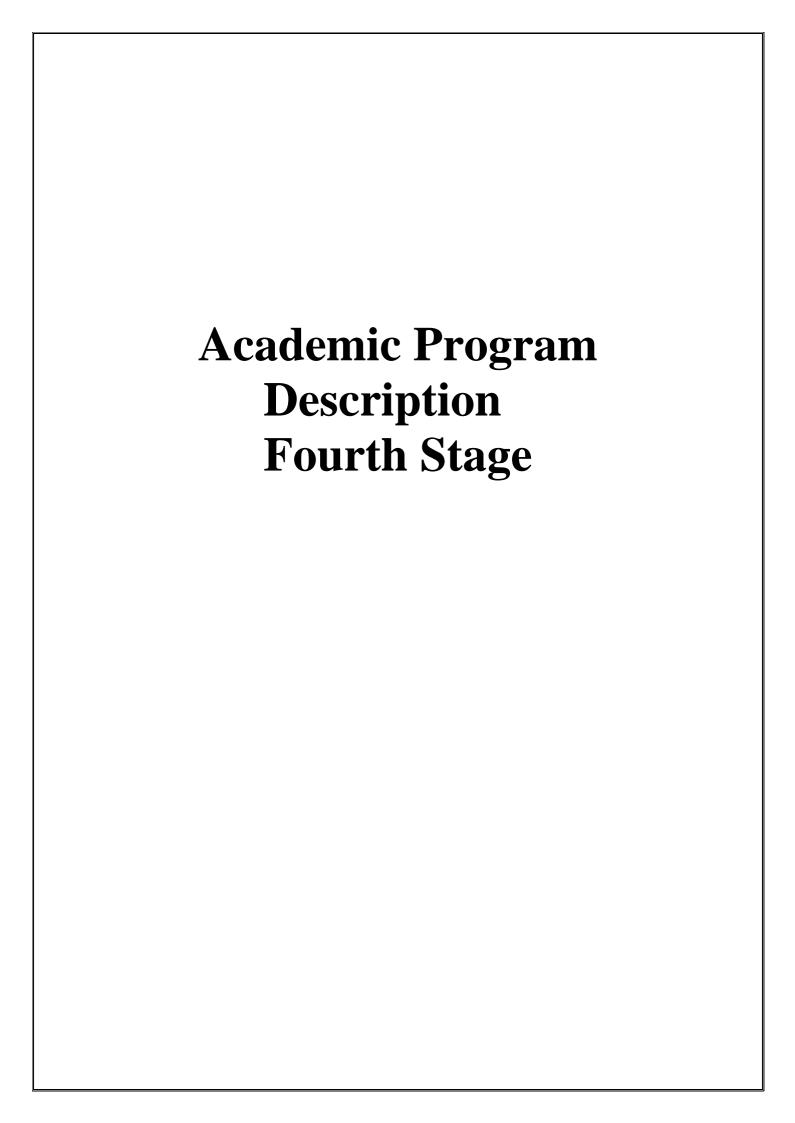
			2- Non-maleficence 3- Beneficence	discussion, debriefing,	and final
			4- Justice	information	exams
			5- Veracity	review, practical	
				research, computer-based learning.	
30	2	Knowledge understanding.	Duties and obligation of dentists  Duties and obligation of dentists In gene	Problem-based learning,	Short, semester,
	1	subject-specific ski		collaboration, discussion,	mid-year and
				debriefing,	final
				information	exams
				review, practical research,	
				computer-based	
				learning.	

# 11. Course Evaluation

5 degrees of first semester; 5degrees of second semester 20 degrees of mid-year 70 degrees of final exam

12.	Learning and	Teaching	Resources
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Required textbooks (curricular books, if any)	
Main references (sources)	
Recommended books and references (scientific journals, reports)	<ul> <li>FDI World Dental Federation - Dental Ethics Manual. 2007 by FDI World Dental Federation.</li> <li>FDI World Dental Federation - Dental Ethics Manual 2. 2018 by FDI World Dental Federation.</li> <li>Dental Ethics at chairside. Professional Principles and practical applications. DAVID T. OZAR AND DAVID J. SOKOL. Second edition. 2002 by Georgetown University Press.</li> </ul>
Electronic References, Websites	



# 1. Course Name: General Medicine 2. Course Code:

#### 423GM

# 3. Semester / Year:

# 2 semester/ fourth stage

# **4.** Description Preparation Date:

#### 2024-2025

#### 5. Available Attendance Forms:

Lectures and laboratory

#### 6. Number of Credit Hours (Total) / Number of Units (Total)

90 hours/4 unite

### 7. Course administrator's name (mention all, if more than one name)

Name: Abdulazeez muayad abdulkarem Email: abdulazeez.muayad@mu.edu.iq

#### 8. Course Objectives

# **Course Objectives**

- aims to identify the principles of general medicine
- This course aims to know the diagnosis and how to manage each diseases presentation
- This course also aims to study the differential diagnosis of general diseases

# 9. Teaching and Learning Strategies

#### Strategy

- Knowledge and understanding
- Skill goals
- Stimulus and response method
- Long, short and semester exams
- Thinking skills

# 10. Course Structure

Week	Hours	Required	Unit or subject name	Learning	Evaluation
		Learning	Theoretical	method	method
		Outcomes			

	1	1		,	
1		Knowledge and understanding.	Diabetes Mellitus 1	Theoretical	Short, semester
		subject-specific		_	mid-year and
		skills		Power point,	final exams
		Jiiii Jii		Problem-	
				based	
				learning,	
				collaboratio	
	3			n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
2	3		Diabetes Mellitus 2	Theoretical	Short, semester
		understanding.		lecture using	mid-year and
		subject-specific skills		Power point,	final exams
		3K1113		Problem-	
				based	
				learning,	
				collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
2	2	17	W/l-:4- D14 C-11- D:41	learning.	Classication
3	3	Knowledge understanding.	White Blood Cells Disorders 1	Theoretical	Short, semester
		subject-specific		lecture using	-
		skills		Power point, Problem-	final exams
		-		based	
				learning, collaboratio	
				n, discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
4	_	I/m av1 3 .	WIL4- D11 C-11 D1 1 C	learning.	Classic
4	3	Knowledge understanding.	White Blood Cells Disorders 2	Theoretical	Short, semester
		subject-specific		lecture using	mid-year and
		skills		Problem	final exams
		J		Problem-	

				based	
				learning,	
				collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
5	3	Knowledge	Hemostasis and Bleeding Disorder	Theoretical	Short, semester
3	J	understanding.	Tremostasis and Diceding Disorder	lecture using	
		subject-specific		Power point,	
		skills		Problem-	IIIIai exaiiis
				based	
				learning,	
				collaboratio	
				n, discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
		77 1 1 1	VI 101 11 01 1	learning.	G1
	3	Knowledge and understanding.	Hemostasis and Bleeding Disorder	Theoretical	Short, semester
6		subject-specific		lecture using	
		skills		Power point,	final exams
				Problem-	
				based	
				learning,	
				collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
<u> </u>		**		learning.	
7	3		Adrenal Gland Disorders 1	Theoretical	Short, semester
		understanding.		lecture using	_
		subject-specific skills		Power point,	final exams
		5K1115		Problem-	
				based	
				learning,	
				collaboratio	
				n,	
				11,	

	,				
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
8	3	Knowledge	Adrenal Gland Disorders 2	Theoretical	Short, semester
	J	understanding.		lecture using	
		subject-specific		Power point,	
		skills		Problem-	
				based	
				learning,	
				collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
		77 1 1	G 1D:	learning.	<b>a</b> 1
9	3	Knowledge understanding.	Gastrointestinal Diseases	Theoretical	Short, semester
		subject-specific		lecture using	
		skills		Power point,	final exams
				Problem-	
				based	
				learning,	
				collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
10	3		Peptic Ulcer Disease 1	Theoretical	Short, semester
		understanding.		lecture using	-
		subject-specific skills		Power point,	final exams
		SKIIIS		Problem-	
				based	
				learning,	
				collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	

				-	
				practical	
				research,	
				computer-	
				based	
				learning.	
11	3	Knowledge	Peptic Ulcer Disease 2	Theoretical	Short, semester
		understanding. subject-specific		lecture using	mid-year and
		skills		Power point,	final exams
				Problem-	
				based	
				learning,	
				collaboratio	
				n,	
				discussion,	
				debriefing, information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
12	3	Knowledge	Intestine	Theoretical	Short, semester
12	J	understanding.		lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-	
				based	
				learning,	
				collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
40		IZ 1. 1	T.C	learning.	01 .
13	3	Knowledge understanding.	Inflammatory Bowel Disease 1	Theoretical	Short, semester
		subject-specific		lecture using Power point,	mid-year and final exams
		skills		Problem-	Illiai exailis
				based	
				learning,	
				collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	

				learning.	
14	3		Inflammatory Bowel Disease 2	Theoretical	Short, semester
17		understanding. subject-specific skills	•	lecture using	mid-year and
				Power point,	
				Problem-	
				based	
				learning,	
				collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
1 5	2	Knowledge	Pseudomembranous Colitis		Chart samestar
15	3	understanding.	r seudomemoranous Conus	Theoretical	Short, semester
		subject-specific		lecture using	
		skills		Power point,	final exams
				Problem-	
				based	
				learning,	
				collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
16	3		Hypertension	Theoretical	Short, semester
		understanding.		lecture using	-
		subject-specific skills		Power point,	final exams
		SKIIIS		Problem-	
				based	
				learning,	
				collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
17	3		Infective Endocarditis	Theoretical	Short, semester
		understanding.		lecture using	mid-year and
		subject-specific		Power point,	final exams
			<u> </u>	1 ower point,	mar Caums

Based   learning   collaboratio   n   discussion   debriefing   information   review, practical   research, computer-based   learning   subject-specific   skills   Schemic Heart Disease   Theoretical   lecture using   Power point, collaboratio   n   discussion, debriefing, information   review, practical   research, computer-based   learning   collaboratio   n   discussion, debriefing, information   review, practical   research, computer-based   learning   collaboratio   n   discussion, debriefing   information   review   practical   research   computer-based   learning   collaboratio   n   discussion, debriefing   information   review   practical   research   review	Г	1	.1.211.		- · · ·	
learning, collaboration, n, discussion, debriefing, information review, practical research, computer-based learning, subject-specific skills  Ischemic Heart Disease Theoretical lecture using Power point, Problem-based learning, collaboration, debriefing, information review, practical research, computer-based learning.  Ischemic Heart Disease Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, collaboration, n, discussion, debriefing, information review, practical research, computer-based learning, collaboration, n, discussion, debriefing, information review, practical research, computer-based learning, collaboration, n, discussion, debriefing, information review, practical research, computer-based learning.			skills		Problem-	
18   3   Knowledge understanding. subject-specific skills   Short, semester based learning.     19   3   Knowledge understanding. subject-specific skills     19   10   10   10   10   10   10   10						
18 3 Knowledge understanding, subject-specific skills  19 4 Computer-based learning, subject-specific skills  19 5 Computer-based learning, subject-specific skills  19 6 Computer-based learning, subject-specific skills  19 7 Computer-based learning, subject-specific skills  19 8 Computer-based learning, subject-specific skills  19 9 Computer-based learning, subject-specific skills  19 9 Computer-based learning, subject-specific skills  19 0 Computer-based learning, subject-specific skills  10 0 Comput						
discussion, debriefing, information review, practical research, computer-based learning.  Short, semester lecture using Power point, problem-based learning, collaboration not preview, practical research, computer-based learning, collaboration not proview, practical research, computer-based learning, information review, practical research, computer-based learning, subject-specific skills  Heart Failure  Heart Failure  Heart Failure  Heart Failure  Theoretical lecture using Power point, problem-based learning, collaboration not proview, practical research, computer-based learning, collaboration not proview, practical review, practical review, practical review, practical review, practical research, computer-based learning.						
18   3   Knowledge understanding. subject-specific skills   Showledge understanding. S						
18   3   Knowledge understanding, subject-specific skills   Ischemic Heart Disease   Ischemic						
18 3 Knowledge understanding. subject-specific skills  19 4 Knowledge understanding. subject-specific skills  19 5 Knowledge understanding. Short, semester lecture using mid-year and Power point, Problembased learning. Short, semester lecture using mid-year and Power point, problembased learning. Short, semester lecture using mid-year and Power point, problembased learning. Short, semester lecture using mid-year and Power point, problembased learning. Short, semester lecture using mid-year and Power point, final exams properties and pr						
18   3   Knowledge understanding. subject-specific skills   Sknowledge understanding. subject-specific skills   Ischemic Heart Disease   Theoretical Short, semester mid-year and final exams Power point, Problembased learning, collaboration, debriefing, information review, practical research, computer-based learning.   Short, semester mid-year and final exams provided in the problem pased learning, collaboration, debriefing, information review, practical research, computer-based learning.   Short, semester mid-year and final exams problem prob						
18 3 Knowledge understanding, subject-specific skills  Solve the second of the second					review,	
18 3 Knowledge understanding, subject-specific skills  Ischemic Heart Disease  Interestical lecture using power point, Problembased learning, collaboration, debriefing, information review, practical research, computerbased learning.  Interestical lecture using problem passed learning, collaboration, debriefing, information review, practical research, computerbased learning.  Interestical research, computerbased lecture using power point, Problembased learning, collaboration, debriefing, information review, practical research, computerbased learning, collaboration, debriefing, information review, practical research, computerbased learning.					practical	
18 3 Knowledge understanding subject-specific skills  Ischemic Heart Disease  Ischemic Heart Disease  Theoretical lecture using Power point, Problembased learning, collaboration, debriefing, information review, practical research, computer-based learning.  Sknowledge understanding subject-specific skills  Rowledge understanding subject-specific skills  Heart Failure  Heart Failure  Theoretical lecture using Power point, Problembased learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning, information review, practical research, computer-based learning.					research,	
Skills   Skills   Skort, semester   Skort, sem					computer-	
Theoretical lecture using subject-specific skills					based	
understanding, subject-specific skills  Knowledge understanding, subject-specific skills  Heart Failure  Heart Failure  Heart Failure  Heart Failure  Heart Failure  Heart Failure  Theoretical lecture using Power point, Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.					learning.	
subject-specific skills  Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  Short, semester mid-year and Power point, skills  Heart Failure  Theoretical lecture using Power point, Problem-based learning.  Short, semester mid-year and final exams  Power point, n, discussion, debriefing, information review, practical lecture using Power point, problem-based learning, collaboration, n, discussion, debriefing, information review, practical research, computer-based learning.	18	3		Ischemic Heart Disease	Theoretical	Short, semester
skills  Problembased learning, collaboration, debriefing, information review, practical research, computerbased learning.  Short, semester lecture using Power point, Problembased learning, collaboration, debriefing, information review, practical research, computerbased learning, collaboration, debriefing, information review, practical research, computerbased learning.					lecture using	mid-year and
Short, semester   Short, sem					Power point,	final exams
learning, collaboratio n, discussion, debriefing, information review, practical research, computer-based learning.  Short, semester lecture using wid-year and final exams final exams final exams  Heart Failure  Heart Failure  Theoretical lecture using Power point, Problem-based learning, collaboratio n, discussion, debriefing, information review, practical research, computer-based learning.			SK1IIS			
Collaboratio   n, discussion, debriefing, information review, practical research, computer-based learning.   Heart Failure   Theoretical lecture using mid-year and final exams					based	
19 3 Knowledge understanding, subject-specific skills  Heart Failure  Heart Failure  Theoretical lecture using Power point, Problembased learning, collaboration, n, discussion, debriefing, information review, practical research, computer-based learning.					learning,	
discussion, debriefing, information review, practical research, computer-based learning.  If the second states of						
debriefing, information review, practical research, computer-based learning.  In the standing subject-specific skills  Heart Failure  Heart Failure  Heart Failure  Theoretical short, semester lecture using mid-year and Power point, Problem-based learning, collaboratio n, discussion, debriefing, information review, practical research, computer-based learning.					n,	
information review, practical research, computer-based learning.  Short, semester mid-year and final exams power point, problem-based learning, collaboration, debriefing, information review, practical research, computer-based learning.					discussion,	
19 3 Knowledge understanding, subject-specific skills  Heart Failure  Heart Failure  Theoretical lecture using Power point, Problembased learning, collaboration, debriefing, information review, practical research, computerbased learning.					debriefing,	
practical research, computer-based learning.  If the problem properties with the problem properties with the problem properties with the problem probl					information	
Theoretical lecture using power point, skills  Heart Failure  Heart Failure  Heart Failure  Theoretical lecture using Power point, Problembased learning, collaboration n, discussion, debriefing, information review, practical research, computerbased learning.					review,	
Theoretical lecture using power point, skills  Heart Failure  Heart Failure  Theoretical lecture using Power point, Problembased learning, collaboration n, discussion, debriefing, information review, practical research, computerbased learning.					practical	
19   3   Knowledge understanding. subject-specific skills   Heart Failure   Theoretical lecture using Power point, Problembased learning, collaboration, debriefing, information review, practical research, computer-based learning.					research,	
19 3 Knowledge understanding. subject-specific skills  Heart Failure  Theoretical lecture using Power point, Problembased learning, collaboration, debriefing, information review, practical research, computerbased learning.					computer-	
Theoretical lecture using Power point, Problembased learning, collaboration n, discussion, debriefing, information review, practical research, computerbased learning.					based	
understanding. subject-specific skills  lecture using Power point, Problem- based learning, collaboratio n, discussion, debriefing, information review, practical research, computer- based learning.					learning.	
subject-specific skills  Power point, Problembased learning, collaboration, debriefing, information review, practical research, computerbased learning.	19	3		Heart Failure	Theoretical	Short, semester
skills  Problembased learning, collaboration, debriefing, information review, practical research, computerbased learning.					lecture using	mid-year and
based learning, collaboratio n, discussion, debriefing, information review, practical research, computer- based learning.					Power point,	final exams
learning, collaboratio n, discussion, debriefing, information review, practical research, computerbased learning.			SKIIIS		Problem-	
collaboratio n, discussion, debriefing, information review, practical research, computer- based learning.					based	
n, discussion, debriefing, information review, practical research, computer- based learning.					learning,	
discussion, debriefing, information review, practical research, computer- based learning.					collaboratio	
debriefing, information review, practical research, computer- based learning.						
information review, practical research, computer- based learning.					-	
review, practical research, computer- based learning.						
practical research, computerbased learning.					information	
research, computer- based learning.					review,	
computer- based learning.						
based learning.					research,	
based learning.					computer-	
20 3 Knowledge Cardiac Arrhythmias Theoretical Short, semester					learning.	
	20	3		Cardiac Arrhythmias	Theoretical	Short, semester
understanding. lecture using mid-year and						
subject-specific Power point final exams						
skills Problem-			SKIIIS			
based					based	
learning,					learning,	
collaboratio						

				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
21	3	Knowledge	Thyroid Diseases	Theoretical	Short, semester
		understanding.	·	lecture using	
		subject-specific		Power point,	final exams
		skills		Problem-	
				based	
				learning,	
				collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
22	3	Knowledge	Kidney Diseases	Theoretical	Short, semester
	3	understanding.	Thaney Discuses	lecture using	
		subject-specific		Power point,	final exams
		skills		Problem-	
				based	
				learning,	
				collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
23	3	Knowledge	Immunologic Diseases	Theoretical	Short, semester
		understanding.		lecture using	
		subject-specific		Power point,	final exams
		skills		Problem-	
				based	
				learning,	
				collaboratio	
				n,	
				discussion,	
		i e		uiscussivii,	
				debriefing, information	

<b>-</b>					
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
24	3		Liver Diseases	Theoretical	Short, semester
		understanding.		lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-	
				based	
				learning,	
				collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
25	3	Knowledge	Pulmonary Diseases	Theoretical	Short, semester
		understanding.	·	lecture using	
		subject-specific		Power point,	final exams
		skills		Problem-	
				based	
				learning,	
				collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
26	3		Red Blood Cells Disorders	Theoretical	Short, semester
		understanding.		lecture using	
		subject-specific		Power point,	final exams
		skills		Problem-	
				based	
				learning,	
				collaboratio	
				n,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
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				based learning.	
27	3	Knowledge understanding. subject-specific skills	Drug and Alcohol Abuse	Theoretical lecture using Power point, Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased	
28	3	Knowledge understanding. subject-specific skills	Psychiatric Disorders	learning. Theoretical lecture using Power point, Problembased learning, collaboratio n, discussion, debriefing, information review, practical research, computerbased learning.	Short, semester, mid-year and final exams
29	3	Knowledge understanding. subject-specific skills	Anxiety and Eating Disorders	Theoretical lecture using Power point, Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	=
30	3	Knowledge understanding.	Neurologic Disorders	Theoretical lecture using	Short, semester, mid-year and

	subject-specific skills	Power point, final exams Problembased learning, collaboratio n, discussion, debriefing, information				
		review, practical research, computer- based learning.				
Lab number	Study unit title					
1	Diabetes Mellitus 1					
2	Diabetes Mellitus 2					
3	White Blood Cells Disorders 1					
4	White Blood Cells Disorders 2					
5	Hemostasis and Bleeding Disorders 1					
6	Hemostasis and Bleeding Disorders 2					
7	Adrenal Gland Disorders 1					
8	Adrenal Gland Disorders 2					
9	Gastrointestinal Diseases					
10	Peptic Ulcer Disease 1					
11	Peptic Ulcer Disease 2					
12	Intestine					
13	Inflammatory Bowel Disease 1					
14	Inflammatory Bowel Disease 2					
15	Pseudomembranous Colitis					
16	Hypertension					
17	Infective Endocarditis					
18	Ischemic Heart Disease					
19	Heart Failure					
20	Cardiac Arrhythmias					
21	Thyroid Diseases					
22	Kidney Diseases					

23	Immunologic Diseases			
24	Liver Diseases			
25	Pulmonary Diseases			
26	Red Blood Cells Disorders			
27	rug and Alcohol Abuse			
28	Psychiatric Disorders			
29	Anxiety and Eating Disorders			
30	Neurologic Disorders			

## 11. Course Evaluation

- 10 degrees of first semester: 8 degrees of short and semester exams and two degrees of oral exam
- 10 degrees of second semester: 8 degrees of short and semester exams and two degrees of oral exam
- 20 degrees of mid-year
- 60 degrees of final exam

Electronic References, Websites

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	
Main references (sources)	<ol> <li>Dental Management of Medically Compromised Patie Ninth Edition, 2018</li> <li>Essentials of Medicine for Der Stude</li> </ol>
Recommended books and references (scientific journals, reports)	

# 1. Course Name: General Surgery 2. Course Code: 424GS 3. Semester / Year: 2 semester/ fourth stage **4.** Description Preparation Date: 2024-2025 5. Available Attendance Forms: Lectures and laboratory 6. Number of Credit Hours (Total) / Number of Units (Total) 90 hours/4 unite 7. Course administrator's name (mention all, if more than one name) Name: Abdulazeez muayad abdulkarem Email: abdulazeez.muayad@mu.edu.iq 8. Course Objectives **Course Objectives** aims to identify the principles of general surgery • This course aims to know the diagnosis and how to manage each surgical presentation This course also aims to study the mechanism of the metabolic response to trauma 9. Teaching and Learning Strategies Strategy • Knowledge and understanding • Skill goals • Stimulus and response method • Long, short and semester exams • Thinking skills 10. Course Structure Week Evaluation Hours Required Unit or subject name Learning **Theoretical** method method Learning Outcomes

	1	1			
1	3	Knowledge and understanding. subject-specific skills	BASIC CONCEPTS IN HOMEOSTASIS MEDIATORS OF THE METABOLIC RESPONSE TO INJURY Physiological response to injury ((THE 'EBB AND FLOW' MODEL)) Insulin resistance AVOIDABLE FACTORS THAT COMPOUND THE RESPONSE TO INJURY Systemic inflammation and tis response	Theoretical lecture using Power point, Problem-base learning, collaboration discussion, debriefing, information review, practical research, computer-based learning	Short, semester, mid-year and final exams
2	3	Knowledge understanding. subject-specific skills	Metabolic response to injury BASIC CONCEPTS IN HOMEOSTASIS MEDIATORS OF THE METABOLIC RESPONSE TO INJURY Physiological response to injury ((THE 'EBB AND FLOW' MODEL)) Insulin resistance AVOIDABLE FACTORS THAT COMPOUND THE RESPONSE TO INJURY Systemic inflammation and tis response	Theoretical lecture using Power point, Problem-base learning, collaboration discussion, debriefing, information review, practical research, computer-based learning	Short, semester, mid-year and final exams
3	3	Knowledge understanding. subject-specific skills	Wound healing Introduction Classification of wound Healing Normal sequence of wound Healing Factors affecting healing (local systemic) Complications of wo healing	Theoretical lecture using Power point, Problem-base learning, collaboration discussion, debriefing, information review, practical research, computer-based learning	Short, semester, mid-year and final exams
4	3	Knowledge understanding. subject-specific skills	Wound healing Introduction Classification of wound Healing Normal sequence of wound Healing Factors affecting healing (local systemic) Complications of wo healing	Theoretical lecture using Power point, Problem-base learning, collaboration discussion, debriefing, information	Short, semester, mid-year and final exams

	T				
				review,	
				practical	
				research,	
				computer-	
				based learning	
5	3	Knowledge	Surgical wound infections	Theoretical	Short, semester,
		understanding.	Surgical sepsis	lecture using	mid-year and
		subject-specific skills	Types of wounds	Power point,	final exams
		SKIIIS	Infecting organisms	Problem-base	
			(Exogenous organisms,	learning,	
			Endogenous organisms)	collaboration	
			Prevention of wound Infecti	discussion,	
			Clinical features of wound Se	debriefing,	
			Diagnosis of wound se	information	
			Treatment would se	review,	
			Treatment	practical	
				research,	
				computer-	
	-	77 1 1		based learning	01
	3	Knowledge and understanding.	Hemorrhage Introduction	Theoretical	Short, semester,
6		subject-specific	Pathophysiology	lecture using	mid-year and
		skills	Definitions (Revealed and	Power point,	final exams
			concealed hemorrhage,	Problem-base	
			Primary, reactionary and	learning,	
			secondary hemorrhage	collaboration	
			Surgical and non-surgical	discussion,	
			hemorrhage)	debriefing, information	
			Degree and classification	review,	
			Management (Identify hemorrha	practical	
			Immediate resuscitative maneuv	research,	
			Identify the site of hemorrha	computer-	
			Hemorrhage control) Dam	based learning	
			control surgery	basea rear ming	
7	3	Knowledge	Hemorrhage Introduction	Theoretical	Short, semester
		understanding.	Pathophysiology	lecture using	mid-year and
		subject-specific	Definitions (Revealed and	Power point,	final exams
		skills	concealed hemorrhage,	Problem-base	
			Primary, reactionary and	learning,	
			secondary hemorrhage	collaboration	
			Surgical and non- surgical	discussion,	
			hemorrhage)	debriefing,	
			Degree and classification	information	
			Management (Identify hemorrha	review,	
			Immediate resuscitative maneuv	practical	
			Identify the site of hemorrha	research,	
			Hemorrhage control) Dam	computer-	
			control surgery	based learning	
0	3	Knowledge	Shock Introduction	Theoretical	Chart competer
8	3	understanding.		Theoretical	Short, semester,
		subject-specific	Pathophysiology	lecture using	mid-year and final exams
		skills	Ischemia-reperfusion	Power point, Problem-base	mai exams
			syndrome Classification of	learning,	
			shock Consequences	collaboration	
				conaboi ation	

	1			11 .	1
			Unresuscitatable shock	discussion,	
			Multiple organ failure	debriefing,	
			RESUSCITATION	information	
			Fluid therapy	review,	
				practical	
				research,	
				computer-	
				based learning	
9	3	Knowledge	Shock Introduction	Theoretical	Short, semester
		understanding.	Pathophysiology	lecture using	mid-year and
		subject-specific	Ischemia–reperfusion	Power point,	final exams
		skills	syndrome Classification of	Problem-base	
			shock Consequences	learning,	
			-	collaboration	
			Unresuscitatable shock	discussion,	
			Multiple organ failure	debriefing,	
			RESUSCITATION	information	
			Fluid therapy	review,	
				practical	
				research,	
				computer-	
				based learning	
10	3	Knowledge	Shock Introduction	Theoretical	Short, semester
10	5	understanding.	Pathophysiology	lecture using	mid-year and
		subject-specific	2 0 00	Power point,	final exams
		skills	Ischemia–reperfusion	Problem-base	Illiai Caallis
			syndrome Classification of	learning,	
			shock Consequences	collaboration	
			Unresuscitatable shock	discussion,	
			Multiple organ failure	debriefing,	
			RESUSCITATION	information	
			Fluid therapy	review,	
			1 2	practical	
				research,	
				,	
				computer-	
4.4		T7 1 1		based learning	<b>21</b>
11	3	Knowledge understanding.	Blood transfusion Introduction	Theoretical	Short, semester,
		subject-specific	Blood and blood products	lecture using	mid-year and
		skills	Indications for blood	Power point,	final exams
		<del></del>	transfusion Blood groups and	Problem-base	
			cross-matching Transfusion	learning,	
			reactions	collaboration	
			Cross-matching	discussion,	
			Complications of blood transfus	debriefing,	
			Management of coagulopathy	IIIIOI IIIauoii	
			ivianagement of coagulopatity	review,	
				practical	
				research,	
				computer-	
				based learning	
12	3	Knowledge	Blood transfusion Introduction	Theoretical	Short, semester
		understanding.	Blood and blood products	lecture using	mid-year and
		subject-specific	Indications for blood	Power point,	final exams
		skills	transfusion Blood groups and	Problem-base	
			dansitusion blood groups and	learning,	
		<u> </u>		G <sup>,</sup>	

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			cross-matching Transfusion	collaboration	
			reactions	discussion,	
			Cross-matching	debriefing,	
			Complications of blood transfus	information	
			Management of coagulopathy	review,	
				practical	
				research,	
				computer-	
				based learning	
13	3	Knowledge	Parenteral feeding Introduction	Theoretical	Short, semester
		understanding.	Route of delivery Peripheral	lecture using	mid-year and
		subject-specific skills	central venous access	Power point,	final exams
		SKIIIS	Complications of parent	Problem-base	
			nutrition Refeeding syndrome	learning,	
			natition refeeding syndrome	collaboration	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based learning	
14	3	Knowledge	Parenteral feeding Introduction	Theoretical	Short, semester
		understanding.	Route of delivery Peripheral	lecture using	mid-year and
		subject-specific	central venous access	Power point,	final exams
		skills	Complications of parent	Problem-base	
			nutrition Refeeding syndrome	learning,	
			nutrition refeeding syndrome	collaboration	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based learning	
15	3	Knowledge	Fluid balance	Theoretical	Short, semester
		understanding.	Abnormalities of body water	lecture using	mid-year and
		subject-specific	Fluid overload and oedema	Power point,	final exams
		skills	Abnormalities of electrolytes	Problem-base	
			Fluid replacement	learning,	
			Acid-base balance	collaboration	
				discussion,	
			Abnormalities of acid-base balar	debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based learning	
16	3	Knowledge	Fluid balance	Theoretical	Short, semester
		understanding.	Abnormalities of body water	lecture using	mid-year and
		subject-specific	Fluid overload and oedema	Power point,	final exams
		skills	1 Idia overioaa ana ocacina	Problem-base	
<u> </u>					

				information review,	
				review, practical	
				research,	
				computer-	
				based learning	
17	3	Knowledge	Fluid balance	Theoretical	Short, semester,
		understanding. subject-specific	Abnormalities of body water	lecture using	mid-year and
		skills	Fluid overload and oedema	Power point, Problem-base	final exams
			Abnormalities of electrolytes	learning,	
			Fluid replacement Acid-base balance	collaboration	
			Abnormalities of acid-base balar	discussion,	
			Abhormanties of acid-base baran	debriefing,	
				information	
				review,	
				practical research,	
				computer-	
				based learning	
18	3	Knowledge	Electrolytes balance Introduction	Theoretical	Short, semester,
		understanding. subject-specific	Principles of electrolyte balance	lecture using	mid-year and
		skills	Normal homeostasis	Power point,	final exams
			Barriers between compartments,	Problem-base learning,	
			osmolality and electrolyte	collaboration	
			concentrations Homeostatic mechanisms	discussion,	
			Homeostatic mechanisms	debriefing,	
				information	
				review,	
				practical research,	
				computer-	
				based learning	
19	3	Knowledge	Cerebral blood flow	Theoretical	Short, semester,
		understanding. subject-specific	Initial evaluation and	lecture using	mid-year and
i				n	final arrama
		skills	management Mechanism	Power point,	final exams
			Neurological progression	Problem-base	illiai exams
			Neurological progression Examination: primary survey	Problem-base learning,	illiai exallis
			Neurological progression Examination: primary survey Glasgow Coma Score	Problem-base learning, collaboration	illiai exallis
			Neurological progression Examination: primary survey Glasgow Coma Score secondary survey	Problem-base learning, collaboration discussion, debriefing,	imai exams
			Neurological progression Examination: primary survey Glasgow Coma Score secondary survey CLASSIFICATION	Problem-base learning, collaboration discussion, debriefing, information	imai exams
			Neurological progression Examination: primary survey Glasgow Coma Score secondary survey CLASSIFICATION SEVERITY TYPE OF HE	Problem-base learning, collaboration discussion, debriefing, information review,	imai exams
			Neurological progression Examination: primary survey Glasgow Coma Score secondary survey CLASSIFICATION	Problem-base learning, collaboration discussion, debriefing, information review, practical	imai exams
			Neurological progression Examination: primary survey Glasgow Coma Score secondary survey CLASSIFICATION SEVERITY TYPE OF HE	Problem-base learning, collaboration discussion, debriefing, information review, practical research,	imai exams
			Neurological progression Examination: primary survey Glasgow Coma Score secondary survey CLASSIFICATION SEVERITY TYPE OF HE	Problem-base learning, collaboration discussion, debriefing, information review, practical research, computer-	imai exams
20	3		Neurological progression Examination: primary survey Glasgow Coma Score secondary survey CLASSIFICATION SEVERITY TYPE OF HE INJURY	Problem-base learning, collaboration discussion, debriefing, information review, practical research,	Short, semester,
20	3	skills	Neurological progression Examination: primary survey Glasgow Coma Score secondary survey CLASSIFICATION SEVERITY TYPE OF HE	Problem-base learning, collaboration discussion, debriefing, information review, practical research, computer-based learning	

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		skills	to the Patient	Problem-base	
			History of the presenting	learning,	
			Complaint	collaboration	
			Relevant medical history	discussion,	
			Family history Drug therapy	debriefing,	
			Social history Allergies	information	
			Common surgical symptoms	review,	
			Terms used in General Surgery	practical	
				research,	
			History Taking	computer-	
				based learning	
21	3	Knowledge	Anesthesia & Pain HISTORY	Theoretical	Short, semester
		understanding.	GENERAL ANAESTHESIA	lecture using	mid-year and
		subject-specific	Management of airway during	Power point,	final exams
		skills	Anesthesia Complications of	Problem-base	
			intubation	learning,	
			Ventilation during anesthesia	collaboration	
			Monitoring and care during	discussion,	
				debriefing,	
			anesthesia Chronic pain	information	
			management	review,	
			Chronic pain control in ben	practical	
			disease Pain control in malign	research,	
			disease	computer-	
				based learning	
22	3	Knowledge	Perioperative care	Theoretical	Short, semester,
		understanding.	Introduction	lecture using	mid-year and
		subject-specific	Factors that predispose	Power point,	final exams
		skills	patients to a high risk of	Problem-base	
			morbidity and mortality	learning,	
			· · · · · · · · · · · · · · · · · · ·	collaboration	
			Patient factors Surgical	discussion,	
			factors	debriefing,	
			Optimize medical	information	
			management of coexisting	review,	
			diseases and intraoperative	practical	
			considerations	research,	
			Ischemic heart disease Respirat	computer-	
			failure SPECIFIC Strategies	based learning	
23	3	Knowledge	Postoperative care	Theoretical	Short, semester,
		understanding.	SYSTEM-SPECIFIC	lecture using	mid-year and
		subject-specific	POSTOPERATIVE	Power point,	final exams
		skills	COMPLICATIONS	Problem-base	
			Respiratory complications	learning,	
			Cardiovascular complications	collaboration	
			-	discussion,	
			Renal and urinary	debriefing,	
			complications	information	
			COMPLICATIONS	review,	
			RELATED TO SPECIFIC	practical	
			SURGICAL SPECIALTIES	research,	
			Paralytic ileus Compartm	computer-	
			syndrome Neck surg	based learning	
			Neurosurgery		
24	3	Knowledge	Postoperative care	Theoretical	Short, semester,
			- 1		1

		understanding.	CVCTEM CDECIEIC	lootuvo vois -	mid waan and
		subject-specific		_	mid-year and
		skills	TOSTOTERATIVE	Power point,	final exams
		SKIIIS	COMPLICATIONS	Problem-base	
			Respiratory complications	learning,	
			Cardiovascular complications	collaboration	
			Renal and urinary	discussion,	
			complications	debriefing,	
			COMPLICATIONS	information	
			RELATED TO SPECIFIC	review,	
			SURGICAL SPECIALTIES	practical	
			Paralytic ileus Compartm	research,	
			1	computer-	
			Neurosurgery	based learning	
25	3	Knowledge	GENERAL	Theoretical	Short, semester,
		understanding.	POSTOPERATIVE	lecture using	mid-year and
		subject-specific skills	PROBLEMS AND	Power point,	final exams
		SKIIIS	MANAGEMENT	Problem-base	
			Nausea and vomiting Bleeding	learning,	
			Deep vein thrombosis	collaboration	
			Hypothermia and shivering	discussion,	
			Fever	debriefing,	
			Pressure sores Drains	information	
			Flessure soles Dialits	review,	
				practical	
				research,	
				computer-	
				based learning	
26	3	Knowledge	Day case surgery Definition	Theoretical	Short, semester
		understanding.	SELECTION CRITERIA	lecture using	mid-year and
		subject-specific	PREOPERATIVE	Power point,	final exams
		skills	ASSESSMENT SURGERY	Problem-base	
			DISCHARGE,	learning,	
			DISCIPLICE,	collaboration	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based learning	
27	3	Knowledge	Day case surgery Definition	Theoretical	Short, semester,
		understanding.	SELECTION CRITERIA	lecture using	mid-year and
		subject-specific	PREOPERATIVE	Power point,	final exams
		skills	ASSESSMENT SURGERY	Problem-base	
			DISCHARGE,	learning,	
			Discin itol,	collaboration	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				tompater .	

					based learning				
28		3	Knowledge understanding. subject-specific skills	Surgical ethics and law INTRODUCTION INFORMED CONSENT MATTERS OF LIFE AND DEATH CONFIDENTIALITY RESEARCH	Theoretical lecture using Power point, Problem-base learning, collaboration discussion, debriefing, information review, practical research, computer-based learning	Short, semester mid-year and final exams			
29		3	Knowledge understanding. subject-specific skills	Patient safety INTRODUCTION THE PREVALENCE OF ADVERSE HEALTHCARE EVENTS COMMON CAUSES OF ADVERSE HEALTHCARE EVENTS PATIENT SAFETY AND THE SURGEON CARING FOR THE SECO VICTIM	Theoretical lecture using Power point, Problem-base learning, collaboration discussion, debriefing, information review, practical research, computer-based learning	Short, semester mid-year and final exams			
30		3	Knowledge understanding. subject-specific skills	Patient safety INTRODUCTION THE PREVALENCE OF ADVERSE HEALTHCARE EVENTS COMMON CAUSES OF ADVERSE HEALTHCARE EVENTS PATIENT SAFETY AND THE SURGEON CARING FOR THE SECO VICTIM	Theoretical lecture using Power point, Problem-base learning, collaboration discussion, debriefing, information review, practical research, computer-based learning	Short, semester mid-year and final exams			
Lab number				Study unit title					
1		His	tory taking						
2		Gei	neral examir	nation					
3		Pul	se rate exar	mination					
4		Blo	od pressure	measurement					
5		Ter	nperature m	neasurement					
6		Res	Temperature measurement Respiratory rate measurement						

7	Head & neck examination
8	Abdominal examination
9	Pelvic examination
10	Upper limb examination
11	Lower limb examination
12	Central nervous system
13	Intramuscular injection & intravenous injection
14	Certain types of fluids

## 11. Course Evaluation

- 10 degrees of first semester: 8 degrees of short and semester exams and two degrees of oral exam
- $10\ degrees$  of second semester:  $8\ degrees$  of short and semester exams and two degrees of oral exam
- 20 degrees of mid-year
- 60 degrees of final exam

12.	Learning and	Teaching	Resources
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Required textbooks (curricular books, if any)	
Main references (sources)	ths short practice of surgery 27'B and Love edition 2018
Recommended books and references (scientific journals,	
reports)	
Electronic References, Websites	

#### 1. Course Name:

Oral and Maxillofacial Pathology

2. Course Code:

425OP

### 3. Semester / Year:

## 2 semester/ Fourth stage

#### **4.** Description Preparation Date:

#### 2024-2025

#### 5. Available Attendance Forms:

Lectures and laboratory

#### 6. Number of Credit Hours (Total) / Number of Units (Total)

150 hours / 7 units

# 7. Course administrator's name (mention all, if more than one name)

Name: Sabah Qaysar Musa

Email: sabah.qaysar@mu.edu.iq

## 8. Course Objectives

#### **Course Objectives**

- The oral and maxillofacial pathology lesson aims to qualify the graduated dentists to be able and have a good knowledge about the reasons of different diseases and lesions that affect the oral and maxillofacial region.
- This course also aims to study the principles of diagnosis and the laboratory procedures and stainin techniques to identify and be familiar with the differential diagnosis of various diseases by laborato methods.

# 9. Teaching and Learning Strategies

#### Strategy

- Knowledge and understanding
- Skill goals
- Stimulus and response methods
- Long, short and semester exams
- Thinking skills

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Week	Hours	Required	Unit or subject name	Learning	Evaluation
		Learning	Theoretical	method	method
		Outcomes			
1	5	Knowledge and understanding. subject-specific skills	Biopsy in oral pathology	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
2	5	Knowledge understanding. subject-specific skills	Healing in oral pathology	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
3	5	Knowledge understanding. subject-specific skills	Dental Caries	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
4	5	Knowledge understanding. subject-specific skills	Pulpitis	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing,	Short, semester, mid-year and final exams

				information	
				review, practical	
				research,	
				computer-based	
				learning.	
5	5	Knowledge	Periapical lesions	Theoretical	Short, semester
	5	understanding.	•	lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-based	Illiai Caallis
				learning,	
				collaboration,	
				,	
				discussion,	
				debriefing,	
				information	
				review, practical	
				research,	
				computer-based	
				learning.	
	5	Knowledge and	Osteomyelitis	Theoretical	Short, semester
6		understanding.	-	lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-based	mai caums
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review, practical	
				research,	
				computer-based	
				learning.	
7	5	Knowledge	Developmental disorder of teeth	Theoretical	Short, semester
		understanding.		lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review, practical	
				research,	
				computer-based	
	-	Vnowlada	Davidonmental disender of order	learning.	Classitation
8	5	Knowledge understanding.	Developmental disorder of soft hard tissue	Theoretical	Short, semester
		subject-specific	naru ussuc	lecture using	mid-year and
		skills		Power point,	final exams
		S.11110		Problem-based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review, practical	
				research,	

				computer-based	
				learning.	
9	5	Knowledge	Non odontogenic cysts	Theoretical	Short, semester
)	3	understanding.	Tion odomogeme cysts	lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-based	imai exams
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review, practical	
				research,	
				computer-based	
				learning.	
10	5		Odontogenic cysts	Theoretical	Short, semester
		understanding.		lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review, practical	
				research,	
				computer-based	
1	1			learning.	
11	5	Knowledge	Odontogenic tumors 1	learning. Theoretical	Short, semester
11	5	Knowledge understanding.	Odontogenic tumors 1	Theoretical	Short, semester
11	5	understanding. subject-specific	Odontogenic tumors 1	Theoretical lecture using	mid-year and
11	5	understanding.	Odontogenic tumors 1	Theoretical lecture using Power point,	
11	5	understanding. subject-specific	Odontogenic tumors 1	Theoretical lecture using Power point, Problem-based	mid-year and
11	5	understanding. subject-specific	Odontogenic tumors 1	Theoretical lecture using Power point, Problem-based learning,	mid-year and
11	5	understanding. subject-specific	Odontogenic tumors 1	Theoretical lecture using Power point, Problem-based learning, collaboration,	mid-year and
11	5	understanding. subject-specific	Odontogenic tumors 1	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion,	mid-year and
11	5	understanding. subject-specific	Odontogenic tumors 1	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing,	mid-year and
11	5	understanding. subject-specific	Odontogenic tumors 1	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information	mid-year and final exams
11	5	understanding. subject-specific	Odontogenic tumors 1	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical	mid-year and final exams
11	5	understanding. subject-specific	Odontogenic tumors 1	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research,	mid-year and final exams
11	5	understanding. subject-specific	Odontogenic tumors 1	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based	mid-year and final exams
		understanding. subject-specific skills		Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	mid-year and final exams
11	5	understanding. subject-specific skills	Odontogenic tumors 1  Odontogenic tumors 2	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning. Theoretical	mid-year and final exams  Short, semester
		understanding. subject-specific skills  Knowledge understanding.		Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning. Theoretical lecture using	mid-year and final exams  Short, semester mid-year and
		understanding. subject-specific skills		Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning. Theoretical lecture using Power point,	mid-year and final exams  Short, semester
		understanding. subject-specific skills  Knowledge understanding. subject-specific		Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning. Theoretical lecture using Power point, Problem-based	mid-year and final exams  Short, semester mid-year and
		understanding. subject-specific skills  Knowledge understanding. subject-specific		Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning. Theoretical lecture using Power point, Problem-based learning,	mid-year and final exams  Short, semester mid-year and
		understanding. subject-specific skills  Knowledge understanding. subject-specific		Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning. Theoretical lecture using Power point, Problem-based learning, collaboration,	mid-year and final exams  Short, semester mid-year and
		understanding. subject-specific skills  Knowledge understanding. subject-specific		Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning. Theoretical lecture using Power point, Problem-based learning, collaboration, discussion,	mid-year and final exams  Short, semester mid-year and
		understanding. subject-specific skills  Knowledge understanding. subject-specific		Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning. Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing,	mid-year and final exams  Short, semester mid-year and
		understanding. subject-specific skills  Knowledge understanding. subject-specific		Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information	short, semester, mid-year and final exams
		understanding. subject-specific skills  Knowledge understanding. subject-specific		Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical	short, semester, mid-year and final exams
		understanding. subject-specific skills  Knowledge understanding. subject-specific		Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research,	short, semester, mid-year and final exams
		understanding. subject-specific skills  Knowledge understanding. subject-specific		Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based	short, semester, mid-year and final exams
12	5	understanding. subject-specific skills  Knowledge understanding. subject-specific skills	Odontogenic tumors 2	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	short, semester mid-year and final exams
		understanding. subject-specific skills  Knowledge understanding. subject-specific skills		Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	short, semester, mid-year and final exams

	-	undorston line		la et	
		understanding. subject-specific		lecture using	mid-year and
		skills		Power point,	final exams
		SKIIIS		Problem-based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review, practical	
				research,	
				computer-based	
				learning.	
14	5	Knowledge	Epithelial Hyperplasia, atrophy	Theoretical	Short, semester
		understanding.	dysplasia	lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review, practical	
				research,	
				computer-based	
				learning.	
15	5	Knowledge	Squamous cell carcinoma and o	Theoretical	Chart compactor
15	5	understanding.	malignant epithelial neoplasms		Short, semester
		subject-specific	mangham epithenar neopiasms	lecture using	mid-year and
		skills		Power point, Problem-based	final exams
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review, practical	
				research,	
				computer-based	
				learning.	
16	5		Fibro osseous lesions, metabolic	Theoretical	Short, semester
		understanding.	genetic conditions	lecture using	mid-year and
		subject-specific skills		Power point,	final exams
		SKIIIG		Problem-based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review, practical	
				research,	
				computer-based	
				learning.	
17	5		Giant cell lesions	Theoretical	Short, semester
		understanding.		lecture using	mid-year and
		subject specific			
		subject-specific		Power point.	final exams
		skills		Power point, Problem-based	final exams

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				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review, practical	
				research,	
				computer-based	
				learning.	
18	5	Knowledge	Benign tumor of the bone	Theoretical	Short, semester
		understanding.		lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review, practical	
				research,	
				computer-based	
				learning.	
19	5	Knowledge	Malignant tumor of the bone	Theoretical	Short, semester
		understanding.		lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review, practical	
				research,	
				computer-based	
				learning.	
20	5	Knowledge	Viral infection	Theoretical	Short, semester
- "		understanding.		lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review, practical	
				research,	
				computer-based	
				learning.	
21	5	Knowledge	Bacterial and fungal infection	Theoretical	Short, semester
		understanding.		lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-based	mai chamb
				learning,	
				collaboration,	
				discussion,	
1	1			นเจนนองเบเเ,	

				1.1. 2.6	
				debriefing,	
				information	
				review, practical	
				research,	
				computer-based	
				learning.	
22	5		Immune mediated disorder 1	Theoretical	Short, semester
		understanding.		lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review, practical	
				research,	
				computer-based	
				learning.	
22	5	Knowledge	Immune mediated disorder 2	Theoretical	Short, semester
23	5	understanding.	minune mediated disorder 2		1
		subject-specific		lecture using	mid-year and
		skills		Power point,	final exams
		SKIIIS		Problem-based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review, practical	
				research,	
				computer-based	
				learning.	
24	5	Knowledge	Connective tissue lesions	Theoretical	Short, semester
		understanding.		lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review, practical	
				research,	
				computer-based	
				_	
25	-	Vn avul s -1	Connective tissue lesions	learning.	Charata
25	5		Connective fissue lesions	Theoretical	Short, semester
		understanding. subject-specific		lecture using	mid-year and
		skills		Power point,	final exams
j l		JIIIIJ		Problem-based	
				learning,	
				11 1 .	
				collaboration,	
				discussion,	
				discussion, debriefing,	
				discussion,	

	1			1	
				research,	
				computer-based	
				learning.	
26	5		Salivary gland disorders	Theoretical	Short, semester
		understanding.		lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review, practical	
				research,	
				computer-based	
				learning.	
27	5	Knowledge	Salivary gland neoplasms	Theoretical	Short, semester
		understanding.		lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-based	mar exams
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review, practical	
				research,	
				computer-based	
				_	
20		17 1 1	Physical and chemical injuries	learning.	Cl
28	5	Knowledge understanding.	Physical and chemical injuries	Theoretical	Short, semester
		subject-specific		lecture using	mid-year and
		skills		Power point,	final exams
		SKIIIS		Problem-based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review, practical	
				research,	
				computer-based	
				learning.	
29	5	Knowledge	Hematopoietic tumors	Theoretical	Short, semester
		understanding.		lecture using	mid-year and
		subject-specific skills		Power point,	final exams
		5K1115		Problem-based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review, practical	
				research,	
				computer-based	
				learning.	

30		5	Knowledge understanding. subject-specific skills			Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semeste mid-year and final exams
Lab nur	mber			Study	unit title	5	
1		Dat	a show and demo	nstration of biopsy proces	ssing		
2		Dat	a show about Hea	lling in oral pathology			
3		Acı	ute and chronic de	ental caries			
4		Acı	ute pulpitis, chroni	ic pulpitis and pulp polyp	1		
5		Per	iapical granuloma	, cyst and abscess			
6	6 Acute and chronic osteomyelitis and squestrum						
7	7 Data show about developmental disorder of teeth						
8 Data show about developmental disorder of soft tissue							
9		Data show about non odontogenic cysts					
10		Dei	ntigerous cyst, ker	tatocyst ,calcifying odont	ogentic cyst a	and eruption cyst	
11		Am	eloblastoma,aden	omatoid odontogenic tum	or and odont	oma	
12		Am	neloblastic fibroma	a odontoma			
13		Let	ıkoplakia, squamo	ous cell papilloma			
14		_	thelial dysplasia				
15			uamous cell carcii				
16		Fil	oro dysplasia, ossi	fying fibroma			
17		Giant cell lesions ,central and peripheral giant cell granuloma					
18		Os	teoma				
19		Os	teosarcoma				
20		Da	ta show about vira	al infections			
21		Da	ta show about bac	cterial and fungal infection	n		
22		Lie	chen planus				
23		Pe	mphigus vulgaris				

24	Fibroma, and pyogenic granuloma				
25	Hemangioma, and lymphangioma				
26	Mucocele and data show				
27	Pleomorphic adenoma and mucoepidermoid carcinoma.				
28	Data show physical and chemical injuries				
29	Hematological neoplasms				
30	Data show about forensic dentistry				

## 11. Course Evaluation

- 10 degrees of first semester: 8 degrees of short and semester exams and two degrees of oral exam
- $10\ degrees$  of second semester:  $8\ degrees$  of short and semester exams and two degrees of oral exam
- 20 degrees of mid-year
- 60 degrees of final exam

# 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	Oral and Maxillofacial Pathology.Brad Neville.Doughlas Damm Carl Allen and Jerry Bouqu 4th edition.2016,Elsevier. Robinson, Max, Keith Hur Michael Pemberton and Ph Sloan.Soames & Southams O Pathology. 2018, Oxford Univers Press.
Recommended books and references (scientific journals, reports)	
Electronic References, Websites	

#### 1. Course Name:

Oral surgery

2. Course Code:

422OS

3. Semester / Year:

2 semester/ Fourth stage

**4.** Description Preparation Date:

2024-2025

5. Available Attendance Forms:

Lectures and Clinics

6. Number of Credit Hours (Total) / Number of Units (Total)

150 hours / 6 unite

7. Course administrator's name (mention all, if more than one name)

Name: Osamah Mohammed Abdullameer

Email: daghir-uma@mu.edu.iq

#### 8. Course Objectives

## **Course Objectives**

 Preparing the student to a high level of knowledge regarding the principles of oral and facial surgery Learn about dental management of patients with chronic and infectious diseases, in addition to minor oral surgical interventions and infections of the mou face and jaws.

## 9. Teaching and Learning Strategies

#### Strategy

- Gain basic knowledge about oral surgery.
- Dental management of patients with chronic and infectious diseases
- Basic knowledge of minimally invasive surgery
- Dealing with infections of the mouth, face and jaws
- Knowing the basics of oral diagnosis
- Dealing with patients with chronic and infectious diseases
- Training in tooth extraction

#### 10. Course Structure

Week	Hours	Required	Unit or subject name	Learning	Evaluation
		Learning	Theoretical	method	method
		Outcomes			
1	5	Knowledge and understanding . subject- specific skills	Cardiovascular diseases  — Hypertension  • Dental management  • Oral Manifestations  — Ischemic heart diseases  • Angina pectoris  • Myocardial infarction (MI)  • Dental management  — Heart failure  • Dental management  • Oral manifestations	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
2	5	Knowledge and understanding subject- specific skills	<ul> <li>¬ Cardiac arrhythmia</li> <li>Dental management</li> <li>¬ Infective endocarditis</li> <li>Dental management</li> <li>¬ Rheumatic fever and rheumatic heart Disease</li> <li>Dental management</li> <li>¬ Congenital heart disease</li> <li>Dental management</li> <li>Oral manifestations</li> </ul>	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
3	5	Knowledge and understanding subject- specific skills	Bleeding disorder  • Dental management of the patient with bleeding disorder:    Hemophilia   Von Willebrand's disease   Thrombocytopenia   Blood dyscrasias   Disorders of the RBCs   Anemia and polycythemia   Dental management   WBCs Disorders   Leukemia, Lymphoma, Burkitt's Lymphoma and Multiple Myloma   Dental management   Dental management	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
4	5	Knowledge and understanding subject- specific skills	Endocrinology  Thyroid diseases  Dental management of hyperand hypothyroidism Oral complications and manifestations  Adrenal insufficiency Dental management of Adrenocortical insufficiency and adrenal crisis  Dental management of Adrenocortical hyperfunction	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical	Short, semester, mid-year and final exams

			. 01	Danage 1.	<del>                                     </del>
			• Oral complications and manifestations — Diabetes Mellitus	Research,	
			<ul> <li>Dental management of the patient</li> </ul>	Computer	
			with diabetes mellitus	Learning	
5	5	Knowledge	Pulmonary diseases	Theoretical	Short,
		and	¬ Chronic obstructive pulmonary	lecture using	semester,
		understanding	diseases (COPD) • Dental	Power point,	mid-year and
		. subject-	management	Problem-Based	final exams
		specific skills	Oral complications and	Learning	
			manifestations  — Asthma	,Collaborate	
			Astıma     Dental management	Discussion	
			Management of asthmatic attack	,Debriefing	
			Oral complications and	,Information	
			manifestations	Review, Practical	
			¬ Tuberculosis	Research,	
			Dental management	Computer	
			Oral complications and	Learning	
			manifestations		
6	5	Knowledge	Liver Diseases	Theoretical	Short,
6		and understanding	¬ Viral hepatitis	lecture using	semester, mid-year and
		. subject-	<ul><li>Dental management</li><li>Oral manifestations and</li></ul>	Power point,	final exams
		specific skills	complications	Problem-Based	IIIai Cailis
			¬ Alcoholic liver disease	Learning	
			Dental management	,Collaborate	
			Oral complications and	Discussion	
			manifestations	,Debriefing	
				,Information	
				Review, Practical	
				Research,	
				Computer	
7	5	Knowledge	Chronic kidney disease and dialysis	Learning Theoretical	Short,
,	J	and	Chronic kidney disease	lecture using	semester,
		understanding	Dental management	Power point,	mid-year and
		. subject-	Patients receiving conservative	•	final exams
		specific skills	care	Problem-Based	
			Dialysis	Learning ,Collaborate	
			Renal transplant	Discussion	
			Oral complications and	,Debriefing	
			manifestations	,Information	
				Review, Practical	
				Research,	
				Computer	
				Learning	
8			Neurologic disorders	Theoretical	Short,
	5	Knowledge	_	Theoretical	Short,
	5	and	¬ Epilepsy	lecture using	semester,
	5	and understanding	¬ Epilepsy  ■ Dental management		semester, mid-year and
	5	and understanding . subject-	<ul><li> Epilepsy</li><li> Dental management</li><li> Oral complications and</li></ul>	lecture using	semester,
	5	and understanding	<ul> <li>Epilepsy</li> <li>Dental management</li> <li>Oral complications and manifestations</li> </ul>	lecture using Power point,	semester, mid-year and
	5	and understanding . subject-	<ul> <li>Epilepsy</li> <li>Dental management</li> <li>Oral complications and manifestations</li> <li>Cerebrovascular accidents</li> </ul>	lecture using Power point, Problem-Based	semester, mid-year and
	5	and understanding . subject-	<ul> <li>¬ Epilepsy</li> <li>Dental management</li> <li>Oral complications and manifestations</li> <li>¬ Cerebrovascular accidents (stroke)</li> </ul>	lecture using Power point, Problem-Based Learning	semester, mid-year and
	5	and understanding . subject-	<ul> <li>¬ Epilepsy</li> <li>• Dental management</li> <li>• Oral complications and manifestations</li> <li>¬ Cerebrovascular accidents (stroke)</li> <li>• Medical management</li> </ul>	lecture using Power point, Problem-Based Learning ,Collaborate	semester, mid-year and
	5	and understanding . subject-	<ul> <li>¬ Epilepsy</li> <li>Dental management</li> <li>Oral complications and manifestations</li> <li>¬ Cerebrovascular accidents (stroke)</li> </ul>	lecture using Power point, Problem-Based Learning ,Collaborate Discussion	semester, mid-year and
	5	and understanding . subject-	<ul> <li>¬ Epilepsy</li> <li>• Dental management</li> <li>• Oral complications and manifestations</li> <li>¬ Cerebrovascular accidents (stroke)</li> <li>• Medical management</li> </ul>	lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing	semester, mid-year and

				Computer	
	1			Learning	
9	5	Knowledge and understanding . subject- specific skills	Pregnancy • Dental management • Medical considerations  Treatment timing	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
10	5	Knowledge and understanding . subject- specific skills	Dental radiographs Drugs in pregnancy Oral manifestations and complications	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
11	5	Knowledge and understanding . subject- specific skills	AIDS and HIV infection     Oral manifestations     Dental managements:     Asymptomatic patient.     Symptomatic patient.     Patient with severe symptoms	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
12	5	Knowledge and understanding . subject- specific skills	Allergy  • Dental management  • Oral complications and manifestations	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams

13	5	Knowledge	Patients on radiotherapy and	Theoretical	Short,
13		and	chemotherapy	lecture using	semester,
		understanding	Patients on radiotherapy	Power point,	mid-year and
		. subject-	Radiation effects on normal	Problem-Based	final exams
		specific skills	tissues in the path of the external	Learning	
			beam	,Collaborate	
			Dental Management	Discussion	
			• Patients on chemotherapy   The	,Debriefing	
			effect of chemotherapy on normal	,Information	
			tissues	Review, Practical	
			Dental management	Research,	
				Computer	
				Learning	
14	5	Knowledge	Odontogenic infections and fascial	Theoretical	Short,
		and	space infections	lecture using	semester,
		understanding	Odontogenic Infections	Power point,	mid-year and
		. subject-	Spread of odontogenic infections	Problem-Based	final exams
		specific skills	• The factors that influence	Learning Learning	
			the spread of odontogenic	,Collaborate	
			infections	Discussion	
				,Debriefing	
				,Information	
				Review, Practical	
				Research,	
				Computer	
				Learning	
15	5	Knowledge	Fascial space infections	Theoretical	Short,
		and	• Infection of spaces in relation to	lecture using	semester,
		understanding	the lower jaw	Power point,	mid-year and
		. subject-	• Infections of spaces in relation to	Problem-Based	final exams
		specific skills	the upper jaw	Learning	
			Cavernous sinus thrombosis	,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review, Practical	
				Research,	
				Computer	
				Learning	
16	5	Knowledge	• Principles of treatment of	Theoretical	Short,
		and understanding	odontogenic infections	lecture using	semester,
		. subject-	• Principles for the use of appropriate antibiotics	Power point,	mid-year and final exams
		specific skills	• Sinus formation	Problem-Based	mai Camis
		T I I I I I I I I I I I I I I I I I I I	Necrotizing fasciitis	Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review, Practical	
				Research,	
				Computer	
17	5	Vmor-1- J	Deinainlas of Flores and since of	Learning	Chont
17	5	Knowledge	Principles of Flaps, suturing and	Theoretical	Short,
		and understanding	management of difficult extraction  — Flaps in oral cavity	lecture using	semester, mid-year and
		. subject-	• Incision	Power point, Problem-Based	final exams

	1	specific skills	• Flap design	Learning	<del>                                     </del>
		specific skins	Types of Mucoperiosteal Flaps	,Collaborate	
			• Flap reflection	Discussion	
			¬ Suturing	,Debriefing	
			Suture Materials	Information	
			• Needles	Review, Practical	
			Needle Holder	Research,	
			Tissue Forceps	Computer	
			Suture Scissor	Learning	
			Principles of suturing		
			Suturing Techniques		
18	5	Knowledge	¬ Management of difficult	Theoretical	Short,
		and	extraction	lecture using	semester,
		understanding	• The main indications for surgical	Power point,	mid-year and
		. subject-	extraction of teeth are	Problem-Based	final exams
		specific skills	• Steps of surgical extraction	Learning	
			• Indications for leaving root	,Collaborate	
			fragments • Multiple Extractions	Discussion	
			Extraction sequencing	,Debriefing	
				,Information	
				Review, Practical	
				Research,	
				Computer	
				Learning	
19	5	Knowledge	Principles of management of	Theoretical	Short,
		and	impacted teeth	lecture using	semester,
		understanding	Definition and stages of eruption	Power point,	mid-year and
		. subject-	• Impacted lower third molars	Problem-Based	final exams
		specific skills	Indications for removal of	Learning	
			impacted lower third molars	,Collaborate	
			Classification of impacted lower third molars   Clinical examination	Discussion	
				,Debriefing	
			Radiographic examination and assessment Surgical extraction of	,Information	
			lower third molar	Review, Practical	
			Complications	Research,	
			Other lines of treatment	Computer	
			other mes or treatment	Learning	
20	5	Knowledge	Impacted upper third molars	Theoretical	Short,
		and	Surgical extraction	lecture using	semester,
		understanding	Complications	Power point,	mid-year and
		. subject-	Impacted maxillary canine	• .	final exams
		specific skills	Classification	Problem-Based	
			Clinical examination	Learning	
			Radiographic examination and	,Collaborate	
			assessment	Discussion	
			Options of treatment	,Debriefing	
				,Information	
				Review, Practical	
				Research,	
				Computer	
				Learning	
21	5	Knowledge	Impacted mandibular canines	Theoretical	Short,
	•	and	Impacted lower premolars	lecture using	semester,
		understanding	• Impacted maxillary premolars	Power point,	mid-year and
		. subject-	Impacted first and second molars	Problem-Based	final exams
		_			

			Dilacerated incisors	Collaborate	
			Diracerated incisors	,Collaborate Discussion	
				,Debriefing	
				,Deorieting ,Information	
				*	
				Review, Practical	
				Research,	
				Computer	
22	_	** 1 1		Learning	G1
22	5	Knowledge	Surgical aids to orthodontics	Theoretical	Short,
		and understanding	Corticotomy assisted orthodontic treatment and labial	lecture using	semester, mid-year and
		. subject-		Power point,	final exams
		specific skills	<ul><li> Labial frenectomy.</li><li> Temporary skeletal anchorage</li></ul>	Problem-Based	illiai Caillis
		specific skins	Temporary skeletar anchorage	Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review, Practical	
				Research,	
				Computer	
				Learning	
23	5	Knowledge	Principles of endodontic surgery	Theoretical	Short,
		and	• Definition	lecture using	semester,
		understanding	• Indications for periapical surgery	Power point,	mid-year and
		. subject-	Contraindications for periapical		final exams
		specific skills	surgery	Problem-Based	
			• Important considerations in	Learning	
			periapical surgery	,Collaborate	
			• Factors Associated with Success	Discussion	
			and Failures in Periapical Surgery	,Debriefing	
				,Information	
				Review, Practical	
				Research,	
				Computer	
				Learning	
24	5	Knowledge	Surgical procedure	Theoretical	Short,
		and	• To perform biopsy or not	lecture using	semester,
		understanding	• Determination of success	Power point,	mid-year and
		. subject-	Microsurgical technique	Problem-Based	final exams
		specific skills		Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review, Practical	
				Research,	
				Computer	
				Learning	
25	5	Knowledge	Osteomyelitis and osteonecrosis of	Theoretical	Short,
23		and	the jaw		semester,
		understanding	¬ Osteomyelitis	lecture using	mid-year and
		. subject-	• Definition.	Power point,	final exams
		specific skills	• Classification	Problem-Based	
		1	• Etiology and pathogenesis	Learning	
			Clinical presentation	,Collaborate	
			Diagnostic imaging	Discussion	
			- Diagnostic imaging	,Debriefing	
<u> </u>	1	I.	1		

			Microbiology	,Information	
			• Treatment: surgical,	Review, Practical	
			antimicrobial and hyperbaric	Research,	
			oxygen	Computer	
			• Other types of osteomyelitis:	Learning	
			infantile, focal and diffuse sclerosing and Garre's sclerosing		
			osteomyelitis		
26	5	Knowledge	¬ Radiation induced osteomyelitis	Theoretical	Short,
		and	and osteoradionecrosis	lecture using	semester,
		understanding . subject-	• Definition	Power point,	mid-year and final exams
		specific skills	<ul><li> Etiology</li><li> Stages</li></ul>	Problem-Based	mai cams
		1	• Treatment	Learning	
			• Prevention	,Collaborate	
			¬ Medication related osteonecrosis	Discussion	
			of the jaw	,Debriefing	
			Definition	,Information	
			Pathophysiology	Review, Practical	
			Clinical presentation and staging	Research, Computer	
			• Imaging	Learning	
			<ul><li>Treatment</li><li>Prevention</li></ul>	Laming	
27	5	Knowledge	Dental Implants: Basic Concepts	Theoretical	Short,
		and	and Techniques	lecture using	semester,
		understanding	• Implant Geometry (Macrodesign)	Power point,	mid-year and
		. subject-	• Implant Surface Characteristics	Problem-Based	final exams
		specific skills	(Microdesign)	Learning	
			<ul><li> Hard Tissue Interface</li><li> Soft Tissue–Implant Interface</li></ul>	,Collaborate	
			Biomechanical Considerations	Discussion	
			Preoperative Assessment and	,Debriefing	
			Treatment Planning (hard tissue	,Information	
			evaluation, soft tissue evaluation,	Review, Practical	
			radiographic examination)	Research,	
				Computer	
28	5	Knowledge	Surgical Treatment Planning	Learning Theoretical	Short,
		and	Considerations	lecture using	semester,
		understanding	• Final Treatment Planning • Basic	Power point,	mid-year and
		. subject-	Implant Surgical Procedures	Problem-Based	final exams
		specific skills	• One-Stage versus Two-Stage	Learning	
			Implant Placement Surgery	,Collaborate	
			<ul><li>Implant Stability</li><li>Complications</li></ul>	Discussion	
			Implant Components	,Debriefing	
			Defining implant outcomes	,Information	
				Review, Practical	
				Research,	
				Computer	
20	5	Knowledge	Biopsy in oral and maxillofacial	Learning	Short
29	J	Knowledge and	surgery	Theoretical	Short, semester,
		understanding	Medical History	lecture using	mid-year and
		. subject-	History of the lesion	Power point,	final exams
		specific skills	• Examination	Problem-Based	
			Differential Diagnosis	Learning ,Collaborate	
		l	A Diamari Deimainlas	,Conauoraic	i l
			<ul><li>Biopsy Principles</li><li>Contraindication</li></ul>	Discussion	

30	5	Knowledge and understanding . subject- specific skills	<ul> <li>Excisional Biopsy</li> <li>Incisional Biopsy</li> <li>Surgical technique</li> <li>Diagnostic imaging in oral and maxillofacial surgery</li> <li>Classification: Invasive and Noninvasive</li> <li>Types of non-invasive imaging</li> <li>Conventional radiography (Plain x-ray)</li> <li>Ultrasonography (USG):</li> <li>Computed tomography scanning (CT scan): Spiral CT, Cone Beam CT (CBCT)</li> <li>Magnetic resonance imaging (MRI)</li> <li>MRI vs. CT scan</li> <li>Radionuclide (scintigraphy or skeletal scan)</li> <li>Positron emission tomography (PET) Scan</li> <li>PET-CT</li> <li>Single Photon Emission</li> </ul>	,Debriefing ,Information Review, Practical Research, Computer Learning Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
			<ul> <li>PET-CT</li> <li>Single Photon Emission</li> <li>Computed Tomography (SPECT)</li> <li>scan</li> </ul>		

# Clinical requirement

Extraction of teeth (simple	4 hours/ week
extraction)	120 hours/ year

## 11. Course Evaluation

10 degrees of first semester: 8 degrees of short and semester exams and two degrees of oral exam

 $10\ degrees$  of second semester:  $8\ degrees$  of short and semester exams and two degrees of oral exam

20 degrees of mid-year

60 degrees of final exam

# 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	<ol> <li>Dental Management of the Medically Compromised Patient, Ninth Edition, 2018</li> <li>Contemporary oral and maxillofa surgery 7th edition 2019 (Elsevier).</li> </ol>
Recommended books and references (scientific journals, reports)	
Electronic References, Websites	

## 1. Course Name:

Orthodontic

2. Course Code:

426 OD

3. Semester / Year:

2 Semester/ Fourth Stage

**4.** Description Preparation Date:

#### 2024-2025

5. Available Attendance Forms:

Theoretical lectures and practical laboratory

6. Number of Credit Hours (Total) / Number of Units (Total)

150 hours / 6 unite

7. Course administrator's name (mention all, if more than one name)

Name: Haydar Saad Hanfoosh

Email: hayderhanfoosh@mu.edu.iq

#### 8. Course Objectives

#### **Course Objectives**

- Preparing the student at a high level of scientific with regard to orthodontics
- Identifying the types of pathological conditions, poor occlusions, the causes leading to them, and the types of orthodontic devices

## 9. Teaching and Learning Strategies

#### Strategy

- Acquire knowledge about the causes of malocclusion and methods of diagnosis treatment
- Identify the types of orthodontic devices
- Learn how to make a mobile orthosis device with its different parts

#### 10. Course Structure

Week	Hours	Required	Unit or subject name	Learning	Evaluation	
		Learning	Theoretical	method	method	

		Outcomes			
1	5	Knowledge and understanding. subject-specific skills	Introduction - Definition of orthodontics Definition of occlusion, normal, i and malocclusion	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Resea Computer Learning	Short, semes mid-year and final exams
2	5	understanding. subject-specific skills	Six keys of normal occlusion - Aims of orthodontic treatment	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Resea Computer Learning	Short, semes mid-year and final exams
3	5	Knowledge understanding. subject-specific skills	Important orthodontic definitions Classification of malocclusion	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Pract Research, Computer Learning	Short, semes mid-year and final exams
4	5	Knowledge understanding. subject-specific skills	Growth and development - Definitions of growth, development and maturity Stages of development (ovum birth)	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Pract Research, Computer Learning	Short, semes mid-year and final exams
5	5	Knowledge	- Theories of bone growth	Theoretical	Short, semes

		understanding. subject-specific skills		lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Pract Research, Computer Learning	
6	5	Knowledge and understanding. subject-specific skills	<ul> <li>Growth curve and maximumgrowth spurt</li> <li>Prenatal and postnatal growth and development of hard tissues</li> </ul>	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Pract Research, Computer Learning	
7	5	Knowledge understanding. subject-specific skills	- Prenatal and postnatal growth anddevelopment of soft tissues Developmental anomalies	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Pract Research, Computer Learning	Short, semes mid-year and final exams
8	5	Knowledge understanding. subject-specific skills	- Jaw rotation Compensation and adaptation	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Pract Research, Computer Learning	Short, semes mid-year and final exams
9	5	Knowledge understanding. subject-specific skills	Deciduous and permanentdentition a-Stages of tooth development: (Formation,	Theoretical lecture using Power point, Problem-Based	Short, semes mid-year and final exams

Г	1		1.0		
			calcification and root completion)	Learning ,Collaborate Discussion ,Debriefing ,Information Review, Pract Research, Computer Learning	
10	5	Knowledge understanding. subject-specific skills	b-Tooth eruption (stages and theories), Sequences and timing of eruption	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Pract Research, Computer Learning	Short, semes mid-year and final exams
11	5	Knowledge understanding. subject-specific skills	Development of occlusion a. new born oral cavity. Deciduous dentition stage - De changes till 6 years of age.	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Pract Research, Computer Learning	Short, semes mid-year and final exams
12	5	Knowledge understanding. subject-specific skills	c. Early mixed dentition stage -eruption of first molars and incisors. d. Late mixed dentition stage - eruption of canines and premolars Permanent dentition - eruption sec and third molars.	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Pract Research, Computer Learning	Short, semes mid-year and final exams
13	5	Knowledge understanding. subject-specific skills	Etiology of malocclusion: -Genetic and inherited etiological factors of malocclusion	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion	Short, semes mid-year and final exams

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				,Debriefing	
				,Information	
				Review, Pract	
				Research,	
				Computer	
				Learning	
14	5	Knowledge	-Classification of etiological	Theoretical	Short, semes
		understanding.	factors	lecture using	mid-year and
		subject-specific	a. General factors	Power point,	final exams
		skills	i. Skeletal factors	Problem-Based	
			1 21010101 1000015	Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				·	
				Review, Pract	
				Research,	
				Computer	
				Learning	
15	5	Knowledge	ii. Soft tissue factors	Theoretical	Short, semes
		understanding.		lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-Based	
				Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				Information	
				Review, Pract	
				Research,	
				Computer	
	_	**		Learning	
16	5	Knowledge	iii. dental factors	Theoretical	Short, semes
		understanding.		lecture using	mid-year and
		subject-specific skills		Power point,	final exams
		SKIIIS		Problem-Based	
				Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review, Pract	
				Research,	
				Computer	
				Learning	
17	5	Knowledge	b. Local factors (definitions	Theoretical	Short, semes
1,	J	understanding.	without treatment)	lecture using	mid-year and
		subject-specific	winiout treatificiit)	Power point,	final exams
		skills		Problem-Based	iiiai exailis
				Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
]				,Information	
į l				Review, Pract	1

				Research, Computer	
				Learning	
18	5	Knowledge understanding. subject-specific skills	Tooth movement  a. Tissue changes associated with tooth movement: i. Histology of periodontium ii. Theories of tooth movement b. Accelerated tooth movement.	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Pract Research, Computer Learning	Short, semes mid-year and final exams
19	5	Knowledge understanding. subject-specific skills	c. Biomechanics i. Force (application, type,magnitude, duration and direction) ii. Center of resistance and rotation, moment of force andmoment of couple. iii. Types of tooth movement Rate of tooth movement and fac affecting it.	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Pract Research, Computer Learning	Short, semes mid-year and final exams
20	5	Knowledge understanding. subject-specific skills	d. iatrogenic effect of tooth movement (pain, mobility, pulpeffect, root resorption, white spot lesions).	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Pract Research, Computer Learning	Short, semes mid-year and final exams
21	5	Knowledge understanding. subject-specific skills	Biomechanics	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Pract Research, Computer Learning	Short, semes mid-year and final exams

understanding. subject-specific skills  indications, types)  lecture Power Prob Learn Collar Discure Company Company Collar Reviews Rese Company Learn Learn Learn Company Collar Reviews Rese Company Company Collar Reviews Rese ved Reserv	aborate ussion riefing rmation ew, Pract
subject-specific skills  Prob Learn ,Colla Discu ,Debr ,Infor Revie	er point, final exams plem-Based ning aborate ussion riefing rmation ew, Pract
skills  Prob Lear ,Colla Discu ,Deb ,Info Revie Rese Com Lear	olem-Based ning aborate ussion riefing rmation ew, Pract
Leary ,Colla Discu ,Debu ,Information Review Rese Complement Compl	ning aborate ussion riefing rmation ew, Pract
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Comp	arch.
Lear	,
	puter
	ning
23 5 Knowledge Orthodontic appliances Theo	oretical Short, semes
understanding. a. Overview: lectu	re using mid-year and
subject-specific i. passive orthodontic Power	er point, final exams
	olem-Based
retainer and space maintainer) Learn	ning
	aborate
iii deli ve oranodonare appliances	ussion
m. (reme tusie, integ, simpeare	riefing
	rmation
iii. Other active appliances: sp Revio	
	earch,
	puter
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Leary  24 5 Knowledge b. Removable Orthodontic Theo	
	oretical Short, semes
I II I	re using mid-year and
1. Troperties of various	er point, final exams
components (SS wire,	olem-Based
acrylic) Learn	_
in components.	aborate
1) delive components	ussion
(Springs, sere ws and classies)	riefing
2) recentive components (crasps)	rmation
3) acrylic base plate and Review	·
biteplanes	earch,
anchorage	puter
Learn	ning
25 5 Knowledge Theo	oretical Short, semes
understanding. iii. Design of a lectu	re using mid-year and
subject-specific removable orthodontic Power	er point, final exams
	olem-Based
iv. Construction of a Learn	
	aborate
D'	ussion
anniane	riefing
apphanee	_
v. Soldering and welding	rmation
v. Soldering and welding Post-insertion instructions Post-insertion Post-insertion	rmation
v. Soldering and welding Post-insertion instructions guidelines  ,Debt	ew, Pract
v. Soldering and welding Post-insertion instructions guidelines  ,Debr. ,Information Revie	ew, Pract earch,
v. Soldering and welding Post-insertion instructions guidelines  Revie	ew, Pract earch, puter
v. Soldering and welding Post-insertion instructions guidelines  Revie Rese Comp	ew, Pract earch, puter ning
v. Soldering and welding Post-insertion instructions guidelines  Rese Comp Learn  Theo  Knowledge  C. Fixed orthodontic appliance:  Theo	ew, Pract earch, puter ning oretical Short, semes
v. Soldering and welding Post-insertion instructions guidelines  Revie Rese Comp Learn  Types, components,  C. Fixed orthodontic appliance: Types, components,	ew, Pract earch, puter ning

		alrilla	Linnahani.	Decalel and Decal	1
		skills	biomechanics, banding vs. bonding	Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Pract Research, Computer Learning	
27	5	Knowledge understanding. subject-specific skills	d. Orthopedic and Myofunctional appliance: Types, components, advantages, limitation, mode of action	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Pract Research, Computer Learning	Short, semes mid-year and final exams
28	5	Knowledge understanding. subject-specific skills	continue Orthopedic and Myofunctional appliance: Types, components, advantages, limitation, mode of action	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Pract Research, Computer Learning	Short, semes mid-year and final exams
29	5	Knowledge understanding. subject-specific skills	f. Retention and retainers Retention (definition, reason,time)	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Pract Research, Computer Learning	Short, semes mid-year and final exams
30	5	Knowledge understanding. subject-specific skills	Retainers (Hawley, clear overlay, positioners, permar fixation, precision)	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate	Short, semes mid-year and final exams

Lab number  Seminar 1 (Introduction to orthodontics)  Seminar 2 (Types of orthodontic appliances)  Seminar 3 (Orthodontic pliers)  Seminar 4 (Stainless steel alloy properties)  Seminar 5 (Acrylic baseplate)  Seminar 6 (Principles of wire bending)  Wire bending training  Z-Spring  Recurved Z-Spring  Review  Simple Finger Spring  Modified Finger Spring  Modified Finger Spring	
2 Seminar 2 (Types of orthodontic appliances) 3 Seminar 3 (Orthodontic pliers) 4 Seminar 4 (Stainless steel alloy properties) 5 Seminar 5 (Acrylic baseplate) 6 Seminar 6 (Principles of wire bending) 7 Wire bending training 8 Z-Spring 9 Recurved Z-Spring 10 Review 11 Simple Finger Spring 12 Modified Finger Spring	
3 Seminar 3 (Orthodontic pliers) 4 Seminar 4 (Stainless steel alloy properties) 5 Seminar 5 (Acrylic baseplate) 6 Seminar 6 (Principles of wire bending) 7 Wire bending training 8 Z-Spring 9 Recurved Z-Spring 10 Review 11 Simple Finger Spring 12 Modified Finger Spring	
4 Seminar 4 (Stainless steel alloy properties) 5 Seminar 5 (Acrylic baseplate) 6 Seminar 6 (Principles of wire bending) 7 Wire bending training 8 Z-Spring 9 Recurved Z-Spring 10 Review 11 Simple Finger Spring 12 Modified Finger Spring	
5 Seminar 5 (Acrylic baseplate) 6 Seminar 6 (Principles of wire bending) 7 Wire bending training 8 Z-Spring 9 Recurved Z-Spring 10 Review 11 Simple Finger Spring 12 Modified Finger Spring	
6 Seminar 6 (Principles of wire bending) 7 Wire bending training 8 Z-Spring 9 Recurved Z-Spring 10 Review 11 Simple Finger Spring 12 Modified Finger Spring	
7 Wire bending training 8 Z-Spring 9 Recurved Z-Spring 10 Review 11 Simple Finger Spring 12 Modified Finger Spring	
8 Z-Spring 9 Recurved Z-Spring 10 Review 11 Simple Finger Spring 12 Modified Finger Spring	
9 Recurved Z-Spring  10 Review  11 Simple Finger Spring  12 Modified Finger Spring	
10 Review 11 Simple Finger Spring 12 Modified Finger Spring	
11 Simple Finger Spring 12 Modified Finger Spring	
12 Modified Finger Spring	
Review	
14 Buccal Canine Retractor	
15 Modified Buccal Canine Retractor	
16 Review	
17 Quarterly Exam	
18 Adams' Clasps on Upper Right 1 <sup>st</sup> Molar	
19 Adams' Clasps on Upper Left 1 <sup>st</sup> Molar	
20 Adams' Clasps on Upper Right 1 <sup>st</sup> Premolar	
21 Double Adams' Clasps on Upper Right 2 <sup>nd</sup> premolar &1 <sup>st</sup> molar	
22 Review	
23 Fitted Labial Arch	
24 Hawley Arch	
25 Review	
26 Robert's Retractor	
27 oldering and Welding	

28	Review
29	Quarterly Exam
30	Final Exam

## 11. Course Evaluation

- 10 degrees of first semester: 8 degrees of short and semester exams and two degrees of oral exam
- 10 degrees of second semester: 8 degrees of short and semester exams and two degrees of oral exam
- 20 degrees of mid-year
- 60 degrees of final exam

## 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	<ol> <li>An Introduction to Orthodontics 5th Edition Simon J. Littlewood and Laura Mitchell 2019.</li> <li>Orthodontics: Principles and Practice: Principles and Practice 2nd Edition 2017</li> </ol>
Recommended books and references (scientific journals, reports)	
Electronic References, Websites	

# 1. Course Name: pedodontics 2. Course Code: 427PE 3. Semester / Year: 2 Semester/ Fourth Stage 4. Description Preparation Date: 2024-2025 5. Available Attendance Forms: Theoretical lectures and practical laboratory 6. Number of Credit Hours (Total) / Number of Units (Total) 90 hours / 4 unite 7. Course administrator's name (mention all, if more than one name) Name: Shayma Abdullah Hanoon Email: shayma.abdullah@mu.edu.iq 8. Course Objectives **Course Objectives** Understanding and assimilating theoretical and practical methods for treating all cases of children's dental infections and learning about scientific methods and methods. Supported by explanations to learn how to identify primary and permanent teeth and the problems related to them 9. Teaching and Learning Strategies Strategy Gaining knowledge about the causes of various dental injuries in children and methods of diagnosing and treating them Identify all primary and permanent teeth and how to distinguish between them 10. Course Structure Week Hours Required Unit or subject name **Evaluation** Learning Learning Theoretical method method

		Outcomes			
1	3	Knowledge and understanding. subject-specific skills	Eruption of teeth , normal eruption process	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
2	3	Knowledge understanding. subject-specific skills	Teething and difficult eruption	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
3	3	Knowledge understanding. subject-specific skills	Eruption haematoma, sequestrum, ectopic eruption	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
4	3	Knowledge understanding, subject-specific skills	- Epstein pearls, Bohn nodules, Dental lamina cysts, Shedding of the primary teeth, Mechanism of resorption and shedding Factors causes differences in time of eruption	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
	l l	·		TOUT TITLE	

		understanding.	which cause late eruption	lecture using	mid-year and
		subject-specific	Deciduous Dentition Period,	Power point,	final exams
		skills	Ugly Duckling Stage	Problem-based	
			- 8 , 8	learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review, practical	
				research,	
				computer-based	
				learning.	
	3	Knowledge and	Morphology of the primary	Theoretical	Short, semester,
6	Ĭ	understanding.	teeth	lecture using	mid-year and
O		subject-specific skills	teetii	Power point,	final exams
				Problem-based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review, practical	
				research,	
				computer-based	
				learning.	
7	3	Knowledge	Normal morphology of all	Theoretical	Short, semester,
,	J	understanding.	primary teeth and their	lecture using	mid-year and
		subject-specific skills	clinical consideration	Power point,	final exams
			ennical consideration	Problem-based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review, practical	
				research,	
				computer-based	
				learning.	
8	3	Knowledge	Morphological	Theoretical	Short, semester,
- I	J	understanding.	differences between primary	lecture using	mid-year and
		subject-specific skills	permanent teeth	Power point,	final exams
			permanent teem	Problem-based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review, practical	
				research,	
				computer-based	
				learning.	
		Knowledge	Functions of primary teeth	Theoretical	Short, semester,
9	2		i unchons of primary teem	i iieui elildi	JIIOI I, SEIIIESIEI,
9	3		1 3	lecture using	mid-vear and
9	3	understanding. subject-specific skills		lecture using Power point,	mid-year and final exams

			learning, collaboration discussion, debriefing, information review, praction research,	
10	3 Knowledge understand		computer-base learning.	Short, semester,
	subject-spe	eific skills	Power point, Problem-base learning, collaboration discussion, debriefing, information review, practic	final exams d
			computer-base learning.	ed
11	3 Knowledge understandi subject-spe	Early childhoo	al caries, Theoretical	final exams
12	3 Knowledge understand subject-spe	children Isolat maintenance o	tion & lecture using	final exams d al
13	3 Knowledge understandi subject-spe	ing. consideration	Theoretical ,cavity lecture using avity preparat Power point,	final exams

				debriefing,	
				information	
				review, practical	
				research,	
				computer-based	
				learning.	
14	3	Knowledge	- Restorative materials used	Theoretical	Short, semester,
		understanding.	on pediatric dentistry	lecture using	mid-year and
		subject-specific skills	-	Power point,	final exams
				Problem-based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review, practical	
				research,	
				computer-based	
				learning.	
15	3	Knowledge	Matrices & retainers	Theoretical	Short, semester,
		understanding.		lecture using	mid-year and
		subject-specific skills		Power point,	final exams
				Problem-based	mar camis
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review, practical	
				research,	
				computer-based	
				learning.	
16	3	Knowledge	Chrome steel crowns, ART	Theoretical	Short, semester,
10	<u> </u>	understanding.		lecture using	mid-year and
		subject-specific skills		Power point,	final exams
				Problem-based	mar chamb
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review, practical	
				research,	
				computer-based	
				learning.	
17	3	Knowledge	Treatment of deep caries	Theoretical	Short, semester,
<del>-</del> ·		understanding.	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	lecture using	mid-year and
		subject-specific skills		Power point,	final exams
				Problem-based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
		l l			
				information	

			research, computer-based	
18 3	Knowledge understanding. subject-specific skills	Indirect pulp treatment	learning. Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based	Short, semester, mid-year and final exams
19 3	Knowledge understanding. subject-specific skills	Vital pulp therapy pulpotomy	learning. Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
20 3	Knowledge understanding. subject-specific skills	Non vital pulp therapy technique	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
21 3	Knowledge understanding. subject-specific skills	Reaction of pulp to various capping material	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams

22	3	Knowledge	Local anesthesia and pain	Theoretical	Short, semester,
	J	understanding.	control for children	lecture using	mid-year and
		subject-specific skills		Power point,	final exams
			Type of space maintainer (indication and contraindicat	Problem-based	mar exams
			(indication and contraindicat	learning,	
			)	collaboration,	
				discussion,	
				debriefing,	
				information	
				review, practical	
				research,	
				computer-based	
				learning.	
22	3	Knowledge	A neatherizing mandibules	Theoretical	Chart competer
23	3	understanding.	Anesthetizing mandibular		Short, semester,
		subject-specific skills	maxillary teeth and soft tissue	lecture using	mid-year and
		subject specific skint		Power point,	final exams
				Problem-based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review, practical	
				research,	
				computer-based	
				learning.	
24	3	Knowledge	complications after a	Theoretical	Short, semester,
		understanding.	local anesthetic	lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review, practical	
				research,	
				computer-based	
				learning.	
25	3	Knowledge		Theoretical	Short, semester,
-	3	understanding.	supplemental injection	lecture using	mid-year and
		subject-specific	techniques	Power point,	final exams
		skills	11	Problem-based	-
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review, practical	
				research,	
				computer-based	
26	2	Vnovvledes	Onel company for	learning.	Chart
26	3	Knowledge	Oral surgery for	Theoretical	Short, semester,
		understanding. subject-specific	children, indication	lecture using Power point,	mid-year and final exams
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		skills	contraindications for extraction of primary teeth,	Problem-based learning,	
				collaboration,	
				discussion, debriefing,	
				information	
				review, practical	
				research,	
				computer-based	
				learning.	
27	3	Knowledge	technique for extraction	Theoretical	Short, semester,
		understanding.	primary teeth	lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-based	
				learning,	
				collaboration,	
				discussion,	
				debriefing, information	
				review, practical	
				research,	
				computer-based	
				learning.	
28	3	Knowledge	extraction complications	Theoretical	Short, semester,
		understanding.	1	lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review, practical research,	
				computer-based	
				learning.	
29	3	Knowledge	postoperative	Theoretical	Short, semester,
_,		understanding.	extraction complication	lecture using	mid-year and
		subject-specific	radiographic survey of	Power point,	final exams
		skills	teeth extracted	Problem-based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review, practical	
				research, computer-based	
				learning.	
30	2	Knowledge	Infections manifestation	Theoretical	Short, semester,
50		understanding.	management	lecture using	mid-year and
		subject-specific	management	Power point,	final exams
		skills		Problem-based	<del>-</del>
				learning,	
	1		i	collaboration,	

		discussion,	
		debriefing,	
		information	
		review, practical	
		research,	
		computer-based	
		learning.	

Study unit title			
Lab number	Study unit title		
1	Hypodontia among children		
2	Anodontia among children		
3	Rampant caries among children		
4	Staining among children		
5	Types of Caries removal techniques		
6	Restoration of primary and young permanent teeth with variety		
7	Rubber dam		
8	Minor oral surgery		
9	Thumb sucking habits		
10	Pulp therapy for permanent dentition		
11	Pulp therapy for primary dentition		
12	Materials used for pulp therapy		
13	Crowns in pediatric dentistry		
14	Nail biting among children		
15	Maintenance of pulp vitality by use of regenerative materials		
16	Root canal treatment for anterior non vital teeth		
17	Root canal treatment		
18	Management of molar incisor hypomineralization MIH		
19	Behavior management for young patients		
20	Infection control re-assurance and guidance of students		
21	Tooth colored restoration technique		
22	Radiographic prescription and interpretation of results		
23	Space maintainers		
24	Fluoride application as a preventive measure		
25	Cleft lip and palate		
26	Supernumerary teeth and their impact on teeth eruption		
27	Management of medically compromised children		
28	Diagnosis and treatment plan		
29	ART technique		
30	Periodontal diseases in children		

# 11. Course Evaluation

10 degrees of first semester: 8 degrees of short and semester exams and two degrees of oral exam

10 degrees of second semester: 8 degrees of short and semester exams and two degrees of oral

20 degrees of mid-year 60 degrees of final exam

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12. Learning and reaching resource	12. Zearming and Teaching Nessances				
Required textbooks (curricular books, if any)					
Main references (sources)	1. McDONALD AND AVERY'S DENTISTRY				
Recommended books and references (scientific journals, reports)	CHILD and ADOLESCENT 2022 by Elsevier hand book of pediatric dentis (Cameron) mosby				
Electronic References, Websites	Handbook of clinical techniques pediatric dentistry				

## 1. Course Name:

#### Periodontic

2. Course Code:

## 427PT

#### 3. Semester / Year:

## 2 Semester/ Fourth Stage

## **4.** Description Preparation Date:

#### 2024-2025

#### 5. Available Attendance Forms:

Theoretical lectures and clinical training

6. Number of Credit Hours (Total) / Number of Units (Total)

#### 120 hours / 5 unit

## 7. Course administrator's name (mention all, if more than one name)

Name: Samer Salim Jaafer

Email: samersalimj@mu.edu.iq

## 8. Course Objectives

#### **Course Objectives**

- Preparing the student at a high level of scientific with regard to periodontics
- Identifying the types of pathological conditions, gingivitis, the causes
   leading to them, and the types of periodontics devices

## 9. Teaching and Learning Strategies

#### Strategy

- Training the students to diagnose periodontal disease
- Treatment patients with gingivitis and staining
- Training the students how to communicate with patients in periodontal clini our teaching hospital

## 10. Course Structure

Week	Hours	Required	Unit or subject name	Learning	Evaluation
		Learning	Theoretical	method	method

		Outcomes			
1	4	Knowledge and understanding. subject-specific skills	Terms &definitions frequently used periodontology	Theoretical lecture using Power point, Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semester, mid-year and final exams
2	4	understanding. subject-specific skills	Anatomy of the periodontium Oral mucosa	Theoretical lecture using Power point, Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semester, mid-year and final exams
3	4	Knowledge understanding. subject-specific skills	Anatomy of the periodontium Periodontal ligaments (PDL) Cellular elements o Ground substance o Development of principal fibers of PDL o Functions of periodontal ligaments: i- Physical functions ii- Formative and Remodeling Function iii- Nutritional and sensory functions o Clinical consideration	Theoretical lecture using Power point, Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semester, mid-year and final exams
4	4	Knowledge understanding. subject-specific skills	<ul> <li>- Anatomy of the periodontium</li> <li>- Cementum o Definition</li> <li>- o Function of cementum</li> <li>- o Classification of</li> </ul>	Theoretical lecture using Power point, Problem- based	Short, semester, mid-year and final exams

understanding. periodontium lecture using mid-y	
cementum ii- Acellular extrinsic fiber cemen iii- Cellular mixed strat cementum iv- Cellular intrinsic f cementum  cementum iii- Cellular mixed strat cementum iv- Cellular intrinsic f cementum  practical research, computer- based learning.  Theoretical understanding. periodontium  discussion, debriefing, information review, practical research, computer- based learning. Short mid-y	
ii- Acellular extrinsic fiber cemen debriefing, information cementum iv- Cellular intrinsic free cementum review, practical research, computer-based learning.  5 4 Knowledge understanding. periodontium - Anatomy of the periodontium - Anatomy of t	
iii- Cellular mixed strat cementum iv- Cellular intrinsic f cementum  cementum  cementum  cementum  review, practical research, computer-based learning.  5  4 Knowledge understanding. periodontium  - Anatomy of the periodontium  lecture using mid-y	
cementum iv- Cellular intrinsic f review, practical research, computer-based learning.  Knowledge understanding. periodontium periodontium lecture using mid-y	
cementum  practical research, computer- based learning.  Knowledge understanding. periodontium  practical research, computer- based learning.  Theoretical periodontium lecture using	
research, computer-based learning.  5 4 Knowledge understanding. periodontium research, computer-based learning.  Theoretical Short periodontium lecture using mid-y	
5 4 Knowledge understanding. Periodontium computer-based learning.  Theoretical Short periodontium lecture using mid-y	
5 4 Knowledge - Anatomy of the understanding. periodontium based learning. Theoretical Short mid-y	
5 4 Knowledge - Anatomy of the understanding. periodontium lecture using mid-y	
5 4 Knowledge - Anatomy of the understanding. periodontium lecture using mid-y	
understanding. periodontium lecture using mid-y	
periodonariam recome domb	, semester
aubicat apositial	ear and
subject-specific - Alveolar process Definition Power point, final e	xams
- o Function of aiveorar process Froblem-	
- o Parts of the alveolar process based	
i- Alveolar bone proper learning,	
- ii- An external plate of collaboration,	
cortical bone discussion,	
iii- Cancellous trabeculae or spo debriefing,	
bone information	
review,	
practical	
research,	
computer-	
based	
learning.  4 Knowledge and Classification of periodontal Theoretical Short	
understanding diamagnature distinct (2017)	, semester
o literature in the second control of the se	rear and
subject-specific skills - Reasons for classification - Reasons for classification - Major changes from previous - Problem-	exams
1 101 1	
Declarated the defendance of the second	
diseases and conditions Periodontal collaboration,	
health and gingival health: discussion,	
o Clinical gingival health on an debriefing,	
intact periodontium information	
o Clinical gingival health on a review,	
reduced periodontium: i- Stable practical	
periodontitis research,	
11- Non-periodontitis patients	
The classification of dental biofilm	
induced gingivitis:	
o Associated with bacterial delitar	
biofilm only	
o Mediated by systemic or local risk	
factors i- Systemic conditions	
ii- Oral factors enhancing plaque	
accumulation	
o Drug-influenced gingival enlargements Case definition of	
gingivitis:	
o Gingivitis on an intact	
periodontium	
o Gingivitis on a reduced	
periodontium	

		T	N 1	1	
			Non-dental biofilm induced gingival		
			disease:		
			o Genetic/developmental disorders		
			o Specific infections o Inflammatory and immune		
			conditions and lesions		
			o Reactive processes		
			o Neoplasms		
			o Endocrine, nutritional, and		
			metabolic diseases		
			o Traumatic lesions		
			o Gingival pigmentation		
7	4	Knowledge	- Classification of periodontal	Theoretical	Short, semester
'	1	understanding.	diseases and conditions (2017)	lecture using	mid-year and
		subject-specific	- Periodontitis (Extent, Staging,	Power point,	final exams
		skills	Grading, Status, Risk factors)	Problem-	imai caams
			- o Necrotizing periodontal diseases:	based	
			- i- Necrotizing gingivitis	learning,	
			- ii- Necrotizing periodontitis iii-	collaboration,	
			Necrotizing Stomatitis)	discussion,	
			- o Periodontitis as a manifestation of	debriefing,	
			systemic disease	information	
			Peri-implant disease and	review,	
			conditions: §	practical	
			- o Peri- implant health	research,	
			- o Peri-implant mucositis	computer-	
			- o Peri-implantitis	based	
			o Peri-implant soft and hard tis	learning.	
8	4	Knowledge	deficiency - Classification of periodontal	Theoretical	Short, semester
0	4	understanding.	diseases and conditions (2017)	lecture using	mid-year and
		subject-specific	Other conditions affecting the	Power point,	final exams
		skills	periodontium	Problem-	IIIIai Cailis
			associated with trauma and iatroge		
			factors	learning,	
			lactors	collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
9	4	Knowledge	Etiology of periodontal	Theoretical	Short, semester
	1	understanding.	disease	lecture using	mid-year and
		subject-specific	Periodontal disease pathogenesis o	Power point,	final exams
		skills	Mechanisms of pathogenicity	Problem-	
			o Histopathology of periodontal	based	
			disease: i- Clinically healthy	learning,	
			gingival tissues	collaboration,	
			ii- Histopathology of gingivitis and	discussion,	
			periodontitis:	debriefing,	
			The initial lesion	information	
1			The early lesion		
l			The carry region	review,	I

	<del>                                     </del>	1	• The established lesion	prostical	
			The established lesion     The advanced lesion	practical	
				research,	
			o Inflammatory responses in the periodontium: i- Microbial virulence	computer-	
			factors:	based	
			Lipopolysaccharide	learning.	
			Bacterial enzymes		
			Microbial invasion		
			Fimbriae		
			Bacterial DNA		
			ii- Host-Derived Inflammatory Mediators:		
			• Cytokines		
			<ul><li> Prostaglandins</li><li> Matrix metalloproteinases</li></ul>		
10	4	Knowledge	Etiology of periodontal	Theoretical	Chart competer
10	4	understanding.	diseaseEtiology of periodontal		Short, semester
		subject-specific	disease and risk factors	lecture using	mid-year and
		skills		Power point,	final exams
			Etiology of periodontal disease and risk factors	Problem-	
			Dental plaque biofilm and	based	
			periodontal microbiology	learning,	
			- Definitions:	collaboration,	
			o Supragingival plaque	discussion,	
			o Subgingival plaque	debriefing,	
			- Structure of a mature dental plaque	information	
			biofilm	review,	
			- Accumulation of a dental plaque	practical	
			biofilm:	research,	
			o Formation of the pellicle	computer-	
			o Initial adhesion/attachment of	based	
			bacteria	learning.	
			o Colonization and plaque		
			maturation		
			- Factors affecting supragingival		
			dental plaque formation:		
			o Topography of supragingival		
			plaque		
			o Surface microroughness		
			o Individual variables that influence		
			plaque formation		
			o Variation within the dentition		
			o Impact of gingival inflammation		
			and saliva		
			o Impact of patient's age		
			o Spontaneous tooth cleaning		
			- Metabolism of dental plaque		
			bacteria		
			- Communication between biofilm		
			bacteria		
			-Biofilms and antimicrobial resistance		
11	4	Knowledge	Microbiologic specificity	Theoretical	Short, semester
		understanding.	of periodontal diseases	lecture using	
		subject-specific	-	Power point,	final exams
		skills	Traditional nonspecific plaque	Problem-	mai Camil
			hypothesis	based	
			- Specific plaque hypothesis	บลงยน	

	1				
			- Updated nonspecific plaque	learning,	
			hypothesis	collaboration,	
			- Ecologic plaque hypothesis	discussion,	
			- Keystone Pathogen Hypothesis	debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
12	4	Knowledge	Dental calculus - Clinical	learning.	Chart careacter
12	4	understanding.		Theoretical	Short, semester, mid-year and
		subject-specific	appearance and	lecture using Power point,	final exams
		skills	distribution(Supragingival	Problem-	Illiai Caallis
			and Subgingival Calculus) Dental calculus	based	
				learning,	
			- Clinical appearance and distribution (Supragingival and	collaboration.	
			Subgingival Calculus)	discussion,	
			- Calculus formation:	debriefing,	
			o Theories of calculus formation	information	
			- Calculus composition:	review,	
			o Inorganic content	practical	
			o Organic content	research,	
			- Attachment to tooth surfaces	computer-	
			and implants	based	
			- Clinical significance	learning.	
13	4	Knowledge	Dental stain	Theoretical	Short, semester
	_	understanding.	Dental stain	lecture using	mid-year and
		subject-specific	- Color and color perception	Power point,	final exams
		skills	- Classification of tooth	Problem-	
			discoloration: o Intrinsic	based	
			discoloration	learning,	
			o Extrinsic discoloration	collaboration,	
			o Internalized discoloration	discussion,	
			- The mechanisms of tooth	debriefing,	
			discoloration	information	
			- Prevention	review,	
			- Treatment approaches	practical	
				research,	
				computer-	
				based	
1.4	4	Vnovil - d.	E41-1	learning.	Clarate
14	4	Knowledge understanding.	Etiology of periodontal	Theoretical	Short, semester
		subject-specific	disease	lecture using	mid-year and
		skills	Risk factors for periodontal diseases: o Definitions of risk factors	Power point, Problem-	final exams
Î.			o Systemic risk factors:	based	
			=		
			i_ Modifiable risk factors	Idarnina	
			i- Modifiable risk factors	learning,	
			ii- Non-modifiable risk factors	collaboration,	
			ii- Non-modifiable risk factors o Local predisposing factors: i-	collaboration, discussion,	
			ii- Non-modifiable risk factors o Local predisposing factors: i- Calculus	collaboration, discussion, debriefing,	
			ii- Non-modifiable risk factors o Local predisposing factors: i-	collaboration, discussion,	

understanding. subject-specific skills  Molecular biology of host—microbe interactions o Microbe-associated molecular patterns o Toll-like receptors: i- Toll-like receptor-4— lipopolysaccharide recognition ii- Toll-like receptor-2— lipoprotein/lipoteichoic acid/peptidoglycan recognition iii- Role of toll-like receptors in periodontitis o Complement system: i-Classical/Lectin/Alternative pathway Role of complement in periodontitis  Molecular biology of host—microbe interactions o Microbe-associated molecular patterns based learning.  Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  16 Knowledge Etiology of periodontal disease Theoretical Short,	, semester rear and exams
therapy o Local anatomic risk factors    Theoretical power point, problem-based learning, subject-specific skills   Short, mid-y final earning, subject-spec	ear and
o Local anatomic risk factors    based learning.	ear and
15	ear and
4 Knowledge understanding. subject-specific skills  Etiology of periodontal disease Molecular biology of host—microbe interactions o Microbe-associated molecular patterns o Toll-like receptors: i- Toll-like receptor-2— lipopolysaccharide recognition iii- Role of toll-like receptors in periodontitis o Complement system: i-Classical/Lectin/Alternative pathway Role of complement in periodontitis  16  4 Knowledge understanding. subject-specific skills  Etiology of periodontal disease understanding. subject-specific skills  Etiology of periodontal disease and risk factors  Smoking and Periodontal Disease o Effects of smoking on the prevalence and severity of periodontal disease: i- Gingivitis ii- Periodontitis  Chort mid-y final 6  Problembased learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  Theoretical short, mid-y final 6  Problembased learning.  Short, mid-y final 6  Problembased learning.  Short, computer-based learning.  Collaboration, discussion, discussion, debriefing, information review, practical research, computer-based learning.  Short, mid-y final 6  Problembased learning.  Short, computer-based learning.  Short, computer-based learning.  Short, computer-based learning.  Short, computer-based learning.  Collaboration, discussion, di	ear and
understanding. subject-specific skills  Molecular biology of host—microbe interactions o Microbe-associated molecular patterns o Toll-like receptors: i- Toll-like receptor-4— lipopolysaccharide recognition ii- Toll-like receptor-2— lipoprotein/lipoteichoic acid/peptidoglycan recognition iii- Role of toll-like receptors in periodontitis o Complement system: i-Classical/Lectin/Alternative pathway Role of complement in periodontitis  Toll-like receptor-4— lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.  Theoretical lecture using prower point, Problem-based learning.  Theoretical lecture using Power point, Problem-based learning.  Theoretical lecture using Power point, Problem-based learning.  Theoretical lecture using prower point, Problem-based learning, collaboration, discussion, discussion, debriefing, information review, practical research, computer-based learning.	ear and
subject-specific skills  interactions o Microbe-associated molecular patterns o Toll-like receptors: i- Toll-like receptor-4— lipopolysaccharide recognition ii- Toll-like receptor-2— lipoprotein/lipoteichoic acid/peptidoglycan recognition iii- Role of toll-like receptors in periodontitis o Complement system: i-Classical/Lectin/Alternative pathway Role of complement in periodontitis  4 Knowledge understanding. subject-specific skills  Etiology of periodontal disease and risk factors Smoking and Periodontal Disease o Effects of smoking on the prevalence and severity of periodontal disease: i- Gingivitis ii- Periodontitis  iii Periodontitis  iii Periodontitis    Power point, Problem-based learning, collaboration, discussion, discus	
skills  molecular patterns o Toll-like receptors: i- Toll-like receptor-4— lipopolysaccharide recognition ii- Toll-like receptor-2— lipoprotein/lipoteichoic acid/peptidoglycan recognition iii- Role of toll-like receptors in periodontitis o Complement system: i-Classical/Lectin/Alternative pathway Role of complement in periodontitis  and risk factors subject-specific skills  Etiology of periodontal disease and risk factors Smoking and Periodontal Disease o Effects of smoking on the prevalence and severity of periodontal diseases: i- Gingivitis ii- Periodontitis  review, practical research, computer- based learning.  Theoretical lecture using Power point, Problem- based learning, collaboration, discussion, discussion, discussion, discussion, collaboration, discussion, discussion, discussion, collaboration, discussion, discussion, discussion, discussion, discussion,	exams
o Toll-like receptors: i- Toll-like receptor-4— lipopolysaccharide recognition ii- Toll-like receptor-2— lipoprotein/lipoteichoic acid/peptidoglycan recognition iii- Role of toll-like receptors in periodontitis o Complement system: i-Classical/Lectin/Alternative pathway Role of complement in periodontitis   4 Knowledge understanding. subject-specific skills  Etiology of periodontal disease and risk factors Smoking and Periodontal Disease o Effects of smoking on the prevalence and severity of periodontal disease: i- Gingivitis ii- Periodontitis  Problem- based learning, collaboration, discussion, lecture using Problem- based learning, collaboration, discussion,	
i- Toll-like receptor-4— learning, collaboration, discussion, lipopolysaccharide recognition ii- Toll-like receptor-2— lipoprotein/lipoteichoic acid/peptidoglycan recognition iii- Role of toll-like receptors in periodontitis o Complement system: i-Classical/Lectin/Alternative pathway Role of complement in periodontitis research, computer-based learning.  Knowledge understanding. subject-specific skills  Knowledge understanding and risk factors Smoking and Periodontal Disease o Effects of smoking on the prevalence and severity of periodontal disease: learning, i- Gingivitis ii- Periodontitis  ii- Periodontitis  learning, collaboration, discussion, learning, collaboration, discussion, learning, collaboration, discussion,	
lipopolysaccharide recognition ii- Toll-like receptor-2— lipoprotein/lipoteichoic acid/peptidoglycan recognition iii- Role of toll-like receptors in periodontitis o Complement system: i-Classical/Lectin/Alternative pathway Role of complement in periodontitis  4 Knowledge understanding. subject-specific skills  Etiology of periodontal disease and risk factors Smoking and Periodontal Disease o Effects of smoking on the prevalence and severity of periodontal disease: i-Gingivitis ii- Periodontitis  collaboration, discussion, debriefing, information review, practical research, computer- based learning. Theoretical Short, Problem- based learning, collaboration, discussion,	
ii- Toll-like receptor-2— lipoprotein/lipoteichoic acid/peptidoglycan recognition iii- Role of toll-like receptors in periodontitis o Complement system: i-Classical/Lectin/Alternative pathway Role of complement in periodontitis  4 Knowledge understanding. subject-specific skills  Etiology of periodontal disease understanding. subject-specific skills  Etiology of periodontal disease and risk factors Smoking and Periodontal Disease o Effects of smoking on the prevalence and severity of periodontal diseases: i- Gingivitis ii- Periodontitis  discussion, debriefing, information review, practical research, computer- based learning. Power point, Problem- based learning, collaboration, discussion,	
lipoprotein/lipoteichoic acid/peptidoglycan recognition iii- Role of toll-like receptors in periodontitis o Complement system: i-Classical/Lectin/Alternative pathway Role of complement in periodontitis  4 Knowledge understanding. subject-specific skills  Etiology of periodontal disease and risk factors Smoking and Periodontal Disease o Effects of smoking on the prevalence and severity of periodontal diseases: i- Gingivitis ii- Periodontitis  lipoprotein/lipoteichoic debriefing, information review, practical research, computer-based learning.  Theoretical lecture using Power point, Problem- based learning, collaboration, discussion,	
acid/peptidoglycan recognition iii- Role of toll-like receptors in periodontitis o Complement system: i-Classical/Lectin/Alternative pathway Role of complement in periodontitis  4 Knowledge understanding. subject-specific skills  Etiology of periodontal disease and risk factors Smoking and Periodontal Disease o Effects of smoking on the prevalence and severity of periodontal diseases: i- Gingivitis ii- Periodontitis  iinformation review, practical research, computer- based learning.  Power point, Problem- based learning, collaboration, discussion,	
iii- Role of toll-like receptors in periodontitis o Complement system: i-Classical/Lectin/Alternative pathway Role of complement in periodontitis  4 Knowledge understanding. subject-specific skills  Etiology of periodontal disease and risk factors Smoking and Periodontal Disease o Effects of smoking on the prevalence and severity of periodontal disease: i- Gingivitis ii- Periodontitis  iii- Role of toll-like receptors in review, practical research, computer-based learning.  Theoretical lecture using mid-y Power point, final expression of the prevalence and severity of periodontal disease: learning, collaboration, discussion,	
periodontitis o Complement system: i-Classical/Lectin/Alternative pathway Role of complement in periodontitis  4 Knowledge understanding. subject-specific skills  Etiology of periodontal disease and risk factors Smoking and Periodontal Disease o Effects of smoking on the prevalence and severity of periodontal disease: i- Gingivitis ii- Periodontitis  practical research, computer- based learning.  Fhooretical lecture using Power point, Problem- based learning, collaboration, discussion,	
o Complement system: i-Classical/Lectin/Alternative pathway Role of complement in periodontitis  4 Knowledge understanding. subject-specific skills  Etiology of periodontal disease and risk factors Smoking and Periodontal Disease o Effects of smoking on the prevalence and severity of periodontal diseases: i- Gingivitis ii- Periodontitis  o Computer- based learning.  Theoretical Short, lecture using Power point, Final 6  Problem- based learning, collaboration, discussion,	
i-Classical/Lectin/Alternative pathway Role of complement in periodontitis  4 Knowledge understanding. subject-specific skills  Etiology of periodontal disease and risk factors Smoking and Periodontal Disease o Effects of smoking on the prevalence and severity of periodontal diseases: i- Gingivitis ii- Periodontitis  i-Classical/Lectin/Alternative pathway computer based learning.  Computer-based learning.  Theoretical Short, lecture using mid-y power point, final end of the prevalence and severity of periodontal diseases: i- Gingivitis collaboration, discussion,	
Role of complement in periodontitis  Role of complement in periodontitis  A Knowledge understanding. subject-specific skills  Smoking and Periodontal Disease o Effects of smoking on the prevalence and severity of periodontal diseases:  i- Gingivitis ii- Periodontitis  Role of complement in periodontitis  based learning.  Theoretical short, mid-y  Power point, problem- based learning, collaboration, discussion,	
16	
4 Knowledge understanding. subject-specific skills  Etiology of periodontal disease and risk factors  Smoking and Periodontal Disease o Effects of smoking on the prevalence and severity of periodontal diseases:  i- Gingivitis ii- Periodontitis  Etiology of periodontal disease and risk factors Smoking and Periodontal Disease o Effects of smoking on the problem-based learning, collaboration, discussion,	
4 Knowledge understanding. subject-specific skills  Smoking and Periodontal Disease o Effects of smoking on the prevalence and severity of periodontal diseases:  i- Gingivitis ii- Periodontitis  Etiology of periodontal disease and risk factors Smoking and Periodontal Disease o Effects of smoking on the prevalence and severity of periodontal diseases:  i- Gingivitis ii- Periodontitis  Theoretical lecture using mid-y final end of the problem-based learning, collaboration, discussion,	
understanding. subject-specific skills  and risk factors  Smoking and Periodontal Disease o Effects of smoking on the prevalence and severity of periodontal diseases:  i- Gingivitis ii- Periodontitis  lecture using Power point, Problem-based learning, collaboration, discussion,	, semester
subject-specific skills  Smoking and Periodontal Disease o Effects of smoking on the prevalence and severity of periodontal diseases: i- Gingivitis ii- Periodontitis  is subject-specific skills  Smoking and Periodontal Disease o Power point, Problembased learning, collaboration, discussion,	ear and
o Effects of smoking on the prevalence and severity of periodontal diseases: learning, i- Gingivitis collaboration, ii- Periodontitis discussion,	
prevalence and severity of based periodontal diseases: learning, i- Gingivitis collaboration, ii- Periodontitis discussion,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
periodontal diseases: learning, i- Gingivitis collaboration, ii- Periodontitis discussion,	
i- Gingivitis collaboration, ii- Periodontitis discussion,	
ii- Periodontitis discussion,	
o Effects of smoking on the ethology   debitefing,	
and pathogenesis of periodontal information	
disease: review,	
i- Microbiology practical	
ii- Immune–inflammatory responses research,	
iii- Physiology computer-	
o Effects of smoking on the based	
response to periodontal therapy: i- learning.	
Nonsurgical Therapy	
ii- Surgical Therapy and Implants	
iii- Maintenance Therapy o Effects of smoking cessation	
o Effects of smoking cessation periodontal treatment outcomes	
	, semester
list we in the state of the sta	rear and exams
subject-specific skills Focal infection theory revisited - Subgingival environment as a Problem-	zadiliS
Dasca Dasca	
- Condition	
uiscussion,	
debrenig,	
- Periodontal disease and stroke information	
- Periodontal disease and diabetes review,	
mellitus: o Periodontal infection associated practical	
o Periodontal infection associated research,	

			glycemic control in diabetes	computor	
			gryceniie control in diabetes	computer- based	
				learning.	
18	4	Knowledge	Impact of periodontal infection	Theoretical	Short, semester
10	4	understanding.			
		subject-specific	on systemic health Periodontal disease and asthma	lecture using Power point,	final exams
		skills	- Periodontal disease and pregnancy	Problem-	illiai Cxailis
			outcome	based	
			- Periodontal disease and chronic	learning,	
			obstructive pulmonary disease	collaboration,	
			- Periodontal disease and acute respira	discussion,	
			infections	debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based	
				learning.	
19	4	_	Periodontal indices	Theoretical	Short, semester,
		understanding.	Definition	lecture using	mid-year and
		subject-specific skills	o Gingival index (Loe and Silness)	Power point,	final exams
		SKIIIS	o Plaque index (Silness and Loe) o Plaque index (O'leary)	Problem-	
			o Plaque index (Quigely Hein)	based	
			o Probing pocket depth	learning,	
			o Clinical attachment loss	collaboration,	
			o Basic Periodontal Examination	discussion,	
			(BPE)	debriefing,	
			o Modified Gingival Index o Bleeding on probing	information	
			o Furcation involvement index	review,	
			o Calculus index	practical research,	
			o Recession index (Miller)	computer-	
			o Recession index (Cairo)	based	
				learning.	
20	4	Knowledge	The periodontal pocket	Theoretical	Short, semester
20	1	understanding.	Classification	lecture using	
		subject-specific	- Clinical features	Power point,	final exams
		skills	- Pathogenesis	Problem-	
			- Histopathology:	based	
			o Bacterial invasion	learning,	
			o Microtopography of the gingival	collaboration,	
			wall	discussion,	
			o Periodontal pockets as healing lesions	debriefing,	
			o Pocket contents	information	
			o Root surface walls	review,	
				practical	
				research,	
				computer-	
				based	
21	4	Vnovila 1	The manifest and a second second	learning.	Charter
21	4	Knowledge understanding.	The periodontal pocket	Theoretical	Short, semester,
		subject-specific	Periodontal disease activity	lecture using	mid-year and
		skills	- Pulp changes associated with	Power point, Problem-	final exams
			periodontal pockets	LIONIGIII-	

Т		1		, , ,	
			- Relationship of attachment loss	based	
			and bone loss to pocket depth	learning,	
			- Area between base of pocket and	collaboration,	
			alveolar bone	discussion,	
			- Relationship of pocket to bone	debriefing, information	
			<ul><li>- Periodontal abscess</li><li>- Lateral periodontal cyst</li></ul>		
			- Laterar periodolitar cyst	review, practical	
				research,	
				computer-	
				based	
				learning.	
22	4	Knowledge	Treatment plan guidelines	Theoretical	Short, semester
	1	understanding.	Phase 1 (behavior change, removal	lecture using	mid-year and
		subject-specific	of supragingival dental biofilm and	Power point,	final exams
		skills	risk factor control):	Problem-	
			o Self-performed supragingival	based	
			biofilm control:	learning,	
			i- Oral hygiene practices to control	collaboration,	
			gingival inflammation ii- Behavioral	discussion,	
			change for oral hygiene	debriefing,	
			improvement iii- Motivational interviewing and	information	
			cognitive behavioral therapy	review,	
			o Adjunctive therapies for gingival	practical	
			inflammation	research,	
			o Professional supragingival dental	computer-	
			biofilm control	based	
			o Risk factor control:	learning.	
			i- Local risk factor control		
			ii- Tobacco smoking cessation		
			interventions		
			iii- Promotion of diabetes cor		
22	1	Vnowladga	interventions Treatment plan guidalines	Theoretical	Chart samestar
23	4	Knowledge understanding.	Treatment plan guidelines	Theoretical lecture using	Short, semester
		subject-specific	- Phase 2 (cause-related therapy) o Subgingival instrumentation:	Power point,	mid-year and final exams
		skills	Scaling Root planing	Problem-	mai Camis
			o Removal of plaque-retentive	based	
			factors	learning,	
			o Use of adjunctive systemically	collaboration,	
			administered antibiotics to	discussion,	
			subgingival instrumentation	debriefing,	
			o Re-evaluation of the cause-related	information	
			therapy	review,	
			o Decision to refer for specialist	practical	
			_	research,	
				computer-	
				based	
				learning.	
24	4	•	Treatment plan guidelines	Theoretical	Short, semester
		understanding.	- Phase 3 (corrective/surgical	lecture using	mid-year and
		subject-specific	phase) o objectives of sargical	Power point,	final exams
		skills	therapy	Problem-	
			o Periodontal access surgery:	based	
			i- Resective	learning,	

			ii- Regenerative	collaboration,	
			o Extraction of hopeless teeth	discussion,	
			o Periodontal plastic surgery:	debriefing,	
			i- Mucogingival surgery	information	
			ii- Aesthetic crown lengthening	review,	
			o Pre-prosthetic surgery:	· ·	
			i- Crown lengthening	practical	
			ii- Implant site preparation	research,	
			ii implant site preparation	computer- based	
			TD	learning.	a)
25	4	Knowledge	Treatment plan guidelines	Theoretical	Short, semester,
		understanding.	- Phase 4 (maintenance	lecture using	mid-year and
		subject-specific	therapy) o Clinical	Power point,	final exams
		skills	recommendations	Problem-	
			o Self-performed supragingival	based	
			dental biofilm control	learning,	
			o Adjunctive therapies for	collaboration,	
			gingival inflammation	discussion,	
			o Professional supragingival	debriefing,	
			dental biofilm control	information	
			o Risk factor control	review,	
			o rask factor control	practical	
				research,	
				computer-	
				based	
				learning.	
26	4	Knowledge	D11:-£:1		Clarat anna atau
26	4	understanding.	Plaque biofilm control for the	Theoretical	Short, semester,
		subject-specific	periodontal patient	lecture using	mid-year and
		skills	- The toothbrush:	Power point,	final exams
		SKIIIS	o Toothbrush design	Problem-	
			- Powered toothbrushes	based	
			<ul><li>Dentifrices</li><li>Toothbrushing methods</li></ul>	learning,	
			- Interdental cleaning aids:	collaboration,	
			o Dental floss	discussion,	
			o Interdental brushes	debriefing,	
			o Other interdental cleaning	information	
			devices	review,	
			- Oral irrigation:	practical	
			o Supragingival irrigation	research,	
			o Subgingival irrigation	computer-	
			- Caries control	based	
				learning.	
27	4	Knowledge	Plaque biofilm control for the	Theoretical	Short, semester
4/	4	understanding.	periodontal patient	lecture using	
		subject-specific	- Chemical plaque biofilm control		-
		skills		Problem	final exams
		-	with oral rinses o Chlorhexidine	Problem-	
			digluconate:	based	
			i- Mode of action ii- Clinical use	learning,	
			iii- Side-effects	collaboration,	
			o Nonprescription essential oil rinse	discussion,	
			o Other products	debriefing,	
			- Disclosing agents	information	
			- Patient motivation and education:	review,	
			o Motivation for effective plaque	practical	
			biofilm control	research,	
L	1			1	

		T		<u></u>	
			o Education and scoring systems: i- Plaque biofilm control record (O'Leary Index) ii- Bleeding points index o Instruction and demonstration	computer- based learning.	
28	4	Knowledge understanding. subject-specific skills	Periodontal instruments and sharpening  - Types of periodontal instruments: i- Diagnostic instruments ii- Scaling, root planing, and curettage instruments  • Plastic and Titanium Instruments for Implants iii- Cleansing and polishing instruments iv- Surgical instruments  - Instrument stabilization: i- Instrument Grasping ii- Finger Rest  - Condition of the instruments resharpening	Theoretical lecture using Power point, Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semester, mid-year and final exams
29	4	Knowledge understanding. subject-specific skills	Breath Malodor (Halitosis)  - Definitions  - Epidemiology  - Classification  - Etiology: o Intraoral Causes: i- Tongue and tongue coating ii- Periodontal infections iii- Dental disorders iv- Dry mouth o Extraoral Causes o Pseudo-halitosis or Halitophobia  - Diagnosis of malodor  - Prevention and management: o Mechanical reduction of intraoral nutrients and microorganisms o Chemical reduction of oral microbial load: i- Chlorhexidine ii- Essential oils iii- Chlorine dioxide	Theoretical lecture using Power point, Problembased learning, collaboration, discussion, debriefing, information review, practical research, computerbased learning.	Short, semester, mid-year and final exams
			iv- Two-phase oil-water rinse v- Triclosan vi- Hydrogen Peroxide vii- Amine Fluoride or Stannous Fluoride o Conversion of volatile sulfur compounds: i- Metal Salt Solutions o Masking the Malodor)		

understanding.	therapy for periodontal	lecture using mid-year and
subject-specific	diseases	Power point, final exams
skills	- Definitions	Problem-
	- Common antibiotic regimens	based
	used to treat periodontal diseases	learning,
	- Tetracyclines:	collaboration,
	o Specific agents:	discussion,
	i- Tetracycline ii- Minocycline	debriefing,
	iii- Doxycycline	information
	o Metronidazole	review,
	o Penicillin derivatives:	practical
	i- Amoxicillin	research,
	ii- Amoxicillin-Clavulanate	computer-
	Potassium	based
	o Cephalosporins	learning.
	o Clindamycin	
	o Ciprofloxacin	
	o Macrolides	
	- Single vs combination antibiotic	
	therapy	
	o Clinical implications	

#### Clinical and preclinical requirement

#### Preclinical:

-Training on ergonomic aspects of grasping and use of the instruments and their maintenance i.e. resharpening

#### Clinical:

- -Recording medical and dental history
- -Patient's education and motivation
- -Oral hygiene instructions (OHI)
- -Recording periodontal indices
- -Diagnosis according to classification of periodontal disease and conditions (2017)
- Non-surgical periodontal therapy (manual scaling + polishing)

#### 11. Course Evaluation

- 10 degrees of first semester: 8 degrees of short and semester exams and two degrees of oral exam
- 10 degrees of second semester: 8 degrees of short and semester exams and two degrees of oral exam
- 20 degrees of mid-year
- 60 degrees of final exam

## 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	1-Clinical Periodontology and Implant Dentistry, Seventh Edition, Niklaus P. Lang and Jan Lindhe, 2022 2-Newman and Carranza's Clinical Periodontolo
	Thirteen Edition, 2019
Recommended books and references	

(scientific journals, reports)		
Electronic References, Websites		

# 1. Course Name: **Prosthodontics** 2. Course Code: 410 PR 3. Semester / Year: 2 Semester/ Fourth Stage **4.** Description Preparation Date: 2024-2025 5. Available Attendance Forms: Theoretical lectures and practical clinic 6. Number of Credit Hours (Total) / Number of Units (Total) 120 hours / 5 unite 7. Course administrator's name (mention all, if more than one name) Name: Mohammed Abdulaziz Reda Alsmael Email: mohammed\_alsmael@mu.edu.iq 8. Course Objectives **Course Objectives** • Preparing the student at a high level of scientific with regard to prosthodontics Identifying the types of teeth loss any the different ways to restore missing dentition by the use of removable prosthesis 9. Teaching and Learning Strategies Strategy • Acquire knowledge about the treatment for teeth loss and prosthodontic appliances • Identify the types of different clinical cases and how to solve each one with the right methods and clinical steps • Learn how to work in dental clinic for partially and completely edentulous patient under the supervision of the instructors

10. Course Structure

Week	Hours	Required	Unit or subject name	Learning	Evaluation
		Learning	Theoretical	method	method
		Outcomes			
1	4	Knowledge and understanding. subject- specific skills	Anatomy and physiology as related to dental prosthesis (osteology)	Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
2	4	Knowledge and understanding. subject- specific skills	Anatomy and physiology as related to dental prosthesis (Myology)	Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
3	4	Knowledge and understanding. subject- specific skills	Diagnosis and treatment plan for RPD	Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
4	4	Knowledge and understanding. subject- specific skills	To be continued Diagnosis and treatment	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information	Short, semester, mid-year and final exams

Short, see and understanding. subject-specific skills  Review, Practical Research, Computer Learning  Preparation of the mouth to receive an RPD  Review, Practical Research, Computer Learning Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion	
Short, se and understanding. subject-specific skills  Research, Computer Learning  Preparation of the mouth to receive an RPD  Research, Computer Learning  Theoretical lecture using mid-year power point, Problem-Based Learning ,Collaborate Discussion	
5 4 Knowledge and understanding. subject-specific skills Preparation of the mouth to receive an RPD  RPD  Computer Learning Theoretical lecture using Power point, Problem-Based Learning, Collaborate Discussion	
5 4 Knowledge and understanding. subject-specific skills Preparation of the mouth to receive an RPD Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion	
5 4 Knowledge and understanding. subject-specific skills Preparation of the mouth to receive an RPD  Preparation of the mouth to receive an RPD  RPD  Preparation of the mouth to receive an RPD  Problem-Based Learning ,Collaborate Discussion	
and understanding. subject-specific skills  RPD  RPD  lecture using Power point, Froblem-Based Learning Collaborate Discussion	
understanding. subject- specific skills  Power point, Problem- Based Learning ,Collaborate Discussion	r and
subject- specific skills  Problem- Based Learning ,Collaborate Discussion	
specific skills  Based Learning ,Collaborate Discussion	
Learning ,Collaborate Discussion	
,Collaborate Discussion	
Discussion	
,Debriefing	
,Information	
Review,	
Practical Practical	
Research,	
Computer	
Learning    Control   Cont	_
6 4 Knowledge Preparation of the mouth to receive an Theoretical Short, so	
6 and RPD (Continued). lecture using mid-year understanding.	
	uns
Learning ,Collaborate	
Discussion	
,Debriefing	
,Information	
Review,	
Practical	
Research,	
Computer	
Learning	
7 4 Knowledge Classification of impression technique Theoretical Short, se	
and lecture using mid-yea	
understanding. Power point, final exa	ams
subject- Problem-	
specific skills Based	
Learning	
,Collaborate	
Discussion Debriofing	
,Debriefing ,Information	
Review,	
Practical	
Research,	
Computer	
Learning	
8 4 Knowledge Classification of impression technique Theoretical Short, se	emester,
and (To be continue) lecture using mid-yea	r and
understanding. Power point, final exa	ams
subject- Problem-	
specific skills Based	
Learning	
,Collaborate	
Discussion	
,Debriefing	
,Information	

				Review,	
				Practical	
				Research,	
				Computer	
				Learning	
9	4	Knowledge	Designing Support	Theoretical	Short, semester,
		and		lecture using	mid-year and
		understanding.		Power point,	final exams
		subject-		Problem-	
		specific skills		Based	
				Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review,	
				Practical	
				Research,	
				Computer	
10	4	IV., 1 . 1	Fishing the property of the control	Learning	G1
10	4	Knowledge	Fitting the removable partial denture framework	Theoretical	Short, semester,
		and	Hamework	lecture using	mid-year and
		understanding.		Power point,	final exams
		subject- specific skills		Problem-	
		specific skills		Based	
				Learning	
				,Collaborate Discussion	
				,Debriefing	
				,Information	
				Review,	
				Practical	
				Research,	
				Computer	
				Learning	
11	4	Knowledge	Occlusal Relationship for Removable	Theoretical	Short, semester,
		and	Partial Denture	lecture using	mid-year and
		understanding.		Power point,	final exams
		subject-		Problem-	
		specific skills		Based	
				Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review,	
				Practical	
				Research, Computer	
				Learning	
12	4	Knowledge	Jaw relation in RPD	Theoretical	Short, semester,
12	•	and	va romnon ni iu b	lecture using	mid-year and
		understanding.		Power point,	final exams
		subject-		Problem-	
		specific skills		Based	
		r		Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
		•	1	,	-

	I	I		n ·	<del> </del>
				Review,	
				Practical	
				Research,	
				Computer	
13	4	Vnowledge	Trial RPD	Learning Theoretical	C1
13	4	Knowledge	Triai RPD		Short, semester,
		and		lecture using	mid-year and
		understanding.		Power point, Problem-	final exams
		subject-		Based	
		specific skills			
				Learning ,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review,	
				Practical	
				Research,	
				Computer	
				Learning	
14	4	Knowledge	Initial placement and adjustment of	Theoretical	Short, semester,
-		and	RPD	lecture using	mid-year and
		understanding.		Power point,	final exams
		subject-		Problem-	imai camis
		specific skills		Based	
		specific skins			
				Learning ,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review,	
				Practical	
				Research,	
				Computer	
				Learning	
15	4	Knowledge	Pre- prosthetic surgery	Theoretical	Short, semester,
		and	and the same of th	lecture using	mid-year and
		understanding.		Power point,	final exams
		subject-		Problem-	
		specific skills		Based	
				Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review,	
				Practical	
				Research,	
				Computer	
				Learning	
16	4	Knowledge	Pre-prosthetic Surgical Considerations	Theoretical	Short, semester,
		and	(Continued)	lecture using	mid-year and
		understanding.		Power point,	final exams
		subject-		Problem-	
		specific skills		Based	
				Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
L	l	1	I .	1 /	

				Review, Practical Research, Computer	
17	4	Knowledge and understanding. subject- specific skills	Diagnosis and treatment plan CD	Learning Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
18	4	Knowledge and understanding. subject- specific skills	To be continued diagnosis and treatment plan for CD	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
19	4	Knowledge and understanding. subject- specific skills	Impression in CD	Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
20	4	Knowledge and understanding. subject- specific skills	TMJ and mandibular movement	Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information	Short, semester, mid-year and final exams

				Review,	
				Practical	
				Research,	
				Computer	
				Learning	
21	4	Knowledge	Record Bases, OcclusionRims,	Theoretical	Short, semester,
		and		lecture using	mid-year and
		understanding.		Power point,	final exams
		subject-		Problem-	
		specific skills		Based	
				Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information Review,	
				Practical	
				Research,	
				Computer	
				Learning	
22	4	Knowledge	Biomechanics of Removable Partial	Theoretical	Short, semester,
		and	Dentures	lecture using	mid-year and
		understanding.		Power point,	final exams
		subject-		Problem-	
		specific skills		Based	
				Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review,	
				Practical	
				Research,	
				Computer	
23	4	Knowledge	Stress-Breakers (StressEqualizers)	Learning Theoretical	Chart same tar
23	4	and	Suess-Breakers (SuessEqualizers)	lecture using	Short, semester, mid-year and
		understanding.		Power point,	final exams
		subject-		Problem-	Illiai Caills
		specific skills		Based	
		1		Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review,	
				Practical	
				Research,	
				Computer	
2.4	4	77 1 1	T. I. (D. (	Learning	
24	4	Knowledge	Indirect Retainers	Theoretical	Short, semester,
		and		lecture using	mid-year and
		understanding.		Power point,	final exams
		subject-		Problem-	
		specific skills		Based	
				Learning	
				,Collaborate	
				Discussion	
	]			,Debriefing ,Information	
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<u> </u>				Davis	
				Review,	
				Practical Research,	
				· · · · · · · · · · · · · · · · · · ·	
				Computer Learning	
25	4	Knowledge	Indirect Retainers(continue)	Theoretical	Short, semester,
23	4	and	muneet Retainers(continue)	lecture using	mid-year and
		understanding.		Power point,	final exams
		subject-		Problem-	illiai Caills
		specific skills		Based	
		specific skins			
				Learning ,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review,	
				Practical	
				Research,	
				Computer	
				Learning	
26	4	Knowledge	Laboratory procedures inRPD	Theoretical	Short, semester,
		and	construction: Blockout and Relief	lecture using	mid-year and
		understanding.		Power point,	final exams
		subject-		Problem-	
		specific skills		Based	
				Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review,	
				Practical	
				Research,	
				Computer	
27	4	Knowledge	Laboratory procedures in RPD	Learning Theoretical	Chart samastar
21	7	and	construction: Duplication and	lecture using	Short, semester, mid-year and
		understanding.	RefractoryCast Construction	Power point,	final exams
		subject-	110111101111111111111111111111111111111	Problem-	mur caums
		specific skills		Based	
		•		Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review,	
				Practical	
				Research,	
				Computer	
28	4	Knowledge	Flexible Removable Partial	Learning Theoretical	Short, semester,
20	7	and	Dentures	lecture using	mid-year and
		understanding.	Demailes	Power point,	final exams
		subject-		Problem-	imai camis
		specific skills		Based	
		1		Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information Review,	

				Practical Research, Computer Learning	
29	4	Knowledge and understanding. subject- specific skills	Repairs and Additions toRemovable Partial Dentures	Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
30	4	Knowledge and understanding. subject- specific skills	Digitally Designed &Fabrication Process of RPD FrameworkUsing CAD/CAM System	Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams

## 11. In addition to 90 hours (three each week in the educational clinic)

Study unit title	Lab number
acrylic RPD (free end extension).	1
acrylic RPD (bounded saddles).	2
immediate or flexible RPD.	3
case repair.	4
90 h/ year	Total

## 12. Course Evaluation

- 10 degrees of first semester: 8 degrees of short and semester exams and two degrees of oral
- $10\ degrees$  of second semester:  $8\ degrees$  of short and semester exams and two degrees of oral exam
- 20 degrees of mid-year
- 60 degrees of final exam

## 13. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	Zarb, Hobkirk, Eckert, Jacob et al. Prosthodontic treatment for edentulous patients:  Complete dentures and implant-supported

Recommended books and references (scientific journals, reports)	prostheses.13th edition 2013 Mosby, Elsevier Inc. McCracken's removable partial prosthodontics, 13th edition 2016 by Elsevier, Inc
Electronic References, Websites	

# 1. Course Name: Conservative dentistry 2. Course Code: 419CV **3.** Semester / Year: 2 Semester/ Fourth Stage **4.** Description Preparation Date: 2024-2025 5. Available Attendance Forms: Theoretical lectures and practical clinics and labratory 6. Number of Credit Hours (Total) / Number of Units (Total) $\overline{210}$ hours/8 unite 7. Course administrator's name (mention all, if more than one name) Name: Shayma Abdullah Hanoon Email: shayma.abdullah@mu.edu.iq 8. Course Objectives **Course Objectives** Training the student to examine patients with modern diagnostic methods, develop a treatment plan in a scientifically correct manner, and provide services For patients in clinics using modern materials and equipment, students are also trained on root fillings on teeth extracted to prepare them to treat clinical patients 9. Teaching and Learning Strategies Strategy Gain knowledge about the causes of various dental injuries and methods of diagnosing and treating them. Identify the anatomical shape of the dental nerve and how to treat various Roots. 10. Course Structure Week Hours Required Unit or subject name Evaluation Learning **Theoretical** method method Learning

		Outcomes			
1	7	Knowledge and understanding. subject-specific skills	Biologic Considerations Enamel structure and its Clinical Significance in Practice of Operative Dentistry.	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning	Short, semest mid-year an final exams
2	7	Knowledge understanding. subject-specific skills	Biologic Considerations Enamel structure and its Clinical Significance in Practice of Operative Dentistry.	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning	Short, semest mid-year an final exams
3	7	Knowledge understanding. subject-specific skills	Biologic Considerations of Dentin structure & its Clinical Significance in Operative Dentistry	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning	Short, semest mid-year an final exams
4	7	Knowledge understanding. subject-specific skills	Biologic Considerations of Dentin structure & its Clinical Significance in Operative Dentistry	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical	Short, semest mid-year an final exams

				research, computer- based learning	
5	7	Knowledge understanding. subject-specific skills	Patient Evaluation , Diagnosis & Treatment Planning	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer- based learning	Short, semeste mid-year and final exams
6	7	Knowledge and understanding. subject-specific skills	Caries Management (Diagnosis & treatment strategies)	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer- based learning	Short, semeste mid-year and final exams
7	7	Knowledge understanding. subject-specific skills	Cervical Lesions(carious and non-carious lesions)	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer- based learning	Short, semeste mid-year and final exams
8	7	Knowledge understanding. subject-specific skills	Restorative Dentistry and Pulpal Health	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review,	Short, semeste mid-year and final exams

				practical	
				research,	
				computer-	
				based learning.	
9	7	Knowledge	Management of Deep	Theoretical	Short, semest
		understanding. subject-specific skills	Seated Caries	lecture using	mid-year and
		subject-specific skills		Power point,	final exams
				Problem-based	
				learning,	
				collaboration,	
				discussion, debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based learning	
10	7	Knowledge	Inflammatory Conditions	Theoretical	Short, semest
		understanding.	of the Pulp	lecture using	mid-year an
		subject-specific skills		Power point,	final exams
				Problem-based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer- based learning	
11	7	Knowledge	Treatment of Deep Coated		Classit assessed
11	/	understanding.	Treatment of Deep Seated	Theoretical	Short, semest mid-year an
		subject-specific skills	Caries Simplified anatomical	lecture using Power point,	final exams
		J 1	modeling.	Problem-based	IIIIai Exaiiis
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based learning	
12	7	Knowledge	Fluoride – Releasing Materials	Theoretical	Short, semest
		understanding. subject-specific skill		lecture using	mid-year an
		subject-specific skill		Power point,	final exams
				Problem-based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	

				review,	
				practical	
				research,	
				computer-	
				based learning.	
13	7	Knowledge	Indirect aesthetic adhesive	Theoretical	Short, semes
		understanding.	restorations	lecture using	mid-year an
		subject-specific skills		Power point,	final exam:
			Inlays and Onlays	Problem-based	
			(materials ,techniques)	learning,	
			CAD/CAM Technology.	collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based learning	
14	7	Knowledge	Direct tooth-colored	Theoretical	Short, semes
		understanding.	restorations(Composite)	lecture using	mid-year ar
		subject-specific skills	restorations (Composite)	Power point,	final exam
				Problem-based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based learning	
15	7	Knowledge	Dental Laser	Theoretical	Short, semes
		understanding.		lecture using	mid-year ar
		subject-specific skills		Power point,	final exam
				Problem-based	
				learning,	
				collaboration,	
				discussion,	
				debriefing,	
				information	
				review,	
				practical	
				research,	
				computer-	
				based learning	
16	7	Knowledge	Application of Laser	Theoretical	Short, semes
		understanding.	Conservative Dentistry.	lecture using	mid-year ar
		subject-specific skills	<b>.</b>	Power point,	final exam
				Problem-based	
				learning,	
				collaboration,	
				discussion,	
	1			debriefing,	

				information review, practical research, computer- based learning	
17	7	Knowledge understanding. subject-specific skills	Application of Laser Conservative Dentistry.	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer- based learning	Short, semeste mid-year and final exams
18	7	Knowledge understanding. subject-specific skills	Indirect tooth-colored restorations	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer- based learning	Short, semeste mid-year and final exams
19	7	Knowledge understanding. subject-specific skills	Laboratory-processed composite inlays and onlays.	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer- based learning	Short, semeste mid-year and final exams
20	7	Knowledge understanding. subject-specific skills	Ceramic veneers, inlays onlays, clinical procedures.	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion,	Short, semeste mid-year and final exams

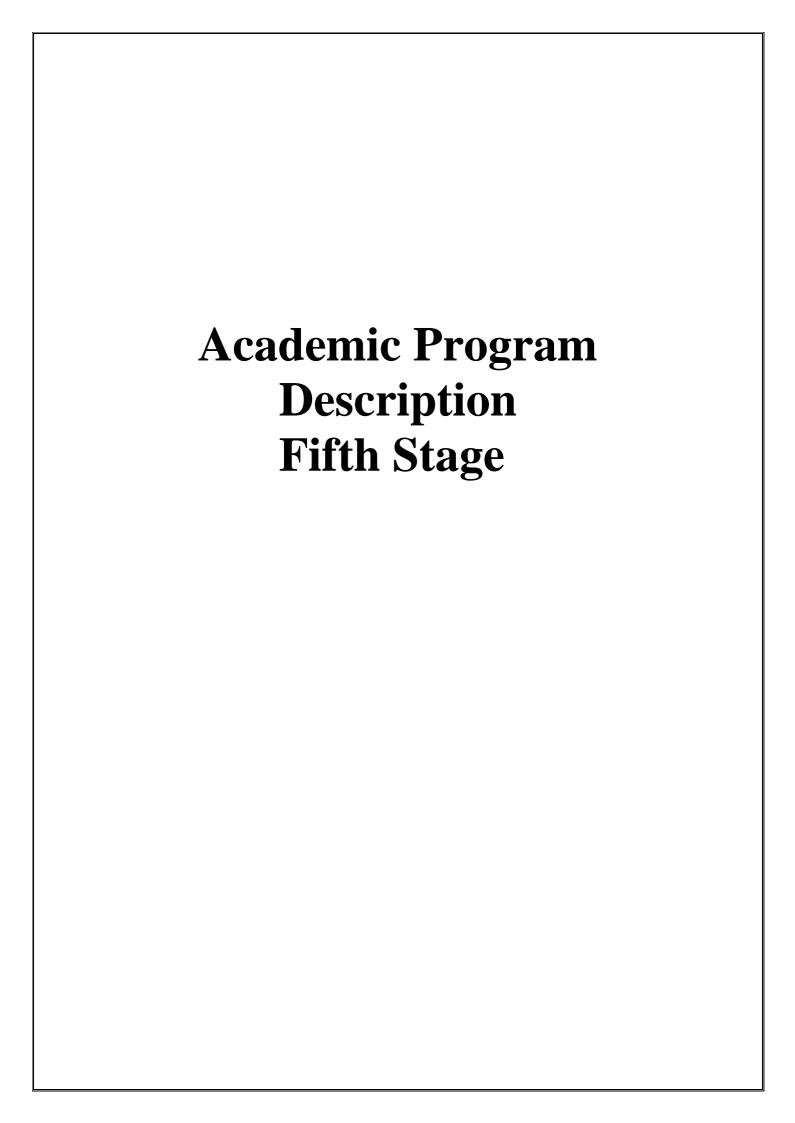
				debriefing, information review, practical research, computer-	
21	7	Knowledge understanding. subject-specific skills	Ceramic veneers, inlays onlays, clinical procedures.	based learning  Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer- based learning	Short, semeste mid-year and final exams
22	7	Knowledge understanding. subject-specific skills	CAD/CAM techniques	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer- based learning	Short, semeste mid-year and final exams
23	7	Knowledge understanding. subject-specific skills	Topics Covered	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer- based learning	Short, semeste mid-year and final exams
24	7	Knowledge understanding. subject-specific skills	Objective of endodontic treatment	Theoretical lecture using Power point, Problem-based learning, collaboration,	Short, semeste mid-year and final exams

			discussion, debriefing, information review, practical research, computer-	
25	7 Knowledge understanding. subject-specific skills	Basic Phases of Treatment	based learning Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer- based learning	Short, semeste mid-year and final exams
26	7 Knowledge understanding. subject-specific skills	Pulp pathologies	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer- based learning	Short, semeste mid-year and final exams
27	7 Knowledge understanding. subject-specific skills	Classification of periapical diseases	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer- based learning	Short, semeste mid-year and final exams
28	7 Knowledge understanding. subject-specific skills	Access Opening Preparation	Theoretical lecture using Power point, Problem-based learning,	Short, semeste mid-year and final exams

				collaboration, discussion, debriefing, information review, practical research, computer- based learning	
29	7	Knowledge understanding. subject-specific skills	Endodontic Instruments	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning	Short, semeste mid-year and final exams
30	7	Knowledge understanding. subject-specific skills	Roentgenography in Endodontics and Root canal preparation	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer- based learning	Short, semeste mid-year and final exams
_	-	inical requirement		5	Hours
The students are required to complete the following restorations:- a.  Amalgam Restorations  Class I, Class II  b. Composite (tooth colored) Restorations  Class I, Class II, Class IV, and Class V					3h/wk
Preclinical endodontics					
Study unit title					Hours
Introduction					3
Block construction					3
Diagnosis					

Quiz 1 in lab 1,2&3 +Access opening		3			
Quiz 2 in lab 4 +Clinical access opening to one anterior tooth and two premotar teeth					
Instrument		3			
Equipment and materials		3			
Quiz 3 clinical quiz in lab 8&9, Working length es	stimation demonstration.	3			
Quiz 4 in lab 11 + clinical working length estimatiteetn.	on on the same three	3			
Rubber dam application		3			
Quiz 5 clinical quiz in lab 15		3			
Review		3			
Root canal instrumentation.		3			
Quiz 6 in lab 18 + clinical instrumentation to the s	ame teeth	3			
		3			
		3			
		3			
		3			
Root canal obturation.		3			
Quiz 7 in lab 24 +clinical obturation to three teeth		3			
		3			
		3			
Review		3			
		3			
		3			
11. Course Evaluation					
10 degrees of first semester: 10 degrees of second semester: 20 degrees of mid-year 60 degrees of final exam					
12. Learning and Teaching Resource	es				
Required textbooks (curricular books, if any)					
Main references (sources)	<ul><li>1- Summitt's fundamentals of operative der contemporary approach. 4th edition.</li><li>2- Dental composite materials for direct res Vesna Miletic Springer, eBook, 2018.</li></ul>				

	3- Textbook of operative dentistry. 3rd edition. Ni Garg, Amit Garg. 1- Cohen's Pathways of the Dental Pulp. 12th ed. Lou H. Berman and Kenneth M. Hargreaves. 2- Textbook of Endodontics. 2nd ed. 2010. Nisha Ga Amit Garg.
Recommended books and references	
(scientific journals, reports)	
Electronic References, Websites	



## 1. Course Name:

#### **Prosthodontics**

#### 2. Course Code:

#### 510 PR

## 3. Semester / Year:

## 2 Semester/ Fifth Stage

## **4.** Description Preparation Date:

#### 2024-2025

#### 5. Available Attendance Forms:

Theoretical lectures and practical clinics

6. Number of Credit Hours (Total) / Number of Units (Total)

#### 210 hours/8 unite

## 7. Course administrator's name (mention all, if more than one name)

Name: Mohammed Abdulaziz Reda Alsmael Email: mohammed\_alsmael@mu.edu.iq

### 8. Course Objectives

#### **Course Objectives**

- Preparing the student at a high level of scientific with regard to prosthodontics
- Identifying the types of teeth loss any the different ways to restore missing dentition by the use of removable prosthesis and complete denture and multiple other options for restorations of teeth

## 9. Teaching and Learning Strategies

#### Strategy

- Acquire knowledge about the treatment for teeth loss and different types of prosthodontic appliances
- Identify the types of different clinical cases and how to solve each one with the right methods and clinical steps
- Learn how to work in dental clinic for partially and completely edentulous patient under the supervision of the instructors

10. Course Structure							
Week	Hours	Required	Unit or subject name	Learning	Evaluation		
		Learning	Theoretical	method	method		
		Outcomes					
1	7	Knowledge and understanding. subject- specific skills	Occlusion in Complete Denture	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams		
2	7	Knowledge and understanding. subject- specific skills	Occlusion in Complete Denture (Continue)	Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams		
3	7	Knowledge and understanding. subject- specific skills	Retention, Stability and Support	Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams		
4	7	Knowledge and understanding. subject- specific skills	Retention, Stability And Support (Continue)	Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion	Short, semester, mid-year and final exams		

	I	T	T	D 1 : 2	
				,Debriefing	
				,Information	
				Review,	
				Practical	
				Research,	
				Computer	
-	7	77 1 1	Cl 'C' (CD ) I	Learning	G1
5	7	Knowledge	Classification of Post-Insertion	Theoretical	Short, semester,
		and	Denture problems	lecture using	mid-year and
		understanding.		Power point,	final exams
		subject-		Problem-	
		specific skills		Based	
				Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review,	
				Practical	
				Research,	
				Computer	
6	7	Knowledge	DoctIngartion Problems (Ctimes)	Learning Theoretical	C1
6	/	_	PostInsertion Problems (Continue)		Short, semester,
6		and		lecture using	mid-year and final exams
		understanding.		Power point,	imai exams
		subject-		Problem-	
		specific skills		Based	
				Learning	
				,Collaborate	
				Discussion	
				,Debriefing ,Information	
				Review,	
				Practical	
				Research,	
				Computer	
				Learning	
7	7	Knowledge	Complications of Complete Denture	Theoretical	Short, semester,
,	,	and	Complete Beneare	lecture using	mid-year and
		understanding.		Power point,	final exams
		subject-		Problem-	Time Chains
		specific skills		Based	
		T TITLE SKIIIS		Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review,	
				Practical	
				Research,	
				Computer	
				Learning	
8	7	Knowledge	Complications Of Complete Denture	Theoretical	Short, semester,
		and	(Continue)	lecture using	mid-year and
		understanding.		Power point,	final exams
		subject-		Problem-	
		specific skills		Based	
				Learning	
				,Collaborate	
				Discussion	
			•		

	T	1		1	
				,Debriefing	
				,Information	
				Review,	
				Practical	
				Research,	
				Computer	
9	7	Knowledge	Immediate Denture	Learning Theoretical	Classic same stan
9	/	and	Infinediate Defiture	lecture using	Short, semester,
		understanding.		Power point,	mid-year and final exams
		subject-		_	Illiai Caillis
		specific skills		Problem- Based	
		specific skins			
				Learning ,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review,	
				Practical	
				Research,	
				Computer	
				Learning	
10	7	Knowledge	Immediate Denture (Continue)	Theoretical	Short, semester,
		and		lecture using	mid-year and
		understanding.		Power point,	final exams
		subject-		Problem-	
		specific skills		Based	
				Learning	
				,Collaborate	
				Discussion	
				,Debriefing ,Information	
				Review,	
				Practical	
				Research,	
				Computer	
				Learning	
11	7	Knowledge	Classification system for completely	Theoretical	Short, semester,
		and	edentulous patients	lecture using	mid-year and
		understanding.		Power point,	final exams
		subject-		Problem-	
		specific skills		Based	
				Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review,	
				Practical Passarch	
				Research, Computer	
				Learning	
12	7	Knowledge	Classification system for completely	Theoretical	Short, semester,
	·	and	edentulous patients	lecture using	mid-year and
		understanding.	(Continue)	Power point,	final exams
		subject-		Problem-	
		specific skills		Based	
				Learning	
				,Collaborate	
				Discussion	
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		1	I	D 1 : 0	П
				,Debriefing	
				,Information	
				Review,	
				Practical	
				Research,	
				Computer	
12	7	77 1 1	B 1 . 1	Learning	~-
13	7	Knowledge	Posterior palatal seal area	Theoretical	Short, semester,
		and		lecture using	mid-year and
		understanding.		Power point,	final exams
		subject-		Problem- Based	
		specific skills			
				Learning ,Collaborate	
				Discussion	
				,Debriefing ,Information	
				Review,	
				Practical	
				Research,	
				Computer	
				Learning	
14	7	Knowledge	Single CD	Theoretical	Short samestar
17	,	and		lecture using	Short, semester, mid-year and
		understanding.		Power point,	final exams
		subject-		Problem-	imai exams
		specific skills		Based	
		specific skills		Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review,	
				Practical	
				Research,	
				Computer	
				Learning	
15	7	Knowledge	Single CD (Continue)	Theoretical	Short, semester,
		and		lecture using	mid-year and
		understanding.		Power point,	final exams
		subject-		Problem-	-
		specific skills		Based	
		=		Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review,	
				Practical	
				Research,	
				Computer	
				Learning	
16	7	Knowledge	Geriatric dentistry	Theoretical	Short, semester,
		and		lecture using	mid-year and
		understanding.		Power point,	final exams
		subject-		Problem-	
		specific skills		Based	
				Learning	
				,Collaborate	

Г	I	1		,Information	
				Review,	
				Practical	
				Research,	
				Computer	
				Learning	
17	7	Knowledge	Maxillofacial Prosthesis	Theoretical	Short, semester,
1,	<i>'</i>	and	TVIAMITOTACIAI I TOSAICOIS	lecture using	mid-year and
		understanding.		Power point,	final exams
		subject-		Problem-	mar exams
		specific skills		Based	
		· · · · · · ·		Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review,	
				Practical	
				Research,	
				Computer	
				Learning	
18	7	Knowledge	Maxillofacial Prosthesis (Continue)	Theoretical	Short, semester,
		and		lecture using	mid-year and
		understanding.		Power point,	final exams
		subject-		Problem-	
		specific skills		Based	
		_		Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review,	
				Practical	
				Research,	
				Computer	
				Learning	
19	7	Knowledge	Residual Ridge resorption	Theoretical	Short, semester,
		and		lecture using	mid-year and
		understanding.		Power point,	final exams
		subject-		Problem-	
		specific skills		Based	
				Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review,	
				Practical	
				Research,	
				Computer	
		**	D 11 1011	Learning	
20	7	Knowledge	Residual Ridge resorption (Continue)	Theoretical	Short, semester,
		and		lecture using	mid-year and
		understanding.		Power point,	final exams
		subject-		Problem-	
		specific skills		Based	
<u> </u>				Learning	
[				,Collaborate	
	ļ				
				Discussion	
				Discussion ,Debriefing ,Information	

	ı	T	Г	l n ·	
		1		Review,	
		1		Practical	
				Research,	
				Computer	
21	7	Vnovilada	Dontal implantal according	Learning Theoretical	C1
21	/	Knowledge and	Dental implantology		Short, semester,
				lecture using	mid-year and
		understanding.		Power point, Problem-	final exams
		subject- specific skills		Based	
		specific skills		Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review,	
				Practical	
				Research,	
				Computer	
				Learning	
22	7	Knowledge	Dental implantology (Continue)	Theoretical	Short, semester,
		and	( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (	lecture using	mid-year and
		understanding.		Power point,	final exams
		subject-		Problem-	
		specific skills		Based	
				Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review,	
				Practical	
				Research,	
				Computer	
				Learning	
23	7	Knowledge	Esthetics in CD	Theoretical	Short, semester,
		and		lecture using	mid-year and
		understanding.		Power point,	final exams
		subject-		Problem-	
		specific skills		Based	
				Learning	
				,Collaborate	
		1		Discussion	
		1		,Debriefing	
		1		,Information	
		1		Review,	
		1		Practical	
				Research,	
				Computer	
				Learning	
24	7	Knowledge	Characteristics Of Ideal Materials For	Theoretical	Short, semester,
		and	Dental Implant	lecture using	mid-year and
		understanding.		Power point,	final exams
		subject-		Problem-	
		specific skills		Based	
				Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
i de la companya de l			•		
				,Information	

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				Review,	
				Practical	
				Research,	
				Computer	
25		77 1 1		Learning	~-
25	7	Knowledge	Copy denture	Theoretical	Short, semester,
		and		lecture using	mid-year and
		understanding.		Power point,	final exams
		subject-		Problem-	
		specific skills		Based	
				Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review,	
				Practical	
				Research,	
				Computer	
				Learning	
26	7	Knowledge	Over Denture	Theoretical	Short, semester,
-		and		lecture using	mid-year and
		understanding.		Power point,	final exams
		subject-		Problem-	IIIai CAuiii
		specific skills		Based	
		specific skills			
				Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review,	
				Practical	
				Research,	
				Computer	
27	7	IZ 1 . 1	O se Dest se (Continue)	Learning	<b>C1</b>
27	7	Knowledge	Over Denture (Continue)	Theoretical	Short, semester,
		and		lecture using	mid-year and
		understanding.		Power point,	final exams
		subject-		Problem-	
		specific skills		Based	
				Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review,	
				Practical	
				Research,	
				Computer	
<u> </u>				Learning	
28	7	Knowledge	Neutral zone in CD	Theoretical	Short, semester,
		and		lecture using	mid-year and
		understanding.		Power point,	final exams
		subject-		Problem-	
		specific skills		Based	
		F		Learning	
				,Collaborate	
į l					
				Discussion	

				Review, Practical Research, Computer Learning	
29	7	Knowledge and understanding. subject- specific skills	Attachments in over denture	Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
30	7	Knowledge and understanding. subject- specific skills	Attachments in over denture (Continue)	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams

## 11. In addition to 180 hours (six each week in the educational clinic)

Study unit title	Lab number
cases of upper and lower complete dentures	1
single complete denture against partial denture or natural teeth.	2
immediate or flexible RPD.	3
case repair.	4
180 h/ year	Total

#### 12. Course Evaluation

10 degrees of first semester: 8 degrees of short and semester exams and two degrees of oral exam

 $10\ degrees$  of second semester:  $8\ degrees$  of short and semester exams and two degrees of oral exam

20 degrees of mid-year

60 degrees of final exam

# 13. Learning and Teaching Resources

Required textbooks (curricular books, if any)

Main references (sources)	Zarb, Hobkirk, Eckert, Jacob et al. Prosthodontic treatment for edentulous patients:  Complete dentures and implant-supported prostheses.13th edition 2013 Mosby, Elsevier Inc. McCracken's removable partial prosthodontics, 13th edition 2016 by Elsevier, Inc
Recommended books and references	
(scientific journals, reports)	
Electronic References, Websites	

#### 1. Course Name:

#### **Oral Medicine**

#### 2. Course Code:

529OM

## 3. Semester / Year:

## 2 semester/ 5 th stage

## 4. Description Preparation Date:

#### 2024-2025

### 5. Available Attendance Forms:

Lectures and laboratory

## 6. Number of Credit Hours (Total) / Number of Units (Total)

150 hours/6 unite

## 7. Course administrator's name (mention all, if more than one name)

Name: Abdulazeez muayad abdulkarem Email: abdulazeez.muayad@mu.edu.iq

## 8. Course Objectives

#### **Course Objectives**

- aims to identify the principles of oral medicine
- This course aims to know the diagnosis and how to manage each oral diseases presentation
- This course also aims to study the differential diagnosis of oral diseases

## 9. Teaching and Learning Strategies

#### Strategy

- Knowledge and understanding
- Skill goals
- Stimulus and response method
- Long, short and semester exams
- Thinking skills

## 10. Course Structure

Week	Hours	Required Learning Outcomes	r subject name etical			Learning method	Evaluation method
1	5	Knowledge and understanding.	principles	of	0		Short, semester, mid-year and

		subject-specific skills	diagnosis	Power point	final exams
2	5		The principles of o diagnosis	Theoretical lecture using Power point	Short, semester mid-year and final exams
3	5	Knowledge understanding. subject-specific skills	Clinical examinations	Theoretical lecture using Power point	Short, semester mid-year and final exams
4	5	Knowledge understanding. subject-specific skills	Clinical examinations	Theoretical lecture using Power point	Short, semester mid-year and final exams
5	5	Knowledge understanding. subject-specific skills	Laboratory investigations dentistry	Theoretical lecture using Power point	Short, semester mid-year and final exams
6	5	Knowledge and understanding. subject-specific skills	Laboratory investigations dentistry	Theoretical lecture using Power point	Short, semester mid-year and final exams
7	5	Knowledge understanding. subject-specific skills	orofacial pain	Theoretical lecture using Power point	Short, semester mid-year and final exams
8	5	Knowledge understanding. subject-specific skills	orofacial pain	Theoretical lecture using Power point	Short, semester mid-year and final exams
9	5	Knowledge understanding. subject-specific skills	T.M.J	Theoretical lecture using Power point	Short, semester mid-year and final exams
10	5	Knowledge understanding. subject-specific skills	T.M.J	Theoretical lecture using Power point	Short, semester mid-year and final exams
11	5	Knowledge understanding. subject-specific skills	Oral ulceration a Vesiculo-bullus lesions	Theoretical lecture using Power point	Short, semester mid-year and final exams
12	5	Knowledge understanding. subject-specific skills	Oral ulceration a Vesiculo-bullus lesions	Theoretical lecture using Power point	Short, semester mid-year and final exams
13	5	Knowledge understanding. subject-specific skills	White & red lesions	Theoretical lecture using Power point	Short, semester mid-year and final exams
14	5	Knowledge understanding. subject-specific skills	White & red lesions	Theoretical lecture using Power point	Short, semester mid-year and final exams
15	5	Knowledge understanding. subject-specific skills	Early detection of oral can	Theoretical lecture using Power point	Short, semester mid-year and final exams
16	5		Early detection of oral can	Theoretical lecture using	Short, semester mid-year and

	skills		Power point	final exams
	Knowledge understanding. subject-specific skills	Pigmented oral lesions	Theoretical lecture using Power point	Short, semester mid-year and final exams
	Knowledge understanding. subject-specific skills	Pigmented oral lesions	Theoretical lecture using Power point	Short, semester mid-year and final exams
19	Knowledge understanding. subject-specific skills	Benign, Premalignant a malignant lesions of the o cavity	Theoretical lecture using Power point	Short, semester mid-year and final exams
20	Knowledge understanding. subject-specific skills	Benign, Premalignant a malignant lesions of the o cavity	Theoretical lecture using Power point	Short, semester mid-year and final exams
21	Knowledge understanding. subject-specific skills	Neuromuscular disorder	Theoretical lecture using Power point	Short, semester mid-year and final exams
22	Knowledge understanding. subject-specific skills	Neuromuscular disorder	Theoretical lecture using Power point	Short, semester mid-year and final exams
23	Knowledge understanding. subject-specific skills	Salivary gland diseases	Theoretical lecture using Power point	Short, semester mid-year and final exams
24	Knowledge understanding. subject-specific skills	Salivary gland diseases	Theoretical lecture using Power point	Short, semester mid-year and final exams
25	Knowledge understanding. subject-specific skills	Salivary gland diseases	Theoretical lecture using Power point	Short, semester mid-year and final exams
26	Knowledge understanding. subject-specific skills	Autoimmune diseases	Theoretical lecture using Power point	Short, semester, mid-year and final exams
27	Knowledge understanding. subject-specific skills	Autoimmune diseases	Theoretical lecture using Power point	Short, semester, mid-year and final exams
28	Knowledge understanding. subject-specific skills	Oral manifestation of aller reaction	Theoretical lecture using Power point	Short, semester mid-year and final exams
29	Knowledge understanding. subject-specific skills	Oral manifestation of aller reaction	Theoretical lecture using Power point	Short, semester mid-year and final exams
30	Knowledge understanding. subject-specific skills	Oral manifestation of aller reaction	Theoretical lecture using Power point	Short, semester, mid-year and final exams

Lab number	Study unit title		
1	Laboratory investigations in dentistry		
2	Viral infection		
3	Bacterial infection		
4	Fungal infection		
5	Diseases of Respiratory tract		
6	Diseases of cardiovascular system		
7	Diseases of gastrointestinal tract		
8	Renal diseases		
9	Anemia		
10	Leukemia		
11 Bleeding and clotting disorders			
12	Immunologic diseases		
13 Diseases of thyroid gland			
14	Diabetes mellitus		
15	Orofacial pain and common headache disorders		
16	Neuromuscular diseases		
17	Temporomandibular disorders		
18	Salivary gland disorders		
19	Drugs in dentistry		
20	Drugs induced oral lesions		
21	Panoramic image interpretation		
22	Allergy		
23	Ulcerative ,vesicular, and bullous lesions		
24	Red and white lesions of the oral mucosa		
25	Pigmented lesions of the oral mucosa		
26	Benign lesions of the oral cavity and the jaw		
27	ral and oropharyngeal cancer		
28	LASER in oral medicine		
29	Geriatric oral medicine		
30	Pediatric oral medicine		

# 11. Course Evaluation

10 degrees of first semester: 8 degrees of short and semester exams and two degrees of oral

exam

10 degrees of second semester: 8 degrees of short and semester exams and two degrees of oral

20 degrees of mid-year 60 degrees of final exam

	12.	Learning and	Teaching	Resources
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12. Learning and reaching resources	
Required textbooks (curricular books, if any)	
Main references (sources)	1. Burket's oral medicine. Mich Glick, Martin Greenberg, Pe Lockhart and Dtephen Challacom 13th edition.2021, Wiley Black we 2. Bumann, A., & Lotzmann, U. I disorders and orofacial pain. role of dentistry in multidisciplinary approach. 20 Thieme
Recommended books and references (scientific journals,	
reports)	
Electronic References, Websites	

#### 1. Course Name:

Oral Surgery

## 2. Course Code:

522OS

### 3. Semester / Year:

## 2 semester/ Fifth stage

## 4. Description Preparation Date:

#### 2024-2025

### 5. Available Attendance Forms:

Lectures and Clinics

## 6. Number of Credit Hours (Total) / Number of Units (Total)

210 hours/8 unite

## 7. Course administrator's name (mention all, if more than one name)

Name: Usama Mohammed Abdullameer

Email: daghir-uma@mu.edu.iq

## 8. Course Objectives

#### **Course Objectives**

 Preparing the student at a high level of knowledge regarding the principles of oral and maxillofacial surgery in particular Benign and malignant tumors, reconstructive surgery, and maxillofacial injuries

## 9. Teaching and Learning Strategies

#### Strategy

- Knowledge and understanding
- Skill goals
- Stimulus and response method
- Long, short and semester exams
- Thinking skills

#### 10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name Theoretical	Learning method	Evaluation method
1	7	Knowledge and understanding.	Orofacial pain	Theoretical lecture using	Short, semester,

		subject-specific skills		Power point, Problem-Based Learning	mid-year and final exams
				,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	
2	7	Knowledge and understanding. subject-specific skills	Preliminary management of patients with facial fractures	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
3	7	Knowledge and understanding. subject-specific skills	Fractures of the mandible	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
4	7	Knowledge and understanding. subject-specific skills	Fractures of the mandible Mandibular fractures that require special consideration:	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
5	7	Knowledge and understanding. subject-specific skills	Fractures of the middle third of facial skeleton	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
6	7	Knowledge and understanding. subject-specific skills	Fractures of the middle third of facial skeleton	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
7	7	Knowledge and understanding. subject-specific skills	Dentoalveolar and soft tissue injuries	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
8	7	Knowledge and understanding. subject-specific skills	Preprosthetic surgery.	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion	Short, semester, mid-year and final exams

				,Debriefing ,Information Review, Practical Research, Computer Learning	
9	7	Knowledge and understanding. subject-specific skills	Preprosthetic surgery.	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
10	7	Knowledge and understanding. subject-specific skills	Potentially malignant disorders of the oral mucosa.	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
11	7	Knowledge and understanding. subject-specific skills	Odontogenic diseases of the maxillary sinus	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
12	7	Knowledge and understanding. subject-specific skills	Benign cystic lesions of the oral cavity	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
13	7	Knowledge and understanding. subject-specific skills	Odontogenic tumors	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
14	7	Knowledge and understanding. subject-specific skills	Non-odontogenic tumors and fibro- osseous lesions of the jaw	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
15	7	Knowledge and understanding. subject-specific skills	Oral cancer	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
16	7	Knowledge and	Oral cancer	Theoretical	Short,

		understanding		lecture using	semester,
		understanding. subject-specific		Power point,	mid-year and
		skills		Problem-Based Learning	final exams
		SKIIIS		,Collaborate Discussion	
				,Debriefing ,Information Review,	
				Practical Research, Computer	
				Learning	
17	7	Knowledge and	Implant Treatment:	Theoretical	Short,
1,		understanding.	Advanced Concepts	lecture using	semester,
		subject-specific	Travallora College	Power point,	mid-year and
		skills		Problem-Based Learning	final exams
		SKIIIS		,Collaborate Discussion	
				,Debriefing ,Information Review,	
				Practical Research, Computer	
				Learning	
18	7	Knowledge and	Implant Treatment:	Theoretical	Short,
		understanding.	Advanced Concepts	lecture using	semester,
		subject-specific		Power point,	mid-year and
		skills		Problem-Based Learning	final exams
				,Collaborate Discussion	
				Debriefing ,Information Review,	
				Practical Research, Computer	
10	7	Vacual 1	Calinomy of and	Learning Theoretical	Chout
19	/	Knowledge and	Salivary gland	lecture using	Short, semester,
		understanding.	diseases	Power point,	mid-year and
		subject-specific		=	final exams
		skills		Problem-Based Learning ,Collaborate Discussion	Tillar Chairis
				,Debriefing ,Information Review,	
				Practical Research, Computer	
				Learning	
20	7	Knowledge and	Salivary gland	Theoretical	Short,
		understanding.	disease	lecture using	semester,
		subject-specific	discuse	Power point,	mid-year and
		skills		Problem-Based Learning	final exams
		SKIIIS		,Collaborate Discussion	
				,Debriefing ,Information Review,	
				Practical Research, Computer	
	<u>L</u>			Learning	
21	7	Knowledge and	Temporomandibula	Theoretical	Short,
		understanding.	r joint (TMJ)	lecture using	semester,
		subject-specific	disorders	Power point,	mid-year and
		skills		Problem-Based Learning	final exams
				,Collaborate Discussion	
				Debriefing ,Information Review,	
				Practical Research, Computer	
22	7	Vnowladae and	Tomporomor dibut-	Learning Theoretical	Short,
22	'	Knowledge and	Temporomandibula	lecture using	snort, semester,
		understanding.	r joint (TMJ)	Power point,	mid-year and
		subject-specific	disorders	* '	final exams
		skills		Problem-Based Learning ,Collaborate Discussion	Tital Challing
				,Debriefing ,Information Review,	
				Practical Research, Computer	
				Learning	
23	7	Knowledge and	Orthognathic	Theoretical	Short,
23	'	understanding.		lecture using	smort, semester,
			surgery	Power point,	mid-year and
		subject-specific		Problem-Based Learning	final exams
		skills		,Collaborate Discussion	
1	1	1	1	,Comaconate Discussion	1

				,Debriefing ,Information Review, Practical Research, Computer Learning	
24	7	Knowledge and understanding. subject-specific skills	Orthognathic surgery	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
25	7	Knowledge and understanding. subject-specific skills	Cleft lip and palate	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
26	7	Knowledge and understanding. subject-specific skills	Cleft lip and palate	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
27	7	Knowledge and understanding. subject-specific skills	Laser and Cryosurgery in oral and maxillofacial surgery	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
28	7	Knowledge and understanding. subject-specific skills	Vascular anomalies	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
29	7	Knowledge and understanding. subject-specific skills	Principles of reconstructive surgery of defects of the jaws	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
30	7	Knowledge and understanding. subject-specific skills	Principles of reconstructive surgery of defects of the jaws	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams

#### **Clinical requirement**

- Extraction of teeth (simple extraction)
- Surgical extraction of teeth
- Surgical assistant in minor oral surgery and dental implants.
- Participating in oral and maxillofacial surgery ward rounds

6 hours/ week 180 hours/ year

## 11. Course Evaluation

10 degrees of first semester: 8 degrees of short and semester exams and two degrees of oral

10 degrees of second semester: 8 degrees of short and semester exams and two degrees of oral exam

20 degrees of mid-year

60 degrees of final exam

# 12. Learning and Teaching Resources

12. Learning and reaching Resources	
Required textbooks (curricular books, if any)	
Main references (sources)	1 Contemporary oral a maxillofacial surgery 7th edi 2019 (Elsevier. ( 2. Perry M, Brown A, Banks (2015). Fractures of The Fa Skeleton, second edition. Wi Blackwell.
Recommended books and references (scientific journals, reports)	
Electronic References, Websites	

Orthodontics

## 2. Course Code:

526OD

## 3. Semester / Year:

## 2 semester/ Fifth stage

## 4. Description Preparation Date:

#### 2024-2025

## 5. Available Attendance Forms:

Lectures and Clinic

## 6. Number of Credit Hours (Total) / Number of Units (Total)

150 hours / 6 unite

# 7. Course administrator's name (mention all, if more than one name)

Name: Hayder Saad Hanfoosh Email: hayderhanfoosh@mu.edu.iq

## 8. Course Objectives

## **Course Objectives**

 Preparing the student to a high level of scientific knowledge regarding the diagnosis and treatment of simple cases of Malocclusion the removable and functional device.

# 9. Teaching and Learning Strategies

#### Strategy

- Knowledge and understanding
- Skill goals
- Stimulus and response method
- Long, short and semester exams
- Thinking skills

Week	Hours	Required Learning Outcomes	Unit or subject name Theoretical	Learning method	Evaluation method
1	5	Knowledge and understanding. subject-specific skills	Orthodontic diagnosis and treatment planning: a- Personal data b- Consent form	Theoretical lecture using Power point, Problem-Based	Short, semester, mid-year and final exams

	1		CI: 1		T
			c- Clinical examination	Learning	
			i. General body stature	,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review, Practical	
				Research, Computer	
				Learning	
2	5	Knowledge and	ii. Face examination in 3	Theoretical	Short, semester,
		understanding.	dimensions	lecture using	mid-year and
		subject-specific	iii. skeletal examination	Power point,	final exams
		skills	iv. Soft tissue examination	Problem-Based	
				Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review, Practical	
				Research, Computer	
				Learning	
3	5	Knowledge and	v. Occlusion	Theoretical	Chart camenter
J	٦		v. Occiusion		Short, semester,
		understanding.		lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-Based	
				Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review, Practical	
				Research, Computer	
				Learning	
4	5	Knowledge and	vi. Dentition	Theoretical	Short, semester,
		understanding.	vii. Temporomandibular joint	lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-Based	
				Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Debriefing ,Information	
				Review, Practical	
				Research, Computer	
				Learning	
5	5	Knowledge and	d- Diagnostic aids	Theoretical	Short samestar
J	'	understanding.	i. Cephalometrics		Short, semester,
		_	1. Cephalometries	lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-Based	
				Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review, Practical	
	1			Research, Computer	
			İ	_	
				Learning	
6	5	Knowledge and	ii. Orthopantomography	Theoretical	Short, semester,
6	5	Knowledge and understanding.	ii. Orthopantomography iii. Other views	Theoretical	
	5			Theoretical lecture using	Short, semester, mid-year and final exams
	5	understanding.		Theoretical	mid-year and

7	5	Knowledge and understanding. subject-specific skills	iv. Study models	Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion	Short, semester, mid-year and final exams
8	5	Knowledge and understanding.	v. Photography vi. 3D imaging	,Debriefing ,Information Review, Practical Research, Computer Learning Theoretical lecture using	Short, semester, mid-year and
		subject-specific skills		Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	final exams
9	5	Knowledge and understanding. subject-specific skills	e- Treatment planning	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
10	5	Knowledge and understanding. subject-specific skills	f-Treatment of Medically compromised patients	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
11	5	Knowledge and understanding. subject-specific skills	g- Orthodontic indices	Theoretical lecture using Power point, Problem-Based	Short, semester, mid-year and final exams

	T		1	1	
				Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review, Practical	
				Research, Computer	
				Learning	
12	5	Knowledge and	Space analysis, Bolton's ratio	Theoretical	Short, semester,
		understanding.		lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-Based	
				Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review, Practical	
				Research, Computer	
				Learning	
13	5	Knowledge and	Teeth extraction in orthodontics	Theoretical	Short, semester,
		understanding.		lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-Based	
				Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review, Practical	
				Research, Computer	
				Learning	
14	5	Knowledge and	Serial extraction	Theoretical	Short, semester,
		understanding.		lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-Based	
				Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review, Practical	
				Research, Computer	
1 🖺	-	V m o v 1 - 1 1	Vortical and transverse	Learning	Ch out
15	5	Knowledge and	Vertical and transverse problems:	Theoretical	Short, semester,
		understanding. subject-specific	a. Deep bite	lecture using	mid-year and
		skills		Power point, Problem-Based	final exams
		SKIIIS		Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Debriefing ,Information	
				Review, Practical	
				Research, Computer	
	•			Learning	
				Louinne	
16	5	Knowledge and	h Open hite		Short samester
16	5	Knowledge and	b. Open bite	Theoretical	Short, semester,
16	5	understanding.	b. Open bite	Theoretical lecture using	mid-year and
16	5	understanding. subject-specific	b. Open bite	Theoretical lecture using Power point,	
16	5	understanding.	b. Open bite	Theoretical lecture using	mid-year and

	Т	1		T	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review, Practical	
				Research, Computer	
				Learning	
17	5	Knowledge and	c. Crossbite and scissors bite	Theoretical	Short, semester,
		understanding.		lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-Based	
				Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review, Practical	
				Research, Computer	
				Learning	
18	5	Knowledge and	Treatment of common local	Theoretical	Short, semester,
		understanding.	factors:	lecture using	mid-year and
		subject-specific	a. supernumerary and hypodontia	Power point,	final exams
		skills	b. Early loss of deciduous teeth	Problem-Based	mai camo
		SKIIIS	c. Retained teeth, delayed eruption,	Learning	
			impaction, ankylosis	,Collaborate	
			d. Abnormal eruptive behavior	Discussion	
			e. Large frenum	,Debriefing	
			e. Large Hellulli	,Information	
				Review, Practical	
				Research, Computer	
19	5	Vnoviladas and	f. Bad oral habits	Learning Theoretical	Chart compostor
19	5	Knowledge and	1. Bad oral liabits		Short, semester,
		understanding. subject-specific		lecture using	mid-year and final exams
		skills		Power point,	Illiai exallis
		SKIIIS		Problem-Based	
				Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review, Practical	
				Research, Computer	
				Learning	
20	5	Knowledge and	Treatment of aberrant position of	Theoretical	Short, semester,
		understanding.	canines	lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-Based	
I					
				Learning	
				Learning ,Collaborate	
				Learning ,Collaborate Discussion	
				Learning ,Collaborate Discussion ,Debriefing	
				Learning ,Collaborate Discussion ,Debriefing ,Information	
				Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical	
				Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer	
21	5	Knowledge and	Treatment of general factors:	Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short semester
21	5	Knowledge and	Treatment of general factors:  a. Class I treatment (crowding)	Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning Theoretical	Short, semester,
21	5	understanding.	a. Class I treatment (crowding,	Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning Theoretical lecture using	mid-year and
21	5	understanding. subject-specific		Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning Theoretical lecture using Power point,	
21	5	understanding.	a. Class I treatment (crowding,	Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning Theoretical lecture using Power point, Problem-Based	mid-year and
21	5	understanding. subject-specific	a. Class I treatment (crowding,	Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning Theoretical lecture using Power point,	mid-year and

	1		T	D:	
				Discussion ,Debriefing	
				,Information	
				Review, Practical	
				Research, Computer	
				Learning	
22	5	Knowledge and	Continue class I treatment (method	Theoretical	Short, semester,
		understanding.	of space creation)	lecture using	mid-year and
		subject-specific	or space creamon)	Power point,	final exams
		skills		Problem-Based	
				Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review, Practical	
				Research, Computer	
				Learning	
23	5	Knowledge and	b. Class II div. 1 treatment	Theoretical	Short, semester,
		understanding.		lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-Based	
				Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review, Practical	
				Research, Computer	
2.4	-	77 1 1 1	c. Class II div. 2 treatment	Learning Theoretical	Classit assessed as
24	5	Knowledge and	c. Class II div. 2 treatment		Short, semester, mid-year and
		understanding. subject-specific		lecture using Power point,	final exams
		skills		Problem-Based	IIIai Cailis
		SKIIIS		Learning	
				.Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review, Practical	
				Research, Computer	
<u></u>				Learning	
25	5	Knowledge and	d. Class III treatment	Theoretical	Short, semester,
		understanding.		lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-Based	
				Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review, Practical	
				Research, Computer Learning	
26	5	Knowledge and	Treatment of adults	Theoretical	Short, semester,
20	3	Knowledge and understanding.	a- Periodontal problems	lecture using	mid-year and
		subject-specific	a Torrodoniai problems	Power point,	final exams
		skills		Problem-Based	mai camis
		JKIIIJ		Learning	
				,Collaborate	
	l	1	1	,	

				Discussion	
				,Debriefing	
				,Information	
				Review, Practical	
				Research, Computer	
				Learning	
27	5	Knowledge and	b- Orthognathic surgery	Theoretical	Short, semester,
		understanding.		lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-Based	
				Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review, Practical	
				Research, Computer	
				Learning	
28	5	Knowledge and	Cleft lip and palate	Theoretical	Short, semester,
		understanding.		lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-Based	
				Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review, Practical	
				Research, Computer	
				Learning	
29	5	Knowledge and	Continue cleft lip and palate	Theoretical	Short, semester,
		understanding.		lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-Based	
				Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review, Practical	
				Research, Computer	
30	5	Knowledge and	Digital orthodontics (digital	Learning Theoretical	C1- and the control of
30	3	understanding.	approach in orthodontic diagnosis	lecture using	Short, semester,
		subject-specific	and	_	mid-year and final exams
		subject-specific skills	treatment)	Power point, Problem-Based	illiai CXallis
		SKIIIS	doublest,		
				Learning	
				,Collaborate Discussion	
				,Debriefing	
				,Deoriering ,Information	
				Review, Practical	
				Research, Computer	
				Learning	
				Laming	
Clinic	al req	uirements			
Item		Minimum Require	ements	Hours	
				1	

The student should receive at least one orthodontic case to

Treatment of at least one patient: 1- Diagnosis :(Mandatory)

	a- Case sheet filling & presentation b- Upper and lower impression. c-Study models preparation d- Extra & intra oral photographs e- Cephalometric tracing 2-Treatment plan:(Mandatory) 3- Insertion(Optional) 4- Adjustment or Activation(Optional)	enter the final exam
Total	The student should receive at least one orthodontic case to enter the final exam	The student should receive at least one orthodontic case to enter the final exam

# 11. Course Evaluation

- 10 degrees of first semester: 8 degrees of short and semester exams and two degrees of oral exam
- 10 degrees of second semester: 8 degrees of short and semester exams and two degrees of oral exam
- 20 degrees of mid-year
- 60 degrees of final exam

0.0000000000000000000000000000000000000				
12. Learning and Teaching Resources				
Required textbooks (curricular books, if any)				
Main references (sources)	<ol> <li>An Introduction to Orthodontics</li> <li>Edition Simon J. Littlewood and Laura Mitchell 2019.</li> <li>Orthodontics: Principles Practice: Principles and Practice Edition 2017</li> </ol>			
Recommended books and references (scientific journals, reports)				
Electronic References, Websites				

Pedodontics dentistry

2. Course Code:

#### **530PAPD**

## 3. Semester / Year:

## 2 Semester/ Fifth Stage

# **4.** Description Preparation Date:

#### 2024-2025

#### 5. Available Attendance Forms:

Theoretical lectures and practical laboratory

6. Number of Credit Hours (Total) / Number of Units (Total)

## 120 hours / 5 unite

# 7. Course administrator's name (mention all, if more than one name)

Name: Mukhalled Salim .Abdulla Email: mukhalled@mu.edu.iq

## 8. Course Objectives

## **Course Objectives**

- Preparing the student at a high level of scientific with regard to pedodontic dentistry
- Learning the clinical examination of primary teeth
- Learning how the student can differentiate between primary teeth from permanent teeth and also learning the problems associated with each type pf teeth

# 9. Teaching and Learning Strategies

#### Strategy

- Acquire knowledge about history taking from children
- How to examine the child clinically
- Learn how to treat the common disorders of teeth in children

Week	Hours	Required	Unit or subject name	Learning	Evaluation
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		Learning	Theoretical	method	method
		Outcomes			
1	4	Knowledge and understanding. subject- specific skills	Diagnosis and treatment planning Advantages of treatment planning, The diagnostic methods, Components of oral examination and diagnosis	Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
2	4	Knowledge and understanding. subject- specific skills	Preliminary medical and dental history Clinical examination, Radio graphic examination	Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
3	4	Knowledge and understanding. subject- specific skills	Art and science of behavior management Child development, Major area of development, Variables influencing children's dental behaviors ,classification of children's behavior	Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
4	4	Knowledge and understanding. subject- specific skills	Non pharmacologic management of patient behavior , Purpose, Classifying children, s cooperative behavior	Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical	Short, semester, mid-year and final exams

				Research, Computer	
5	4	Knowledge	Pharmacologic management of patient	Learning Theoretical	Short, semester,
		and understanding. subject- specific skills	behavior Degree of sedation, Indications for pharmacological behavior management	lecture using Power point, Problem- Based	mid-year and final exams
			technique, Pretreatment documentation and assessment,	Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical	
		TZ 1. 1.		Research, Computer Learning	GI.
6	4	Knowledge and	Sedation in pediatric dentistry 4 Conscious sedation, Routes of drug	Theoretical lecture using	Short, semester, mid-year and
		understanding.	administration, Enteral sedation	Power point,	final exams
		subject- specific skills	,Rectal route, Intra muscular route,	Problem-	
		specific skins	Intravenous	Based Learning	
			route, Inhalation, Drugs and agents	,Collaborate	
			used Sadation in padiatria dantistry 4	Discussion	
			Sedation in pediatric dentistry 4 Conscious sedation, Routes of drug	,Debriefing	
			administration, Enteral sedation	,Information Review,	
			,Rectal	Practical	
			route, Intra muscular route, Intravenous	Research,	
			route, Inhalation, Drugs and agents used	Computer Learning	
7	4	Knowledge and	management of traumatic injuries to the	Theoretical lecture using	Short, semester, mid-year and
		understanding. subject-	teeth and supporting tissues of children,	Power point, Problem-	final exams
		specific skills	······································	Based	
				Learning ,Collaborate	
				Discussion	
				,Debriefing ,Information Review,	
				Practical	
				Research,	
0		YZ 1 1		Computer Learning	
8	4	Knowledge and	classification of injuriesto the anterior teeth of children classification	Theoretical lecture using	Short, semester, mid-year and
		understanding.	methods	Power point,	final exams
		subject-	of clinical examination	Problem-	
		specific skills		Based	
				Learning	
				,Collaborate Discussion	
				,Debriefing ,Information	
				Review,	

	1	T		Practical	
				Research,	
				Computer	
				Learning	
9	4	Knowledge	Traumatic injuries of the primary teeth	Theoretical	Short, semester,
		and	and its effect on permanent teeth	lecture using	mid-year and
		understanding.	P	Power point,	final exams
		subject-		Problem-	
		specific skills		Based	
		1		Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review,	
				Practical	
				Research,	
				Computer	
10	4	Vnowladga	Treatment of in items of a surround	Learning Theoretical	C1
10	+	Knowledge and	Treatment of injury of permanent teeth,	lecture using	Short, semester, mid-year and
		understanding.	emergency treatment,	Power point,	final exams
		subject-	tempora ryrestoration preparation	-	Illiai Caills
		specific skills	methods	Problem- Based	
		specific skins	1110 1110 110	Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				Information	
				Review,	
				Practical	
				Research,	
				Computer	
				Learning	
11	4	Knowledge	Advances in Pediatric Dentistry: 4	Theoretical	Short, semester,
		and	Advances in diagnostic aids,	lecture using	mid-year and
		understanding.	Advancesin cavity	Power point,	final exams
		subject-		Problem-	
		specific skills		Based	
				Learning	
				,Collaborate Discussion	
				,Debriefing	
				,Information	
				Review,	
				Practical	
				Research,	
				Computer	
				Learning	
12	4	Knowledge		Theoretical	Short, semester,
		and	Advances in endodontics, Advances in	lecture using	mid-year and
		understanding.	local anesthesia	Power point,	final exams
		subject-		Problem-	
		specific skills		Based	
				Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
ĺ				Review,	

		1		Decation1	
				Practical	
				Research,	
				Computer	
12	1	Vmarriadaa	A dyonoog in mostomotive motomicle	Learning	C1
13	4	Knowledge	Advances in restorative materials,	Theoretical	Short, semester,
		and	Advances in surgical procedures,	lecture using	mid-year and
		understanding.	Miscellaneous	Power point,	final exams
		subject-		Problem- Based	
		specific skills			
				Learning ,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review,	
				Practical	
				Research,	
				Computer	
				-	
14	4	Knowledge	Acquired disturbances of oral	Learning Theoretical	Chart samester
17	7	and	structures	lecture using	Short, semester,
		understanding.	Structures	Power point,	mid-year and final exams
		subject-		Problem-	iiliai exailis
		specific skills		Based	
		specific skills		Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review,	
				Practical	
				Research,	
				Computer	
				Learning	
15	4	Knowledge	Developmental disturbances of	Theoretical	Short, semester,
		and	oral 4	lecture using	mid-year and
		understanding.		Power point,	final exams
		subject-	Structures	Problem-	mur exams
		specific skills		Based	
				Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review,	
				Practical	
				Research,	
				Computer	
				Learning	
16	4	Knowledge	Gingivitis and periodontal disease in	Theoretical	Short, semester,
		and	children:	lecture using	mid-year and
		understanding.	Introduction simple gingivitis,	Power point,	final exams
		subject-	eruption	Problem-	
		specific skills	gingivitis, acute gingival disease;	Based	
		_	herpes	Learning	
			simplex viral infection.	,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
		Í.	İ		i l
				Review,	
				Review, Practical	

				Research, Computer Learning	
17	4	Knowledge and understanding. subject- specific skills	Acute candidacies (thrush), acute bacterial infection, chronic non specific gingivitis, gingival diseases modified by systemic factors.	Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
18	4	Knowledge and understanding. subject- specific skills	Gingival lesions of genetic origin, 4 ascorbic acid deficiency gingivitis.	Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
19	4	Knowledge and understanding. subject- specific skills	Permanent Mandibular First PremolarsPeriodontal diseases in children, early onset periodontitis, prepubertal periodontitis, localized juvenile periodontitis.	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
20	4	Knowledge and understanding. subject- specific skills	Papillon – Lefevere syndrome, gingival recession, extrinsic stains and deposits on teeth	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research,	Short, semester, mid-year and final exams

				Computer	
				Learning	
21	4	Knowledge and understanding. subject- specific skills	Management of space problems, planning for space maintenance, loss of primary incisors	Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
22	4	Knowledge and understanding. subject-specific skills	Space Maintenance for the First and Second Primary Molar and the Primary Canine Area, premature loss of second primary molar	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
23	4	Knowledge and understanding. subject- specific skills	Loss of the Second Primary Molar Before Eruption of the First Permanent Molar, Areas of Multiple Primary Molar Loss	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
24	4	Knowledge and understanding. subject- specific skills	Development of dental arch and occlusion; deciduous phase, mixed dentition	Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research,	Short, semester, mid-year and final exams

			Computer	
4	Knowledge			Short, semester,
	and	Arch length analysis;		mid-year and
			_	final exams
	subject-	dentition	- '	
	specific skills	analysis, Tanaka and Johnston	Based	
		analysis, Bolton analysis		
			,Collaborate	
			Discussion	
			,Debriefing	
1	Knowledge	Dantal problems of the disabled shild		Chart arreston
4	_			Short, semester, mid-year and
		<u> </u>	_	final exams
			-	mai Camis
		_		
	Specific billing			
		immobilization,		
			,	
			Information	
			Review,	
			Practical	
			Research,	
	77 1 1	M (1 F 1 F D		~-
4	_			Short, semester,
			_	mid-year and final exams
		Learning disability	- '	Illiai exallis
	specific skins			
			Collaborate	
			,Information	
			Review,	
			Practical	
			Research,	
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		auusiii,		mid-year and final exams
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	specific skins			
			Discussion	
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			I Deprienno	
			,Debriefing .Information	
			,Information	
	4	4 Knowledge and understanding. subject-specific skills  4 Knowledge and understanding. subject-specific skills	Arch length analysis; Nance analysis, Moyers mixed dentition analysis, Tanaka and Johnston analysis, Bolton analysis  4 Knowledge and understanding. subject-specific skills   and understanding. subject-specific skills  4 Knowledge and understanding. subject-specific skills  4 Knowledge and understanding. subject-specific skills  4 Knowledge and understanding. subject-specific skills  4 Knowledge and understanding. subject-specific skills  4 Knowledge and understanding. subject-specific skills  4 Knowledge and understanding. subject-specific skills  4 Knowledge and understanding. subject-specific skills  4 Knowledge and understanding. subject-specific skills  4 Knowledge and understanding. subject-specific skills  4 Knowledge and understanding. subject-specific skills  4 Knowledge and understanding. subject-specific skills  4 Knowledge and understanding. subject-specific skills  4 Knowledge and understanding. subject-specific skills  4 Knowledge and understanding. subject-specific skills  4 Knowledge and understanding. subject-specific skills  4 Knowledge and understanding. subject-specific skills  4 Knowledge and understanding. Theoretical lecture using power point, problem-based learning and power point problem-based learning and power poin	

				Computer Learning	
29	4	Knowledge and understanding. subject- specific skills	Respiratory diseases, hearing loss, visual impairment, epilepsy	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
30	4	Knowledge and understanding. subject- specific skills	Heart disease, hemophilia, ,sickle cell anemia, viral hepatitis, AIDS, children with systemic diseases	Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams

Clinic number	Clinical requirements			
1	Prophylaxis/ Prophylaxis with fluoride			
2	xtraction			
3	Restoration (cl I, cl II, l III, cl IV, cl V, full coverage composite)			
4	Pulp treatment (FP, VP, RCT, DPC and IPC)			
5	Others (mass excavation, C.S.C, splint, space maintainer and fissure sealant)			
6	Patient motivation			
Total	60 hours/year			

# 11. Course Evaluation

- 10 degrees of first semester 10 degrees of second semester 20 degrees of mid-year 60 degrees of final exam

# 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	McDONALD AND AVERY'S DENTISTRY for CHILD ar ADOLESCENT 2022 by Elsevier

	Text book of pediatric dentistry Nikhil Marwa 2nd e 2019 New Delh
Recommended books and references	
(scientific journals, reports)	
Electronic References, Websites	

#### Prevention

2. Course Code:

531PD

3. Semester / Year:

2 semester/ Fifth stage

4. Description Preparation Date:

#### 2024-2025

5. Available Attendance Forms:

Lectures and clinics

6. Number of Credit Hours (Total) / Number of Units (Total)

120 hours/5 unite

7. Course administrator's name (mention all, if more than one name)

Name: Hiba Ahmed Saed Email: Hiba.ahmed @mu.edu.iq

# 8. Course Objectives

## **Course Objectives**

Introducing the importance of preventive dentistry an
its applications for individuals and society, especial
for Widespread diseases, such as tooth decay and g
disease, as well as those related to nutrition and
immune factors Against diseases of the mouth and
teeth

# 9. Teaching and Learning Strategies

#### Strategy

- Knowledge and understanding
- Skill goals
- Stimulus and response method
- Long, short and semester exams
- Thinking skills

Week	Hours	Required	Unit or subject name	Learning	Evaluation
		Learning	Theoretical	method	method

		Outcomes			
1	4	Knowledge and understanding. subject- specific skills	Prevention of oral diseases (introduction)  • What is preventive dentistry?  • prevention is better than a cure  • Is preventive dentistry still needed?  • Levels of prevention  • Caries prevention: how far it had come in one century!	Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
2	4	Knowledge and understanding. subject- specific skills	Dental caries development  • Etiology of dental caries  • Inorganic and organic components of tooth  • Terminology of dental caries  • Dynamics Process of De-/Remineralization  • The development of a carious lesion  • Root caries  • Clinical appearance of root caries  • Classification of root caries	Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
3	4	Knowledge and understanding. subject- specific skills	Diagnosis of dental caries  Detection systems of caries  visual and tactile examinations  Radiographic techniques  Electrical current measurement (electronic resistant method)  Fiber Optic Transillumination (FOTI and DiFOTI) (Enhanced visual techniques)  Fluorescent techniques  Other techniques like Dyes, Ultrasound techniques, Photo- thermal Radiometry (PTR).	Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
4	4	Knowledge and understanding, subject- specific skills	Fluoride in Dentistry  Introduction  Fluoride in Environment  Fluoride Metabolism (Absorption, Distribution and Excretion of Fluoride in the Body).	Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research,	Short, semester, mid-year and final exams

				Computer Learning	
5	4	Knowledge and understanding. subject- specific skills	Fluorides in prevention and controlling dental caries  • Mechanism of action  • Fluoride's effect on tooth mineral  • Fluoride effect on plaque and bacterial metabolism	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
6 6	4	Knowledge and understanding. subject- specific skills	Topical fluoride therapy Professionally applied fluoride  Introduction  Advantages and disadvantages of topical fluoride application  Fluoride Compounds  Classification of Professionally applied fluoride.	Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
7	4	Knowledge and understanding. subject- specific skills	Topical fluoride therapy :Self- applied fluoride  • Requisites for self-applied fluoride agents  • Fluoride dentifrices and Mechanism of Action  • Fluoride mouth rinses, Indications and Recommendations.	Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
8	4	Knowledge and understanding. subject- specific skills	Safety and toxicity of fluoride  • Fluoride Toxicity  • Factors influencing acute toxicity  • Management of acute toxicity  • Recommendations for parents  • Chronic Toxicity( Dental fluorosis and bone fluorosis)	Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research,	Short, semester, mid-year and final exams

				Computer Learning	
9	4	Knowledge and understanding. subject- specific skills	Dental sealants  • definition  • History  • indication and contraindication  • sealant in adult  • Ideal sealants materials  • Requisites for Sealant Retention  • Sealant Placement Guidelines  • Fluoride-Releasing Sealants  • Glass ionomer sealants  • Colored Versus Clear Sealants  • Sealants for proximal enamel surfaces  • Sealing over caries lesions	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
10	4	Knowledge and understanding. subject- specific skills	New approach in restorative dentistry  • Minimally Invasive Treatment Technique  • Minimally Invasive Cavity Preparation  • Non-machinery Preparation  • LASER  • Chemo mechanical Caries Removal  • Preventive Resin Restorations  • Remineralization Treatment	Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
11	4	Knowledge and understanding. subject- specific skills	Microbiology of dental caries  • Microbial ecology in the oral cavity  • Acquisition of the resident oral microflora  • Site distribution of oral bacteria  • Ecological factors affecting the growth and metabolism of oral bacteria  • Dental biofilms: development, structure, composition and properties  • Development of dental biofilms  • Pellicle formation  • Microbial colonization  • Initial microbial colonization  • Microbial succession  • Microbial composition of the climax community (mature biofilm)  • Virulence of microorganisms  • Major dental caries-associated bacteria  • Other caries-associated bacteria	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
12	4	Knowledge and understanding. subject- specific skills	Saliva and host defense mechanism  • Function of saliva  • Composition of saliva  • Salivary flow rate  • Influence of saliva on dental caries  • Oral immune system	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate	Short, semester, mid-year and final exams

13	4	Knowledge and understanding. subject- specific skills	Non-specific immune factors     Specific immune factors     Immunization of dental caries      Caries risk assessment     Goals of Caries Risk Assesment     Caries Disease Indicators     Caries Risk Factors     Caries Protective Factors	Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning Theoretical lecture using Power point, Problem- Based Learning	Short, semester, mid-year and final exams
			<ul> <li>Factors in Low, Moderate and High Caries</li> <li>Cariogram</li> </ul>	,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	
14	4	Knowledge and understanding. subject- specific skills	infection control  Transmission of infection  Standard precautions  Components of infection control  Treatment room features  Single use disposable instruments  Biomedical waste management	Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
15	4	Knowledge and understanding. subject- specific skills	Oral hygiene measures (Mechanical)  • Acquired pellicle  • Dental plaque  • Dental calculus  • Mechanical plaque control aids  • Toothbrushes  • Tooth brushing methods  • Powered toothbrush  • Objectives of toothbrushing  • Interdental Cleaning aids  • Dental floss  • Wooden tips  • Interdental brushes  • Miswak  • Oral irrigation devices  • Gingival massage	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
16	4	Knowledge and understanding. subject- specific skills	Oral hygiene measures (Chemical)  • Ideal properties of chemical plaque control agents  • Modes of action  • Chlorhexidine  • Triclosan	Theoretical lecture using Power point, Problem- Based Learning	Short, semester, mid-year and final exams

17	4	Knowledge and understanding. subject- specific skills	Essential oil mouthwashes or Listerine     Enzymes     Sanguinarine extracts     Metal ions     Antibiotics     Dentifrices     Composition of dentifrices  Diet and dental caries     Role of carbohydrates in caries development     Evidences     Factors affecting food cariogenicity     Physical form of food and clearance time     Types of fermentable carbohydrate     The basic Stephan curve     Frequency of intake sugar and dental caries	,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research,	Short, semester, mid-year and final exams
18	4	Knowledge and understanding. subject- specific skills	Non- sugar sweeteners  • The sweetness of sugars  • Non- sugar sweeteners  • Bulk sweeteners  • Intense sweeteners  • Protective factors in food  • Fruit and dental caries  • Testing food cariogenicity	Computer Learning Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
19	4	Knowledge and understanding, subject- specific skills	Dietary counseling in dental practice  Nutritional status assessment  Body Mass Index  Assessment of dietary intake  Objectives of dietary assessment  24-hour recall  Dietary record  Food frequency questionnaires  Evaluation of cariogenic potentiall  Evaluation of nutritive value  Dietary counseling  Approach to counseling  Motivation	Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
20	4	Knowledge and understanding. subject- specific skills	Nutrition and dental health  Nutrition dental caries  Systemic effect  Morphology of the teeth  The quality of the hard tissues  Quality of saliva  Evidences of the effect of some	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate	Short, semester, mid-year and final exams

	1	-	Landalanda an disetti setti	Diaz	
			nutrients on dental caries	Discussion ,Debriefing	
			Nutrition and eruption of teeth	,Information	
				Review,	
				Practical	
				Research,	
				· · · · · · · · · · · · · · · · · · ·	
				Computer Learning	
21	4	Vnovdodao	Drayantian of mariadantal disease and	Theoretical	Short, semester,
21	4	Knowledge and	Prevention of periodontal disease and	lecture using	mid-year and
		understanding.	oral cancer by nutrition	Power point,	final exams
		subject-	Nutrition and periodontal health	Problem-	Illiai Caills
		specific skills	• The mechanisms by which nutrition	Based	
		specific skills	may affect periodontal disease	Learning	
			• Effect of food texture on periodontal	,Collaborate	
			health	Discussion	
			Nutrition and oral mucosal disease	,Debriefing	
			Nutrition and oral cancer	,Information	
			Primary prevention	Review,	
			Secondary prevention	Practical	
				Research,	
				Computer	
				Learning	
22	4	Knowledge	Probiotics and dental health	Theoretical	Short, semester,
22	'	and	Caries-related mechanisms of	lecture using	mid-year and
		understanding.	probiotic activity	Power point,	final exams
		subject-	• Probiotics and counts of <i>mutans</i>	Problem-	Timur Unwillig
		specific skills	streptococci	Based	
		specific similar	Probiotics and caries occurrence	Learning	
			Probiotics and periodontal health	,Collaborate	
			o i robiotics and periodonial neutri	Discussion	
				,Debriefing	
				,Information	
				Review,	
				Practical	
				Research,	
				Computer	
				Learning	
23	4	Knowledge	Diagnosis and prevention of dental	Theoretical	Short, semester,
		and	erosion	lecture using	mid-year and
		understanding.	Prevalence	Power point,	final exams
		subject-	• Early detection	Problem-	
		specific skills	• Etiology	Based	
		1	Protection against erosion	Learning	
			Prevention of erosion	,Collaborate	
			• 1 revention of crosson	Discussion	
				,Debriefing	
				,Information	
				Review,	
				Practical	
				Research,	
				Computer	
				Learning	
24	4	Knowledge	Prevention of malocclusion	Theoretical	Short, semester,
- '		and	Normal development	lecture using	mid-year and
		understanding.	Etiology of malocclusion	Power point,	final exams
		subject-	Interceptive measures	Problem-	IIIdi OAdiiis
		specific skills	• Interceptive measures • Tooth anomalies		
		Specific skins		Based	
			Risk assessment	Learning	
1	1			,Collaborate	1

Г	<u> </u>	1		D' ·	<del>                                     </del>
				Discussion	
				,Debriefing ,Information	
				Review,	
				Practical	
				Research,	
				Computer	
				Learning	
25	4	Knowledge	preventive measure for population	Theoretical	Short, semester,
23	4	and	with developmental disabilities	lecture using	mid-year and
		understanding.	=	_	final exams
		subject-	Disability definition     Classification of disabling and disability and disability an	Power point,	Illiai Caills
		specific skills	Classification of disabling conditions	Problem-	
		specific skills	• The issues regarding the delivery of	Based	
			care to people with disabilities	Learning	
			Dental management and preventive	,Collaborate	
			measures among disabled individuals	Discussion	
			• The risk factors for dental caries	,Debriefing	
			among disabled individuals	,Information	
			• People with physical (neurological)	Review,	
			impairment	Practical	
			Visual Deficits	Research,	
			Hearing problems	Computer	
			Mentally retardation	Learning	
			Specialized Equipment for disabled		
			patient management		
			Dental care for Institutionalized		
			disabled individual		
26	4	Knowledge	preventive treatment strategies for	Theoretical	Short, semester,
		and	medically compromised	lecture using	mid-year and
		understanding.	populations	Power point,	final exams
		subject-	• Introduction	Problem-	
		specific skills	• Eating disorders: Characteristics and	Based	
			preventive treatment strategies	Learning	
			Depression: Characteristics and	,Collaborate	
			preventive treatment strategies	Discussion	
			Diabetes mellitus: Characteristics	,Debriefing	
			and preventive treatment strategies	,Information	
			• Epilepsy: Characteristics and	Review,	
			preventive treatment strategies	Practical	
			Blood disorders: Characteristics and	Research,	
			preventive treatment strategies	Computer	
			proventive treatment strategies	Learning	
27	4	Knowledge	Ozone in the prevention of dental	Theoretical	Short, semester,
	Ι΄.	and	diseases	lecture using	mid-year and
		understanding.	<ul> <li>Definition and physical properties</li> </ul>	Power point,	final exams
		subject-	Mode of action		IIIIII OAUIIIS
	Ī		1.1000 01 0001011	Problem-	
i		specific skills	▲ Cofoty	Dogg J	l I
ļ		specific skills	• Safety	Based	
		specific skills	Application of ozone in dentistry	Learning	
		specific skills	<ul><li>Application of ozone in dentistry</li><li>Effects of ozone on oral</li></ul>	Learning ,Collaborate	
		specific skills	<ul> <li>Application of ozone in dentistry</li> <li>Effects of ozone on oral microorganisms and oral cells</li> </ul>	Learning ,Collaborate Discussion	
		specific skills	<ul> <li>Application of ozone in dentistry</li> <li>Effects of ozone on oral microorganisms and oral cells</li> <li>Ozone for disinfecting dentures</li> </ul>	Learning ,Collaborate Discussion ,Debriefing	
		specific skills	<ul> <li>Application of ozone in dentistry</li> <li>Effects of ozone on oral microorganisms and oral cells</li> <li>Ozone for disinfecting dentures</li> <li>Ozone instruments designed for</li> </ul>	Learning ,Collaborate Discussion ,Debriefing ,Information	
		specific skills	<ul> <li>Application of ozone in dentistry</li> <li>Effects of ozone on oral microorganisms and oral cells</li> <li>Ozone for disinfecting dentures</li> <li>Ozone instruments designed for dentistry</li> </ul>	Learning ,Collaborate Discussion ,Debriefing ,Information Review,	
		specific skills	<ul> <li>Application of ozone in dentistry</li> <li>Effects of ozone on oral microorganisms and oral cells</li> <li>Ozone for disinfecting dentures</li> <li>Ozone instruments designed for dentistry</li> <li>Ozone in the management of</li> </ul>	Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical	
		specific skills	<ul> <li>Application of ozone in dentistry</li> <li>Effects of ozone on oral microorganisms and oral cells</li> <li>Ozone for disinfecting dentures</li> <li>Ozone instruments designed for dentistry</li> <li>Ozone in the management of incipient caries</li> </ul>	Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research,	
		specific skills	<ul> <li>Application of ozone in dentistry</li> <li>Effects of ozone on oral microorganisms and oral cells</li> <li>Ozone for disinfecting dentures</li> <li>Ozone instruments designed for dentistry</li> <li>Ozone in the management of incipient caries</li> <li>Ozone in the management of open</li> </ul>	Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer	
		specific skills	<ul> <li>Application of ozone in dentistry</li> <li>Effects of ozone on oral microorganisms and oral cells</li> <li>Ozone for disinfecting dentures</li> <li>Ozone instruments designed for dentistry</li> <li>Ozone in the management of incipient caries</li> <li>Ozone in the management of open caries</li> </ul>	Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research,	
		specific skills	<ul> <li>Application of ozone in dentistry</li> <li>Effects of ozone on oral microorganisms and oral cells</li> <li>Ozone for disinfecting dentures</li> <li>Ozone instruments designed for dentistry</li> <li>Ozone in the management of incipient caries</li> <li>Ozone in the management of open</li> </ul>	Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer	
28	4	specific skills  Knowledge	<ul> <li>Application of ozone in dentistry</li> <li>Effects of ozone on oral microorganisms and oral cells</li> <li>Ozone for disinfecting dentures</li> <li>Ozone instruments designed for dentistry</li> <li>Ozone in the management of incipient caries</li> <li>Ozone in the management of open caries</li> </ul>	Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer	Short, semester,

29	4	Knowledge and understanding. subject-specific skills  Knowledge and understanding. subject-specific skills  Knowledge and understanding. subject-specific skills	<ul> <li>Physiologic Changes</li> <li>Functional status</li> <li>common oral manifestation</li> <li>preventive measures</li> <li>long term care</li> </ul> Implant care <ul> <li>Dental implant parts</li> <li>Dental implant and biofilm</li> <li>Implant Maintenance</li> <li>Professional care in dental clinic</li> <li>Home care</li> </ul> Protection of the dentition <ul> <li>Impact of dental trauma</li> <li>Types of traumatic dental injuries to teeth</li> <li>Sports dentistry</li> <li>Protective mouth-guards</li> <li>Evidence of effectiveness</li> <li>mouth-guards and oral &amp; systemic</li> </ul>	Power point, Problem- Based Learning , Collaborate Discussion , Debriefing , Information Review, Practical Research, Computer Learning Theoretical lecture using Power point, Problem- Based Learning , Collaborate Discussion , Debriefing , Information Review, Practical Research, Computer Learning , Theoretical lecture using power point, Problem- Based Learning , Collaborate Learning Theoretical lecture using Power point, Problem- Based Learning , Collaborate Discussion	Short, semester, mid-year and final exams  Short, semester, mid-year and final exams		
			mouth-guards and oral & systemic infections	Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning			
Lab num	ıber		Study unit title	Learning			
			•				
1		Diagnosis and trea	tment planning				
2		Diagnosis and trea	itment planning				
4 F		Preliminary medic graphic examination	al and dental history,Clinical exam on	ination , Radio	)		
		Preliminary medic graphic examination	al and dental history,Clinical exam on	ination , Radio	)		
5			d use of Primary prevention progrand and calculus and application of fluo	•			
6		of dental plaque and calculus and application of fluoride and fissure sealants  Demonstration and use of Primary prevention program by removal of dental plaque and calculus and application of fluoride and fissure sealants					

7	Monitoring of developing dentition and recognition and prevention (through use of space maintainers) or interception of any occurrence of malocclusion
8	Monitoring of developing dentition and recognition and prevention (through use of space maintainers) or interception of any occurrence of malocclusion
9	Caries removal and restoration of primary and young developing permanent dentition with variety of restorative materials
10	Caries removal and restoration of primary and young developing permanent dentition with variety of restorative materials
11	Trauma management in anterior teeth
12	Trauma management in anterior teeth
13	Minimal intervention dentistry by removal of dental decay and choice of suitable restorative material
14	Minimal intervention dentistry by removal of dental decay and choice of suitable restorative material
15	Pulp therapy for primary dentition
16	Pulp therapy for primary dentition
17	Management of simple cases of dental anomalies and other developmental defects
18	Management of simple cases of dental anomalies and other developmental defects
19	Maintenance of pulp vitality by use of regenerative materials and Root canal treatment for anterior non vital teeth
20	Maintenance of pulp vitality by use of regenerative materials and Root canal treatment for anterior non vital teeth
21	Extraction for non restorable primary and permanent teeth or over- retained primary dentition and permanent teeth for space creation for orthodontic treatment
22	Extraction for non restorable primary and permanent teeth or over- retained primary dentition and permanent teeth for space creation for orthodontic treatment
23	Management of molar incisor hypomineralization MIH
24	Behavior management for young patients
25	Behavior management for young patients
26	Infection control re-assurance and guidance of students
27	nfection control re-assurance and guidance of students
28	Tooth colored restoration technique
29	Tooth colored restoration technique
30	Radiographic prescription and interpretation of results

# 11. Course Evaluation

- 10 degrees of first semester: 8 degrees of short and semester exams and two degrees of oral exam
- 10 degrees of second semester: 8 degrees of short and semester exams and two degrees of oral exam
- 20 degrees of mid-year
- 60 degrees of final exam

oo degrees of final exam	
12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	
Main references (sources)	Primary Preventive Dentistry by Harris NO Garcia-GodoyF- NatheCN 8th Ed ( . 20014 ) Comprehensive preventive denti (2012) Edited by Hardy Limeback
Recommended books and references (scientific journals,	
reports)	
Flectronic References, Websites	

periodontic

2. Course Code:

528PT

3. Semester / Year:

2 Semester/ Fifth Stage

**4.** Description Preparation Date:

## 2024-2025

5. Available Attendance Forms:

Theoretical lectures and clinical

6. Number of Credit Hours (Total) / Number of Units (Total)

120 hours / 5 unite

7. Course administrator's name (mention all, if more than one name)

Name: Samer Salim Jaafer

Email: Samersalimj@mu.edu.iq

## 8. Course Objectives

## **Course Objectives**

- Preparing the student at a high level of scientific with regard to periodontics
- Identifying the types of pathological conditions, gingivitis, the causes leading to them, and the types of periodontics devices

# 9. Teaching and Learning Strategies

#### Strategy

- Training the students to diagnose periodontal disease
- Treatment patients with gingivitis and staining
- Treatment patients with periodontal pocket & assist in surgical cases
- Training the students how to communicate with patients in periodontal clinic of our teaching hospital

Week	Hours	Required	Unit or subject name	Learning	Evaluation
		Learning	Theoretical	method	method

		Outcomes			
1	4	Knowledge and understanding. subject- specific skills	Periodontal examination and diagnosis  Overall appraisal of the patient  Medical history  Dental history:  Chief complaint  Photographic documentation  Clinical Examination:  Extraoral examination  Intraoral examination  Visual examination of the periodontium  Visual examination of biofilm and calculus  Visual examination of the gingiva  Probing force and angulation  Periodontal examination:  Suppuration  Probing depth  Probing around implants  Bleeding on probing	Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
2	4	Knowledge and understanding. subject- specific skills	Bone loss and patterns of bone destruction  - Bone destruction caused by the extension of gingival inflammation:  o Histopathology o Rate of bone loss o Mechanisms of bone destruction - Bone destruction caused by trauma from occlusion - Bone destruction caused by systemic disorders - Factors determining bone morphology in periodontal disease: o Normal variation in alveolar bone o Exostoses o Trauma from occlusion o Buttressing bone formation o Food impaction - Bone destruction patterns in periodontal disease: o Horizontal bone loss o Vertical or angular defects o Osseous craters o Bulbous bone contours o Reversed architecture o Ledges o Furcation involvement	Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
3	4	Knowledge and understanding. subject- specific skills	Radiographic aids in the diagnosis of periodontal disease - Normal interdental bone - Radiographic techniques - Bone Loss: o Amount o Distribution - Radiographic appearance of periodontal disease o Periodontitis o Interdental craters o Furcation involvement o Periodontal abscess	Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical	Short, semester, mid-year and final exams

			o Clinical probing	Research,	
			o Trauma from occlusion	Computer	
4	4	Vassaladas	- Digital intraoral radiography	Learning	Chartanastan
4	4	Knowledge	Advanced diagnosis - Objectives of diagnosis	Theoretical lecture using	Short, semester,
		and understanding.	- Advances in periodontal probing	_	mid-year and final exams
		subject-	- Generations of periodontal probes:	Power point,	Illiai exailis
		specific skills	o First-generation (conventional)	Problem-	
		specific skins	probes	Based	
			o Second-generation (constant-	Learning	
			pressure) probes i- Pressure-sensitive	,Collaborate Discussion	
			probe	,Debriefing	
			ii- Electronic pressure-sensitive	,Information	
			(Yeaple) probe	Review,	
			o Third-generation (automated)	Practical	
			probes: i- Foster-Miller probe	Research,	
			ii- Florida Probe®	Computer	
			iii- Toronto Automated probe iv-	Learning	
			InterProbe <sup>TM</sup>	20011111115	
			o Fourth-generation probes:		
			i- Three-dimensional (3D) probes		
			o Fifth-generation probes:		
			i- UltraSonographic (US) probe		
			- Advances in		
			microbiologic/biochemical analyses		
			o Conventional culture techniques		
			o Molecular biology techniques:		
			i- DNA-analysis method ii- Checkboard DNA-DNA		
			hybridization iii- Polymerase Chain Reaction (PCR)		
			o Immunologic-based tests for putative		
			pathogens: i- Immunofluorescent		
			microscopy		
			ii- ELISA		
			iii- Flow cytometry		
			iv- Latex agglutination test		
			v- Microbiologic enzyme assay		
			- Advances in characterizing host		
			response		
			o Assessment of the susceptible host		
			using makers in peripheral blood		
			o Identification of host constituent in		
			GCF		
			o Salivary biomarkers		
			o Subgingival temperature		
			- Advanced Imaging Modalities		
			o Conventional radiograph		
			o Digital radiograph		
			o Subtraction radiography		
			o Computer-assisted-densitometric-		
			image-analysis (CADIA)		
			o Cone Beam Computed Tomography (CBCT)		
	4	Knowledge	Periodontal response to external forces	Theoretical	Short samester
	+	and	- Occlusion	lecture using	Short, semester, mid-year and
			- Occlusion - Assessment of occlusion	_	final exams
		understanding.	- Adaptive capacity of the	Power point,	mai exams
		subject- specific skills	periodontium to occlusal forces	Problem-	
		specific skills	- Trauma from occlusion:	Based	
			o Classification of trauma from	Learning	
			5 Stabbilleadon of tradina from	,Collaborate	

			occlusion: At d -1'	Diganasian	
			occlusion: i- Acute and chronic	Discussion ,Debriefing	
			ii- Primary and secondary - Stages of tissue response to trauma	,Information	
			from occlusion:	Review,	
			o Stage I: Injury	Practical	
			o Stage II: Repair	Research,	
			o Stage III: Adaptive remodeling of	Computer	
			the periodontium	Learning	
			- Relationship between plaque-induced		
			periodontal diseases and trauma from		
			occlusion		
			- Clinical and radiographic signs of		
			trauma from occlusion		
			- Pathologic tooth migration:		
			o Pathogenesis:		
			i- Weakened periodontal support		
			ii- Changes in the forces exerted on the		
			teeth		
	1	77	- Treatment		G1
6	4	Knowledge	Immunology	Theoretical	Short, semester,
6		and	- Innate immunity	lecture using	mid-year and
		understanding. subject-	o Components of innate immunity: i- Saliva:	Power point,	final exams
		specific skills	<ul><li>Salivary peroxidase system</li></ul>	Problem-	
		specific skills	Lactoferrin	Based	
			• Lysozyme	Learning	
			ii- Gingival epithelial barrier iii-	,Collaborate Discussion	
			Gingival crevicular fluid	,Debriefing	
			o Pathogen recognition and activation	,Information	
			of cellular innate responses:	Review,	
			i- Toll like receptors	Practical	
			ii- Pro inflammatory cytokines	Research,	
			o Cells of innate immunity: i-	Computer	
			Neutrophils	Learning	
			ii- Macrophages		
7	4	Knowledge	Immunology	Theoretical	Short, semester,
		and	- Adaptive immunity	lecture using	mid-year and
		understanding.	o Characteristics o Cellular elements	Power point,	final exams
		subject-		Problem-	
		specific skills	o Cellular immunity to dental plaque o The humoral response to plaque	Based	
			o Osteo-immunology in periodontal	Learning	
			diseases	,Collaborate	
			- Therapeutic Strategies	Discussion ,Debriefing	
			1	,Debriefing ,Information	
				Review,	
				Practical	
				Research,	
				Computer	
				Learning	
8	4	Knowledge	Tooth mobility	Theoretical	Short, semester,
		and	- Introduction	lecture using	mid-year and
		anu	•	_	final exams
		understanding.	- Types:	Power point,	imai exams
		understanding. subject-	o Physiologic mobility	Power point, Problem-	imai exams
		understanding.	o Physiologic mobility o Pathologic mobility		imai exams
		understanding. subject-	o Physiologic mobility o Pathologic mobility - Directions of movement:	Problem-	imai exams
		understanding. subject-	o Physiologic mobility o Pathologic mobility - Directions of movement: o Horizontal	Problem- Based Learning ,Collaborate	imai exams
		understanding. subject-	o Physiologic mobility o Pathologic mobility - Directions of movement: o Horizontal o Vertical	Problem- Based Learning ,Collaborate Discussion	imai exams
		understanding. subject-	o Physiologic mobility o Pathologic mobility - Directions of movement: o Horizontal o Vertical - Factors influencing tooth mobility	Problem- Based Learning ,Collaborate Discussion ,Debriefing	imai exams
		understanding. subject-	o Physiologic mobility o Pathologic mobility - Directions of movement: o Horizontal o Vertical	Problem- Based Learning ,Collaborate Discussion	imai exams

		T		1	,
			- Sign & symptoms - Treatment:     oSituation I: Increased mobility of a tooth with increased width of PDL but normal height of the alveolar bone     o Situation II: Increased mobility of a tooth with increased width of PDL & reduced height of alveolar bone     oSituation III: Increased mobility of a tooth with reduced height of alveolar bone & normal width of PDL     oSituation IV: progressive mobility of a tooth (teeth) as a result of gradually increasing width of PDL in teeth with reduced height of alveolar bone     o Situation V: Increased bridge mobility despite splinting	Practical Research, Computer Learning	
9	4	Knowledge and understanding. subject- specific skills	Epidemiology of periodontal diseases - Introduction: The need for epidemiology - Measuring the occurrence of conditions or diseases: o Prevalence o Risk o The odds o Incidence - Typical measurement of periodontal disease - True and surrogate measures of the periodontal condition - Epidemiologic study designs: o Randomized controlled trials o Cohort studies o Case—control studies - Suspected modifiable causative factors for periodontal disease: o Tobacco smoking o Nutrition o Dental plaque	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
10	4	Knowledge and understanding. subject- specific skills	Determination of prognosis  - Definitions  - Types of prognosis  - Overall versus individual tooth prognosis  - Detrimental factors:  o Overall clinical factors:  i. Patient age  ii. Disease severity  iii. Biofilm control  iv. Patient compliance  o Systemic and environmental factors:  i. Smoking  ii. Systemic disease or condition  iii. Genetic factors  iv. Stress  o Local factors  i. Biofilm and calculus  ii. Subgingival restorations  o Anatomic factors  i- Short, tapered roots  ii- Cervical enamel projections iii-	Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams

11	4	Knowledge	Enamel pearls iv- Bifurcation ridges v- Root concavities vi- Developmental grooves vii- Root proximity viii- Furcation invasion ix- Tooth mobility x- Caries xi- Tooth vitality xii- Root resorption o Prosthetic and Restorative Factors - Prognosis of specific periodontal diseases: o Prognosis for patients with gingival disease: i- Biofilm-induced gingival diseases ii- Prognosis for patients with periodontitis § - Determination and reassessment of prognosis Diagnostic and prognostic criteria according to the new classification of periodontal disease and conditions (2017) must be considered in this section Interrelationships of periodontal disease and therapy with other dental	Theoretical lecture using	Short, semester, mid-year and
		understanding. subject- specific skills	disciplines Restorative interrelationships - Biologic considerations: o Margin placement and biologic width o Biologic width evaluation o Margin placement guidelines o Marginal fit o Crown contour - Aesthetic tissue management: o Managing interproximal embrasures o Pontic design o Correcting open gingival embrasures Periodontal – orthodontic interaction - Orthodontic tooth movement in adults with periodontal tissue breakdown - Orthodontic treatment considerations - Periodontal surgery associated with ortho therapy Prosthodontic and Periodontic interaction	Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	final exams
12	4	Knowledge and understanding. subject- specific skills	Periodontal surgery. General principles - Rationale for periodontal surgery - Indications - Contraindication - Surgical instruments o Excisional and incisional instruments i- Periodontal knives (gingivectomy knives) ii- Interdental knives iii- Surgical blades o Surgical curettes and sickles o Periosteal elevators	Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer	Short, semester, mid-year and final exams

	1		o Cumpical phicals	Loomica	1
			o Surgical chisels o Tissue forceps	Learning	
			o Scissors and nippers		
			o Needleholders		
			o Additional instruments		
			- Fundamentals of periodontal surgery:		
			o Incisions:		
			i- Horizontal incisions		
			ii- Vertical incisions		
			- Papilla management		
	,		- Flap elevation		
13	4	Knowledge	Sonic and ultrasonic instrumentation	Theoretical	Short, semester,
		and	and irrigation	lecture using	mid-year and
		understanding.	- Power-driven instruments: overview	Power point, Problem-	final exams
		subject- specific skills	- Mechanism of action of power scalers	Based	
		specific skills	- Type of power instruments	Learning	
			- Mechanized instruments vs manual	,Collaborate	
			instruments	Discussion	
			- Clinical outcomes of power-driven	,Debriefing	
			instruments:	,Information	
			o Special considerations	Review,	
			o Root surface roughness	Practical	
			o Aerosol production	Research,	
			o Cardiac pacemakers	Computer	
			- Principles of instrumentation - Power-driven devices and COVID-	Learning	
			19- associated limitations		
			- Irrigators:		
			o Mechanism of action of irrigation		
			o Clinical outcomes of irrigation		
			o Individuals with special		
			considerations		
14	4	Knowledge	Gingivectomy and local excision	Theoretical	Short, semester,
		and	- Gingivectomy:	lecture using	mid-year and
		understanding.	o Indications and contraindication	Power point,	final exams
		subject-	o Advantages and disadvantages o Surgical procedure	Problem-	
		specific skills	- Gingivoplasty	Based Learning	
			- Gingival curettage	,Collaborate	
			- Periodontal dressings (Periodontal	Discussion	
			Packs)	,Debriefing	
			o Zinc oxide-eugenol dressing	,Information	
			o Non-eugenol dressing	Review,	
			- Postoperative instructions	Practical	
			- Management of postoperative pain	Research,	
				Computer	
15	1	V. and 1	Elem sumsem:	Learning	Classic assessed in
15	4	Knowledge	Flap surgery - Objectives, indication, and	Theoretical	Short, semester,
		and understanding.	contraindications	lecture using Power point,	mid-year and final exams
		subject-	- Flap techniques: §	Problem-	imai caamo
		specific skills	o Modified Widman flap	Based	
		r	o Undisplaced flap	Learning	
			o Apically displaced flap	,Collaborate	
			o Distal wedge flap	Discussion	
			o Papilla preservation flap	,Debriefing	
			o Papilla preservation flap - Full and partial thickness flap	,Debriefing ,Information	
			o Papilla preservation flap - Full and partial thickness flap - Osteoplasty	,Debriefing ,Information Review,	
			o Papilla preservation flap - Full and partial thickness flap	,Debriefing ,Information	

			demonstrate advantage, disadvantage,	Computer	
16	4	Knowledge and understanding. subject-specific skills	and surgical technique  Mucogingival and aesthetic surgery  Objectives  Techniques to increase attached gingiva:  o Gingival augmentation apical to recession: i- Free gingival graft ii- Free connective tissue graft iii- Apically displaced flap  o Gingival augmentation coronal to recession i- Free gingival graft ii- Subepithelial connective tissue graft iii- Pouch and tunnel technique  Techniques to deepen the vestibule  Techniques to remove the frenum:  o Frenectomy and frenotomy: i- Procedure  Techniques to improve aesthetics:  o Root coverage  o Papilla reconstruction  Therapy to correct excessive gingival display:  o Surgical techniques  o Osseous surgery  This technique has been described sufficiently in previous lecture. Brief	Computer Learning Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
17	4	Knowledge and understanding. subject-specific skills	reminder of the concept and technique is only required  Furcation: involvement and treatment - Introduction - Anatomy of furcation area: o Root complex o Root trunk o Root cone o Furcation entrance - Local anatomic factors - Classification of furcation involvement - Diagnosis: o Clinical o Radiographic analysis - Differential diagnosis: o Pulpal pathologies o Trauma from occlusion - Treatment: o Objectives o Scaling and root planing o Furcation plasty o Tunnel preparation o Root resection/separation, tooth division& hemisection o Treatment guidelines according to degree of involvement o Regeneration of Furcation Defects: i- Guided tissue regeneration &Bone grafting o Failures of furcation therapy - Prognosis	Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
18	4	Knowledge	Laser therapy	Theoretical	Short, semester,

		and understanding. subject-specific skills	- Laser physics and biologic interactions - Laser Types: o Diode Laser o Neodymium:Yttrium-Aluminum-Garnet Laser oErbium:Yttrium-Aluminum-Garnet Laser o Er,Cr:YSGG Laser o CO2 Laser - Laser applications in periodontics: o Aesthetic and pre-prosthetic surgeries o Nonsurgical periodontal therapy: i- Lasers in the management of periodontitis ii- Lasers in the management of periimplantitis - Advantages and disadvantages - Complications and risks of laser therapy Case scenario, questions about decision whether using laser or not should be formulated	lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	mid-year and final exams
19	4	Knowledge and understanding. subject-specific skills	Locally delivered, controlled-release antimicrobials  - Objectives  - Types: oChlorhexidine-based products: i-Chlorhexidine chip ii- PerioCol-CG iii- Chlo-Site o Doxycycline-based products: i-Ligosan slow release ii- Doxycycline gel o Periodontal Plus AB o Minocycline Microspheres - Rationale for local delivery and controlled release - Clinical significance - Clinical indications: o Adjunctive therapy o Surgical therapy o Peri-implantitis o Tobacco smoking - Adverse effects	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
20	4	Knowledge and understanding. subject- specific skills	Management of medically compromised patients - Cardiovascular diseases: o Hypertension o Angina pectoris o Myocardial infarction o Previous cerebrovascular accident o Congestive heart failure o Cardiac pacemakers o Infective endocarditis - Renal disease - Chemotherapy	Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
21	4	Knowledge	Management of medically	Theoretical	Short, semester,

		and	compromised patients	lecture using	mid-year and
		understanding. subject-	- Endocrine/metabolic disorders: o Diabetes mellitus	Power point, Problem-	final exams
		specific skills	o Thyroid disorders	Based	
			o Adrenal Insufficiency	Learning	
			- Pregnancy - Hemorrhagic disorders	,Collaborate Discussion	
			- Blood dyscrasias	,Debriefing	
			- Liver diseases	,Information	
			- Neurologic Disorders:	Review,	
			o Epilepsy	Practical	
			- Infectious diseases: o COVID-19	Research,	
			o Hepatitis	Computer Learning	
			o AIDS	Learning	
			o Tuberculosis		
22	4	Knowledge	Gingival crevicular fluid (GCF)	Theoretical	Short, semester,
		and	- Introduction	lecture using	mid-year and
		understanding. subject-	- Permeability of junctional and sulcular epithelia	Problem	final exams
		specific skills	- Function	Problem- Based	
		•	- Amount:	Learning	
			o Methods for estimating GCF amount	,Collaborate	
			- Composition: o Cellular elements	Discussion	
			o Electrolytes	,Debriefing	
			o Organic compounds	,Information Review,	
			- Methods of collection:	Practical	
			o Absorbing paper strip: i- Intra-	Research,	
			crevicular method ii- Extra-crevicular method	Computer	
			o Crevicular washing	Learning	
			o Micropipettes or capillary tubes		
			- Cellular and humoral activity in GCF		
			- Clinical significance:		
			o Circadian periodicity o Sex hormones		
			o Mechanical stimulation		
			o Smoking		
			o Periodontal therapy		
			- Drugs in GCF		
			- GCF as a diagnostic/prognostic tool for periodontal disease		
23	4	Knowledge	Dentin hypersensitivity 605.e1	Theoretical	Short, semester,
		and	- Introduction	lecture using	mid-year and
		understanding.	- Epidemiology	Power point,	final exams
		subject-	- Etiology	Problem-	
		specific skills	- Theories of dentin hypersensitivity: o Direct innervation	Based	
			o Odontoblast receptor	Learning	
			o Fluid movement/hydrodynamic	,Collaborate Discussion	
			- Diagnosis	,Debriefing	
			- Measurement methods	,Information	
			- Prevention and management	Review,	
			o Classification of desensitizing agents: i- Mode of administration	Practical	
			ii- Mechanism of action	Research,	
				Computer Learning	
24	4	Knowledge	Tissue regeneration. General	Theoretical	Short, semester,
		and	principles Periodontal Wound Healing	lecture using	mid-year and
		and	- Wound healing: Outcomes and	recture using	iiid-ycai aiid

		and 1 2 a 1 4	definitions	Daratat	
		subject-	definitions o Healing patterns in the periodontal	Problem-	
		specific skills	tissues	Based	
				Learning	
			o Outcomes of periodontal wound	,Collaborate	
			healing: i- Repair	Discussion	
			ii- Reattachment iii- New attachment	,Debriefing	
			iv- Regeneration	,Information	
			v- Resorption vi- Ankylosis	Review,	
			- Phases of wound healing:	Practical	
			o Inflammation phase	Research,	
			o Granulation phase	Computer	
			o Matrix formation and remodeling	Learning	
			(maturation) phase		
			- Factors that affect healing:		
			o Local factors		
			o Systemic factors		
			- Periodontal wound healing:		
			o Healing after nonsurgical treatment		
			o Healing after periodontal surgery: i-		
			Gingivectomy		
			ii- Flap operation		
			iii- Grafting procedures		
			o Healing after regenerative therapy		
			o Healing after implant placement: i-		
			bone tissue interface		
			ii- Mucosal interface		
25	4	Knowledge	Regenerative periodontal therapy	Theoretical	Short, semester,
		and	- Regenerative capacity of bone cells	lecture using	mid-year and
		understanding.	- Regenerative capacity of gingival	Power point,	final exams
		subject-	connective tissue cells	Problem-	
		specific skills	- Regenerative capacity of periodontal	Based	
			ligament cells	Learning	
			- Role of epithelium in periodontal	,Collaborate	
			wound healing	,	
			would healing	Discussion	
			- The possible outcomes of periodontal	Discussion Debriefing	
			•	,Debriefing	
			- The possible outcomes of periodontal	,Debriefing ,Information	
			- The possible outcomes of periodontal therapy	,Debriefing ,Information Review,	
			<ul><li>The possible outcomes of periodontal therapy</li><li>Regenerative concepts:</li></ul>	,Debriefing ,Information Review, Practical	
			<ul><li>The possible outcomes of periodontal therapy</li><li>Regenerative concepts:</li><li>o Grafting procedures</li></ul>	,Debriefing ,Information Review, Practical Research,	
			The possible outcomes of periodontal therapy     Regenerative concepts:     Grafting procedures     Root surface biomodification	,Debriefing ,Information Review, Practical Research, Computer	
			- The possible outcomes of periodontal therapy - Regenerative concepts: o Grafting procedures o Root surface biomodification o Guided tissue regeneration	,Debriefing ,Information Review, Practical Research,	
			- The possible outcomes of periodontal therapy - Regenerative concepts: o Grafting procedures o Root surface biomodification o Guided tissue regeneration - Assessment of periodontal	,Debriefing ,Information Review, Practical Research, Computer	
			- The possible outcomes of periodontal therapy - Regenerative concepts: o Grafting procedures o Root surface biomodification o Guided tissue regeneration - Assessment of periodontal regeneration:	,Debriefing ,Information Review, Practical Research, Computer	
			- The possible outcomes of periodontal therapy - Regenerative concepts: o Grafting procedures o Root surface biomodification o Guided tissue regeneration - Assessment of periodontal regeneration: o Clinical assessment i- Pocket	,Debriefing ,Information Review, Practical Research, Computer	
			- The possible outcomes of periodontal therapy - Regenerative concepts: o Grafting procedures o Root surface biomodification o Guided tissue regeneration - Assessment of periodontal regeneration: o Clinical assessment i- Pocket probing.	,Debriefing ,Information Review, Practical Research, Computer	
			- The possible outcomes of periodontal therapy - Regenerative concepts: o Grafting procedures o Root surface biomodification o Guided tissue regeneration - Assessment of periodontal regeneration: o Clinical assessment i- Pocket probing. ii- Attachment level iii- Gingival	,Debriefing ,Information Review, Practical Research, Computer	
			- The possible outcomes of periodontal therapy - Regenerative concepts: o Grafting procedures o Root surface biomodification o Guided tissue regeneration - Assessment of periodontal regeneration: o Clinical assessment i- Pocket probing. ii- Attachment level iii- Gingival indices	,Debriefing ,Information Review, Practical Research, Computer	
			- The possible outcomes of periodontal therapy - Regenerative concepts: o Grafting procedures o Root surface biomodification o Guided tissue regeneration - Assessment of periodontal regeneration: o Clinical assessment i- Pocket probing. ii- Attachment level iii- Gingival indices iv- Alveolar bone level	,Debriefing ,Information Review, Practical Research, Computer	
			- The possible outcomes of periodontal therapy - Regenerative concepts: o Grafting procedures o Root surface biomodification o Guided tissue regeneration - Assessment of periodontal regeneration: o Clinical assessment i- Pocket probing. ii- Attachment level iii- Gingival indices iv- Alveolar bone level o Radiographic methods	,Debriefing ,Information Review, Practical Research, Computer	
26	4	Knowledge	- The possible outcomes of periodontal therapy - Regenerative concepts: o Grafting procedures o Root surface biomodification o Guided tissue regeneration - Assessment of periodontal regeneration: o Clinical assessment i- Pocket probing. ii- Attachment level iii- Gingival indices iv- Alveolar bone level o Radiographic methods o Re-entry operations	,Debriefing ,Information Review, Practical Research, Computer	Short, semester,
26	4	Knowledge	- The possible outcomes of periodontal therapy - Regenerative concepts: o Grafting procedures o Root surface biomodification o Guided tissue regeneration - Assessment of periodontal regeneration: o Clinical assessment i- Pocket probing. ii- Attachment level iii- Gingival indices iv- Alveolar bone level o Radiographic methods o Re-entry operations o Histologic methods	,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and
26	4		- The possible outcomes of periodontal therapy - Regenerative concepts: o Grafting procedures o Root surface biomodification o Guided tissue regeneration - Assessment of periodontal regeneration: o Clinical assessment i- Pocket probing. ii- Attachment level iii- Gingival indices iv- Alveolar bone level o Radiographic methods o Re-entry operations o Histologic methods Reconstructive surgical techniques:	,Debriefing ,Information Review, Practical Research, Computer Learning	
26	4	and	- The possible outcomes of periodontal therapy - Regenerative concepts: o Grafting procedures o Root surface biomodification o Guided tissue regeneration - Assessment of periodontal regeneration: o Clinical assessment i- Pocket probing. ii- Attachment level iii- Gingival indices iv- Alveolar bone level o Radiographic methods o Re-entry operations o Histologic methods Reconstructive surgical techniques: o Non- bone graft associated new	,Debriefing ,Information Review, Practical Research, Computer Learning  Theoretical lecture using Power point,	mid-year and
26	4	and understanding. subject-	- The possible outcomes of periodontal therapy - Regenerative concepts: o Grafting procedures o Root surface biomodification o Guided tissue regeneration - Assessment of periodontal regeneration: o Clinical assessment i- Pocket probing. ii- Attachment level iii- Gingival indices iv- Alveolar bone level o Radiographic methods o Re-entry operations o Histologic methods Reconstructive surgical techniques: o Non- bone graft associated new attachment: i- Principles	,Debriefing ,Information Review, Practical Research, Computer Learning  Theoretical lecture using Power point, Problem-	mid-year and
26	4	and understanding.	- The possible outcomes of periodontal therapy - Regenerative concepts: o Grafting procedures o Root surface biomodification o Guided tissue regeneration - Assessment of periodontal regeneration: o Clinical assessment i- Pocket probing. ii- Attachment level iii- Gingival indices iv- Alveolar bone level o Radiographic methods o Re-entry operations o Histologic methods Reconstructive surgical techniques: o Non- bone graft associated new attachment: i- Principles ii- Procedure Bone Graft associated new attachment	,Debriefing ,Information Review, Practical Research, Computer Learning  Theoretical lecture using Power point, Problem- Based	mid-year and
26	4	and understanding. subject-	- The possible outcomes of periodontal therapy - Regenerative concepts: o Grafting procedures o Root surface biomodification o Guided tissue regeneration - Assessment of periodontal regeneration: o Clinical assessment i- Pocket probing. ii- Attachment level iii- Gingival indices iv- Alveolar bone level o Radiographic methods o Re-entry operations o Histologic methods Reconstructive surgical techniques: o Non- bone graft associated new attachment: i- Principles ii- Procedure Bone Graft associated new attachment or combination of both approaches	,Debriefing ,Information Review, Practical Research, Computer Learning  Theoretical lecture using Power point, Problem- Based Learning	mid-year and
26	4	and understanding. subject-	- The possible outcomes of periodontal therapy - Regenerative concepts: o Grafting procedures o Root surface biomodification o Guided tissue regeneration - Assessment of periodontal regeneration: o Clinical assessment i- Pocket probing. ii- Attachment level iii- Gingival indices iv- Alveolar bone level o Radiographic methods o Re-entry operations o Histologic methods Reconstructive surgical techniques: o Non- bone graft associated new attachment: i- Principles ii- Procedure Bone Graft associated new attachment or combination of both approaches i- Types of bone graft:	,Debriefing ,Information Review, Practical Research, Computer Learning  Theoretical lecture using Power point, Problem- Based Learning ,Collaborate	mid-year and
26	4	and understanding. subject-	- The possible outcomes of periodontal therapy - Regenerative concepts: o Grafting procedures o Root surface biomodification o Guided tissue regeneration - Assessment of periodontal regeneration: o Clinical assessment i- Pocket probing. ii- Attachment level iii- Gingival indices iv- Alveolar bone level o Radiographic methods o Re-entry operations o Histologic methods Reconstructive surgical techniques: o Non- bone graft associated new attachment: i- Principles ii- Procedure Bone Graft associated new attachment or combination of both approaches	,Debriefing ,Information Review, Practical Research, Computer Learning  Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion	mid-year and
26	4	and understanding. subject-	- The possible outcomes of periodontal therapy - Regenerative concepts: o Grafting procedures o Root surface biomodification o Guided tissue regeneration - Assessment of periodontal regeneration: o Clinical assessment i- Pocket probing. ii- Attachment level iii- Gingival indices iv- Alveolar bone level o Radiographic methods o Re-entry operations o Histologic methods Reconstructive surgical techniques: o Non- bone graft associated new attachment: i- Principles ii- Procedure Bone Graft associated new attachment or combination of both approaches i- Types of bone graft: • Autogenous graft	,Debriefing ,Information Review, Practical Research, Computer Learning  Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing	mid-year and
26	4	and understanding. subject-	- The possible outcomes of periodontal therapy - Regenerative concepts: o Grafting procedures o Root surface biomodification o Guided tissue regeneration - Assessment of periodontal regeneration: o Clinical assessment i- Pocket probing. ii- Attachment level iii- Gingival indices iv- Alveolar bone level o Radiographic methods o Re-entry operations o Histologic methods Reconstructive surgical techniques: o Non- bone graft associated new attachment: i- Principles ii- Procedure Bone Graft associated new attachment or combination of both approaches i- Types of bone graft: • Autogenous graft • Allograft	,Debriefing ,Information Review, Practical Research, Computer Learning  Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion	mid-year and

27	4	Knowledge and understanding. subject- specific skills	- Guided tissue regeneration (principle, advantages, disadvantages, and indications)  Advanced regenerative approaches - Enamel matrix Derivatives - Acellular dermal matrix allograft - Clinical applications of growth factors - Cell therapy for periodontal regeneration - Gene therapeutics for periodontal tissue repair - Factors influencing the success or failure of all regeneration techniques	Practical Research, Computer Learning Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer	Short, semester, mid-year and final exams
28	4	Knowledge and understanding. subject-specific skills	Oral implantology Peri-implant anatomy and Peri-implant diseases classification - Introduction - Epithelial structure around natural tooth - Epithelial structure around dental implant - Structure of the interface between the tooth and gingivae - Structure of the interface between implant and oral epithelium - Structure of the interface between the implant and connective tissue - Keratinized tissue (attached gingiva) around implant - Clinical Comparison of Teeth and Implants - Peri-implant health - Peri-implant mucositis: o Diagnosis o Treatment - Peri-implantitis o Diagnosis o Treatment	Learning Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
29	4	Knowledge and understanding. subject- specific skills	Oral implantology Implant-related complications and failure - Definitions of implant survival and success - Types and prevalence of implant complications - Surgical complications: o Hemorrhage and hematoma o Neurosensory disturbances o Implant malposition - Biologic Complications: o Inflammation and proliferation o Dehiscence and recession o Peri-implantitis and bone loss o Implant loss or failure - Prosthetic or mechanical	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams

30	4	Knowledge	complications: o Screw loosening and fracture o Implant fracture o Fracture of restorative materials - Aesthetic and phonetic complications: o Aesthetic complications o Phonetic problems Oral implantology Supportive implant	Theoretical	Short, semester,
		and understanding. subject-specific skills	treatment - Rationale for supportive implant treatment - Examination of implants o Peri-implant probing o Microbial testing o Stability measures o Implant percussion o Radiographic examination - Assessment of peri-implant health o Evaluation of biofilm control o Evaluation of peri-implant health and disease o Evaluation of implant osseointegration o Evaluation of implant restorations - Implant maintenance o Methods for patient oral hygiene o Methods for professional recall maintenance - Treatment of peri-implant diseases o Peri-implant mucositis o Peri-implantitis - Referral of patients to the periodontist	lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	mid-year and final exams

## **Clinical requirement**

### Clinical:

- -Recording medical and dental history
- -Patient's education and motivation
- -Oral hygiene instructions (OHI)
- -Recording periodontal indices:
- Bleeding on probing (BOP)
- Plaque index (% of plaque)
- Probing pocket depth (PPD)
- Clinical attachment loss (CAL)
- -For periodontitis cases, determination of bone loss level by radiograph or clinically
- -Diagnosis according to classification of periodontal disease and conditions (2017)
- -Non-surgical periodontal therapy (manual/ultrasonic scaling, root planing) and removal of all plaque retentive factors
- -Referral of cases that potentially requiring surgical therapy
- -Maintenance and follow-up after 3 months

#### Requirements:

- -Recording periodontal indices and diagnosis (min= 15)
- -Non-surgical periodontal treatment:

- •Scaling (min= 8)
- Root planing (min= 3 teeth)
- Periodontal surgery assistant (one case optional)

# Course Evaluation

- 10 degrees of first semester: 8 degrees of short and semester exams and two degrees of oral exam
- 10 degrees of second semester: 8 degrees of short and semester exams and two degrees of oral exam
- 20 degrees of mid-year
- 60 degrees of final exam

# 11. Learning and Teaching Resources

3	
Required textbooks (curricular books, if any)	
Main references (sources)	1-Clinical Periodontology and Implant Dentistry, Seventh Edition, Niklaus P. Lang and Jan Lindhe, 20 2-Newman and Carranza's Clinical Periodontolo Thirteen Edition, 2019
Recommended books and references	
(scientific journals, reports)	
Electronic References, Websites	

# 1. Course Name: Conservative dentistry 2. Course Code: 519CV 3. Semester / Year: 2 Semester/ Fifth Stage **4.** Description Preparation Date: 2024-2025 5. Available Attendance Forms: Theoretical lectures and practical clinics and labratory 6. Number of Credit Hours (Total) / Number of Units (Total) $\overline{210}$ hours/8 unite 7. Course administrator's name (mention all, if more than one name) Name: Shayma Abdullah Hanoon Email: shayma.abdullah@mu.edu.iq 8. Course Objectives **Course Objectives** Training the student on how to examine patients, diagnose the condition with approved modern diagnostic methods, and then prepare a treatment plan Then start treating the condition scientifically And using modern materials and methods in treating root fillings, crowns and bridges by giving theoretical lectures while working in clinics 9. Teaching and Learning Strategies Strategy Gain knowledge about the causes of various dental injuries and methods of diagnosing and treating them. *Identify the anatomical shape of the dental nerve and how to treat various* Roots. 10. Course Structure Week **Hours** Required Unit or subject name Learning **Evaluation**

		Learning	Theoretical	method	method
		Outcomes			
1	7	Knowledge and understanding.	Endodontic diagnosis	Theoretical lecture using	Short, semester, mid-year and
		subject-specific skills		Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	final exams
2	7	Knowledge and understanding. subject-specific skills	Pain control in Endodontics	Theoretical lecture using Power point, Problem-Based Learning	Short, semester, mid-year and final exams
				,Collaborate Discussion ,Debriefing ,Information Review, Practical Research,	
3	7	Knowledge and	Endodontic radiography	Computer Learning Theoretical	Short, semester,
3		understanding. subject-specific skills	Endodoniie radiography	Power point, Problem-Based Learning ,Collaborate	mid-year and final exams
				Discussion ,Debriefing ,Information Review, Practical Research,	
4	7	Knowledge and	Working length Determination	Computer Learning Theoretical	Short, semester,
		understanding. subject-specific skills		Power point, Problem-Based Learning ,Collaborate	mid-year and final exams
				Discussion ,Debriefing ,Information Review, Practical Research,	
				Computer Learning	
5	7	Knowledge and	Microbiology	Theoretical	Short, semester,

		understanding.		lecture using	mid-year and
		subject-specific skills		Power point, Problem-Based	final exams
				Learning ,Collaborate Discussion	
				,Debriefing ,Information	
				Review, Practical	
				Research, Computer	
<u> </u>	7	Knowledge and	Microbiology	Learning Theoretical	Short, semester,
5		understanding. subject-specific		lecture using Power point,	mid-year and final exams
		skills		Problem-Based Learning	
				,Collaborate Discussion	
				,Debriefing ,Information	
				Review, Practical	
				Research, Computer	
7	7	Knowledge and	Intracanal instruments	Learning Theoretical	Short, semester,
		understanding. subject-specific		lecture using Power point,	mid-year and final exams
		skills		Problem-Based Learning	
				,Collaborate Discussion	
				,Debriefing ,Information	
				Review, Practical	
				Research, Computer	
8	7	Knowledge and understanding.	Intracanal instruments	Theoretical lecture using	Short, semester, mid-year and
		subject-specific skills		Power point,	final exams
		SAMES .		Problem-Based Learning ,Collaborate	
				Discussion ,Debriefing	
				,Information Review,	
				Practical Research,	
				Computer Learning	
9	7	Knowledge and understanding.	Obturation of the root canal system	Theoretical lecture using	Short, semester, mid-year and
		subject-specific skills		Power point, Problem-Based	final exams
				Learning	

				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review,	
				Practical	
				Research,	
				Computer	
				Learning	
0	7	Knowledge and	Obturation of the root	Theoretical	Short, semester,
		understanding.	canal system	lecture using	mid-year and
		subject-specific	,	Power point,	final exams
		skills			Timar Chamis
		SKIIIS		Problem-Based	
				Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review,	
				Practical	
				Research,	
				Computer	
				Learning	
.1	7	Knowledge and	Endodontic Emergency	Theoretical	Short, semester,
		understanding.	Treatment	lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-Based	
				Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review,	
				Practical	
				Research,	
				Computer	
10	7		Donto metion of	Learning	Classet
2	7	Knowledge and	Restoration of	Theoretical	Short, semester,
		understanding.	Endodontically Treated Teeth	lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-Based	
				Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
				,Information	
				Review,	
				Practical	
				Research,	
				Computer	
2	7	V 1. 1	Endadantia Desir de est	Learning	Classet
3	7	Knowledge and	Endodontic-Periodontal	Theoretical	Short, semester,
		understanding.	Relations	lecture using	mid-year and
		subject-specific		Power point,	final exams
		skills		Problem-Based	
				Learning	
				,Collaborate	
				Discussion	
				,Debriefing	
		•		i 'Dennennia	Î.
				,Information	

				Review, Practical Research, Computer Learning	
14	7	Knowledge and understanding. subject-specific skills	Tooth discoloration and bleaching.	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
15	7	Knowledge and understanding. subject-specific skills	Tooth discoloration and bleaching.	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
16	7	Knowledge and understanding. subject-specific skills	Terminology, definition of fixed partial denture, Effect of Tooth Loss, Comparism with R.P.D	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
17	7	Knowledge and understanding. subject-specific skills	Types of Fixed Bridge including Basic Bridge Design	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams

18	7	Knowledge and	Components of Fixed Bridge;	Theoretical	Short, semester,
		understanding. subject-specific skills	Retainers	lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	mid-year and final exams
19	7	Knowledge and understanding. subject-specific skills	Components of Fixed Bridge; Pontics Connectors	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
20	7	Knowledge and understanding. subject-specific skills	Clinical Consideration for Bridge Construction—.  _Abutment Tooth(evaluation and selection) _Crown/Root RatioSplinting of teethPatient Occlusal StatusGeneral Factors.	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
21	7	Knowledge and understanding. subject-specific skills	Clinical Situations affecting Bridge Design;  (Post. Tilted Abutments, Span Length, Pier Abut., Arch curvature)	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
22	7	Knowledge and understanding. subject-specific skills	Resin bonded bridge	Theoretical lecture using Power point, Problem-Based	Short, semester, mid-year and final exams

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				Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	
23	7	Knowledge and understanding. subject-specific skills	Diagnosis And Treatment Plan.  a. Intra-oral Examination. b. X-Rays Examination. c. Diagnostic Cast Examination	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
24	7	Knowledge and understanding. subject-specific skills	Gingival retraction and impression(techniques)and impression disinfection	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
25	7	Knowledge and understanding. subject-specific skills	provisional Restoration, Oclussion and Aesthetics (Principles of occlusion occlusal plane, Anterior guidance) Bite Registeration, and Articulation	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
26	7	Knowledge and understanding. subject-specific skills	provisional Restoration , Oclussion and Aesthetics (Principles of occlusion occlusal plane, Anterior guidance) Bite Registeration, and Articulation	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing	Short, semester, mid-year and final exams

				,Information Review, Practical Research, Computer	
27	7	Knowledge and understanding. subject-specific skills	Try-in and Shade Selection ( Colour dimensions Hue,Chroma,and Value).	Learning Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
28	7	Knowledge and understanding. subject-specific skills	Final Cementation of F.P.Ds.( Techniques)	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
29	7	Knowledge and understanding. subject-specific skills	Failure in Fixed Prosthodontics.	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
30	7	Knowledge and understanding. subject-specific skills	Porcelain in Fixed Prosthodontics (Current Ceramic ).	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research,	Short, semester, mid-year and final exams

	Computer
	Learning
nical requirement)	Hours
11. Course Evaluation	
10 degrees of first semester:	
10 degrees of second semester:	
20 degrees of mid-year 60 degrees of final exam	
12. Learning and Teaching Resource	es
Required textbooks (curricular books, if any)	
Main references (sources)	
	1-Cohen's Pathways of the Dental Pulp. 12th ed.
	Louis H. Berman and Kenneth M. Hargreaves 1-Cohen's Pathways of the Dental Pulp. 12th ed
	Louis H. Berman and Kenneth M. Hargreaves
	-1Fundamentals of Fixed Prosthodontics, 2012,
	II diiddiiiciiddi
	Quintessence Pub. SHILLINGBURG, H. T. & SATHER A.
	Quintessence Pub. SHILLINGBURG, H. T. & SATHER A.  2- Contemporary Fixed Prosthodontics, 2016 Else ROSENSTIEL, S. F., LAND, M. F. & FUJIMOTO, J.
Recommended books and references	A. 2- Contemporary Fixed Prosthodontics, 2016 Else
Recommended books and references (scientific journals, reports)	A. 2- Contemporary Fixed Prosthodontics, 2016 Else