

**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

2026-2025

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 : 2025-2026

File Completion Date: 2025-2026

Signature:

Scientific Associate Name: Lecturer Mukhallad Salem Abdullah

Date:26/3/2026

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:22/3/2026

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 Structure

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

* This can include notes whether the course is basic or optional.

7. Program Description

Year/Level	Course Code	Course Name	Credit Hours	
First			Theoretical hr/year	Practical 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 language	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 215OH	Embryology and Oral Histology	60	60
	-	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	Preventive Dentistry	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- PowerPoint 5- Collaboration 6- Classroom discussion 7- Debriefing is a conversation session about examining information after a specific event 8- Clinical learning 9- Computer-assisted learning 10- Self-learning

10. Evaluation methods

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

1. Faculty

Faculty Members

Academic Rank	Specialization		Special Requirements /Skills (if applicable)		Number of the teaching staff	
	General	Special			Staff	Lecturer
1. Professor	bachelor of dentistry	Orthodontic			1	
2. Professor	Biology	physiology			1	
3. Professor	bachelor of dentistry	Oral and Maxillofacial Surgery			1	
4. Lecturer	bachelor of dentistry	Oral and Maxillofacial Surgery			1	
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 Professor	business management	marketing			1	
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. Assistant 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	Biology	Biology			1	

lecturer						
25. Assistant lecturer	Veterinary medicine	Veterinary pathology			1	

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.

Program Skills Outline															
				Required program Learning outcomes											
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
First	107PS	Medical Physics	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	106CH	Medical Chemistry	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	108BL	Medical Biology	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	104DA	Dental Anatomy	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	101AN	Anatomy	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	103CS	Computer	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	102AL	Arabic Languish	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	109EL	English Languish	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	105HR	Human Right	Basic	√	√	√	√	√	√	√	√	√	√	√	√

Second				√	√	√	√	√	√	√	√	√	√	√	√
	201AN	Anatomy	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	209DM	Dental Material	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	210PR	Prosthodontic	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	212BC	Biochemistry	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	214PH	General Physiology	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	213GH	General Histology	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	211EL	Embryology and Oral Histology	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	-	Baath crimes	Basic	√	√	√	√	√	√	√	√	√	√	√	√
Third	316MB	Medical Microbiology	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	318CM	Community Dentistry	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	-	Medical Ethics	Basic	√	√	√	√	√	√	√	√	√	√	√	√

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

Fifth	410PR	prosthodontic	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	419CV	Restorative Dentistry	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	427PE	Pediatric Dentistry	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	522OS	Oral surgery	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	526OD	Orthodontic	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	528PT	Periodontics	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	510PR	prosthodontic	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	519CV	Restorative Dentistry	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	529OM	Oral Medicine	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	530PAPD	Pediatric Dentistry	Basic	√	√	√	√	√	√	√	√	√	√	√	√
	531PD	Preventive Dentistry	Basic	√	√	√	√	√	√	√	√	√	√	√	√

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

Academic Program Description First Stage

1. Course Name:	
General Human Anatomy	
2. Course Code:	
101AN	
3. Semester / Year:	
2 semester/ first year	
4. Description Preparation Date:	
2025-2026	
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 head 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 Outcomes	Unit or subject name	Learning method	Evaluation method
1.	1	• Understanding and assimilating the scientific data. • Possibility of inference and access to any part of the body strictly and	Introduction to Human Anatomy Descriptive Anatomic Terms	- Theoretical lectures	- Quizzes
2.	1		Basic Structures: Skin, Fasciae, Muscle, Joints, Ligament, Bursae	- Illustrating images and movies.	- Seminars
3.	1		Basic Structures: Bone, Cartilage, Blood Vessels, Lymphatic System	- X- rays	- Tutorial
4.	1		Basic Structures: Bone, Cartilage, Blood Vessels,	- Problem-based learning, collaboration	- Free question on
					- Daily following activity

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

		Mediastinum, Pleurae, Trachea, Bronchi, Lungs		
21.	1	Thoracic cavity: Mediastinum, Pleurae, Trachea, Bronchi, Lungs		
22.	1	Pericardium, Heart, Large arteries, veins and nerves of thorax		
23.	1	Pericardium, Heart, Large arteries, veins and nerves of thorax		
24.	1	Pericardium, Heart, Large arteries, veins and nerves of thorax		
25.	1	• Bones of the Shoulder (Pectoral girdle) girdles • Bones of the Upper extremities		
26.	1	• Bones of the Shoulder (Pectoral girdle) girdles • Bones of the Upper extremities		
27.	1	• Bones of the Pelvic girdle • Bones of the Lower extremities		
28.	1	• Bones of the Pelvic girdle • Bones of the Lower extremities		
29.	1	Abdominal cavity and organs		
30.	1	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	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. 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:					
2025-2026					
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:					
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 Outcomes	Unit or subject name Theoretical	Learning method	Evaluation method
1	2	Knowledge and	Introduction to medical	Problem-based	Short, semester,

		understanding, subject-specific skills	and oral biology	learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	mid-year and final exams
2	2	Knowledge understanding, subject-specific skills	Prokaryote and eukaryote	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
3	2	Knowledge understanding, subject-specific skills	General and immunology	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
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	2	Knowledge and understanding, subject-specific skills	Simple epithelial tissue (Tongue)	Problem-based learning, collaboration, discussion, debriefing, information	Short, semester, mid-year and final exams

				review, practical research, computer-based learning.	
7	2	Knowledge understanding. subject-specific skills	Stratified epithelial tissue	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
8	2	Knowledge understanding. subject-specific skills	Glandular epithelial tissue (salivary gland)	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
9	2	Knowledge understanding. subject-specific skills	General connective tissue (blood)	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
10	2	Knowledge understanding. subject-specific skills	Muscular tissue	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	Nerve tissue	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams

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

				information review, practical research, computer-based learning.	
18	2	Knowledge understanding. subject-specific skills	Nucleic acid, DNA and RN	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	Introduction to parasitolog	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	Types of parasites and hosts	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	General and oral protozoa	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
22	2	Knowledge understanding. subject-specific skills	Human amoebas, E. histolytica, E.coli, E.gingivalis	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams

23	2	Knowledge understanding. subject-specific skills	Flagellates, Giardia lamblia, Trichomonas tenax, T.hominas, T.vaginalis	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
24	2	Knowledge understanding. subject-specific skills	Leishmania , cutaneous and vesiral	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
25	2	Knowledge understanding. subject-specific skills	Sporozoa, Plasmodium sp	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
26	2	Knowledge understanding. subject-specific skills	Toxoplasma gondii	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
27	2	Knowledge understanding. subject-specific skills	Nemathelminthes, Ascaris lumbricoides,	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
28	2	Knowledge understanding. subject-specific skills	Ancylostoma duodenale, Entrobilus vermicularis	Problem-based learning, collaboration, discussion, debriefing,	Short, semester, mid-year and final exams

				information 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
15	Nerve cell
16	Central and peripheral nerve system

17	Spinal cord and meninges
18	<i>Entamoeba histolytica</i> , <i>Entamoeba coli</i>
19	<i>Giardia lamblia</i> , <i>Trichomonas vaginalis</i>
20	<i>Trichomonan tenax</i>
21	<i>Leishmania tropica</i> , <i>Leshmania donovani</i>
22	<i>Trypanosoma gambiense</i> , <i>T.rhodesiense</i>
23	<i>Plasmodium vivax</i> , <i>Toxoplasma gondii</i>
24	<i>Balantidium coli</i>
25	<i>Echinococcus granulosus</i> , <i>Taenia saginata</i> <i>Taenia solium</i>
26	<i>Ancylostoma</i> , <i>Ascaris</i> , <i>Entrobilus</i>
27	<i>Schistosoma spp</i> , <i>Fasciola hepatica</i>
28	Endoskeleton of frog
29	Experiment...examine samples of water
30	Experiment...examine samples of water (one hour), Experiment ...Blood 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:					
2025-2026					
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: Abdulala 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					
Strategy		• Knowledge and understanding • Skill goals • Stimulus and response method • Long, short and semester exams Thinking skills			
10. Course Structure					
Week	Hours	Required Learning Outcome s	Unit or subject name Theoretical	Learning method	Evaluation method
1	2	Knowledge & understanding subject-spec skills	Introduction about comp /Hardware and Software/comp structure/ Floppy magnetic dis	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
2	2	Knowledge & understanding subject-spec skills	E-learning	Problem-based learning, collaboration, discussion, debriefing,	Short, semester, mid-year and final exams

				information review, practical research, computer-based learning.	
3	2	Knowledge understandi subject-spec skills	Introduction to E-learning Go Classroom Platform Google dri	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
4	2	Knowledge understandi subject-spec skills	Google forms	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
5	2	Knowledge understandi subject-spec skills	Online conferencing	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
6	2	Knowledge a understandi subject-speci skills	Introduction about Windows look at Windows 10/Sta Windows 10/Working with windows Program	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
7	2	Knowledge understandi subject-speci skills	Working with files and fold Using My computer	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
8	2	Knowledge understandi subject-speci skills	Working with Taskbar Desktop	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
9	2	Knowledge understandi subject-speci	Using Windows Accessories	Problem-based learning, collaboration,	Short, semester, mid-year and final exams

		skills		discussion, debriefing, information review, practical research, computer-based learning.	
10	2	Knowledge understanding subject-specific skills	A look at Control Panel	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	Windows Explorer	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
12	2	Knowledge understanding subject-specific skills	Libraries	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
13	2	Knowledge understanding subject-specific skills	Introduction about Microsoft Word 2016 A look at Microsoft Word /Editing Document	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
14	2	Knowledge understanding subject-specific 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 understanding subject-specific skills	Formatting paragraphs	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
16	2	Knowledge understanding	Proofing documents	Problem-based learning,	Short, semester mid-year and

		subject-specific skills		collaboration, discussion, debriefing, information review, practical research, computer-based learning.	final exams
17	2	Knowledge understanding subject-specific skills	Adding Tables	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	Inserting Graphic Elements	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	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 understanding subject-specific 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 understanding subject-specific 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 understanding subject-specific skills	Formatting a worksh Developing a work book	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams

23	2	Knowledge understanding subject-specific skills	Printing Contents/Customizing Layout Workb	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
24	2	Knowledge understanding subject-specific 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 understanding subject-specific skills	Creating Data tables /properties the fields	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
26	2	Knowledge understanding subject-specific skills	Querying the database/Design 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 understanding subject-specific skills	Introduction about Micro Power point/starting po	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
28	2	Knowledge understanding subject-specific skills	Formatting text/Using graph 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 understanding subject-specific skills	Manipulating the slides/UMultimedia Elements	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based	Short, semester, mid-year and final exams

				learning.	
30	2	Knowledge understanding subject-specific skills	Power point Management	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	Introduction about computer /Hardware and Software/computer structure/`Floppy magnetic disks.
2	Operating systems/CD-ROM/
3	Create Files & Folders High level programming language /Constant and variable/Library Function /Arithmetic expression/Type of Monitor /Number of systems
4	Introduction about MS-DOS Operating systems/DOS drive /Key-Board
5	DOS commands /Internal Commands/External Commands
6	Introduction about Windows /A look at Windows 7/Stating Windows 7/Working with a windows Program
7	Working with files and folders/ Using My computer
8	Working with Taskbar and Desktop
9	Using Windows Accessories
10	A look at Control Panel
11	
12	Libraries
13	Introduction about Microsoft Word A look at Microsoft Word /Editing Document
14	Formatting Text/
15	Formatting paragraphs
16	Proofing documents
17	Adding Tables
18	Inserting Graphic Elements
19	Controlling page Appearance
20	Introduction about Excels /A Look at Microsoft Excel
21	Modifying A Worksheet /performing Calculations
22	Formatting a worksheet/ Developing a work book
23	Printing Workbook Contents/Customizing Layout
24	Introduction about Microsoft Access/ A look at Microsoft Access

25	Creating Data tables /properties of the fields
26	Querying the database/Designing Forms/Producing reports
27	Introduction 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

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)	• E-learning concepts and techniques • Computer application in management
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

1. Course Name:	
Medical Physics	
2. Course Code:	
PS107	
3. Semester / Year:	
2 semester/ First stage	
4. Description Preparation Date:	
2025-2026	
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
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	Terminology, Modeling, Measurement Terms: Medical Physics, physics medicine, Physical therapy, Head Physics	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
2	2	Knowledge understanding, subject-specific skills	Radiological Physics, clinical physics. Modeling, Accuracy, Precision False Positive, False Negative	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based 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, Force of muscle and joint	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
4	2	Knowledge understanding, subject-specific skills	Physics of teeth, Forces on normal teeth, Some Simple Cases of tooth Physics in Orthodontics ,Crowns 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 understanding. subject-specific skills	Bones:(Function of bones, Composition of bone, bone remodeling, compact and trabecular bone)	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
6	2	Knowledge and understanding. subject-specific skills	Stress-strain curve compressive and tensile stress, young modulus). Bone joints :(Synovial fluid, coefficient of a joint).	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
7	2	Knowledge understanding. subject-specific skills	Heat and cold in medicine: Temperature scales, thermography, heat and cold in medicine and cryosurgery	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
8	2	Knowledge understanding. subject-specific skills	Thermal conductivity, Thermal shock. Teeth sensitive to hot or cold	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
9	2	Knowledge	Energy, work and power of thermodynamic systems	Problem-based learning.	Short, semester, mid-year and final exams

		understanding. subject-specific skills	body: First law of thermodynamic. Energy change in the body (Met, Basal metabolic rate (BMR)).	based learning, collaboration, discussion, debriefing, information review, practical research, computer- based learning.	mid-year and final exams
10	2	Knowledge understanding. subject-specific skills	Work and power. Efficiency heat losses from the body. Anaerobic phase and aerobic phase. Hypothalamus (body's thermostat).Heat lost by (radiation, convection, evaporation of sweat and respiration).	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	Pressure: Definition, absolute pressure, gauge pressure, negative pressure, unit of pressure. Measurement of pressure in the body (Manometer).Pressure inside the skull. Eye pressure.	Problem- based learning, collaboration, discussion, debriefing, information review, practical research, computer- based learning.	Short, semester mid-year and final exams
12	2	Knowledge understanding. subject-specific skills	Pressure in the skeleton. Pressure in the urinary bladder.Boyle's law: (pressure while diving).HOT (hyperbaric oxygen therapy).	Problem- based learning, collaboration, discussion, debriefing, information review, practical research, computer- based learning.	Short, semester mid-year and final exams
13	2	Knowledge understanding. subject-specific skills	Ultrasound (A-scan, B-scan, M-scan and Doppler effect).	Problem- based learning, collaboration,	Short, semester mid-year and final exams

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

				review, practical research, computer- based learning.	
18	2	Knowledge understanding. subject-specific skills	Element of the eye (pupil)	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	Element of the eye (pupil, aqueous humor, vitreous humor, sclera).	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	Visual acuity, Snellen chart, optical density.	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	Physics of diagnostic X-ray: Properties of X-ray,	Problem- based learning, collaboration, discussion, debriefing, information review, practical research,	Short, semester, mid-year and final exams

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

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

		skills	(QF)	collaboration discussion, debriefing, information review, practical research, computer- based learning.	
Lab number	Study unit title				
1	Guidelines of Medical Physics Lab and Rules must be obeyed by the students				
2	Graphing Techniques				
3	Ohm's law:				
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. voltage. -Measurement 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 spring. -To determine the work done by stretching the spring.				
13	Focal length of concave mirror: -Locating the radius of curvature				
14	Determining the focal length				

15	General review and 1 st 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: -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. - To verify Stokes' law
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. - To calculate curvature 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 2 nd course 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)	• Medical Physics • Physics of the Human Body
Recommended books and references (scientific journals, reports...)	

1. Course Name:					
Human rights and democracy					
2. Course Code:					
105HRAD					
3. Semester / Year:					
Two semesters - first year					
4. Description Preparation Date:					
2025-2026					
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			
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation 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 -Reports. -Monthly exams - Mid-year exam -final exam

2	1	Knowledge of rights duties	3- Rights in Greek and Greek civilization. 4- Rights in Roman civilization	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 -Reports. -Monthly 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 -Reports. -Monthly 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 -Reports. -Monthly 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 -Reports. -Monthly 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 -Reports. -Monthly 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 -Reports. -Monthly 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 -Reports. -Monthly 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 -Reports. -Monthly exams - Mid-year exam

13	1	Commitment to rights and duties	2-The future of rights at the national level.	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct questions -Rapid exams -Reports. -Monthly exams - Mid-year exam
14	1	Promoting concepts for democratic practice	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 -Reports. -Monthly exams - Mid-year exam
15	1	Promoting concepts for democratic practice	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 -Reports. -Monthly exams - Mid-year exam
16	1	Promoting concepts for democratic practice	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 -Reports. -Monthly exams - Mid-year exam
17	1	Promoting concepts for democratic practice	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	Promoting concepts for democratic practice	3- The undemocratic dictatorial regime.	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct questions -Rapid exams -Reports. -Monthly exams - Mid-year exam

19	1	Promoting concepts for democratic practice	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 -Reports. -Monthly exams - Mid-year exam
20	1	Promoting concepts for democratic practice	3- Independent institutions (especially judicial).	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	-Direct questions -Rapid exams -Reports. -Monthly exams - Mid-year exam
21	1	Promoting concepts for democratic practice	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	Promoting concepts for democratic practice	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 -Reports. -Monthly exams - Mid-year exam
23	1	Promoting concepts for democratic practice	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	Promoting concepts for democratic practice	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 -Reports. -Monthly exams - Mid-year exam

25	1	Developing democratic practices	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	Developing democratic practices	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 -Reports. -Monthly exams - Mid-year exam
27	1	Developing democratic practices	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	Developing democratic practices	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 -Reports. -Monthly exams - Mid-year exam
29	1	Conclusion and drawing lessons	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	Conclusion and drawing lessons	3- Political participation and public effectiveness. 4- Acceptability and the criterion for progress and advancement	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 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)			*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)			Iraqi Constitutions – Iraqi Journal (Al-Waqai') – United Nations Publications.		
Recommended books and references (scientific journals, reports...)			Journal of Political Science, issued by the College of Political Science.		
Electronic References, Websites			https://www.un.org/ar/global-issues/human-right		

1. Course Name:					
Dental anatomy					
2. Course Code:					
104DA					
3. Semester / Year:					
2 Semester/ First Stage					
4. Description Preparation Date:					
2025-2026					
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			
10. Course Structure					
Week	Hours	Required	Unit or subject	Learning method	Evaluation

		Learning Outcomes	name Theoretical		method
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	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	Knowledge 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-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	mid-year and final exams
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	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
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	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
11	4	Knowledge understanding. subject-specific skills	Permanent Mandibu Incisors	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.	
12	4	Knowledge understanding. subject-specific skills	Permanent Mandibular 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	Knowledge understanding. subject-specific skills	Permanent Mandibular 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	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
16	4	Knowledge understanding. subject-specific skills	Permanent Maxillary 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	Knowledge understanding. subject-specific skills	Permanent Premolars	Maxill	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
18	4	Knowledge understanding. subject-specific skills	Permanent First Premolars	Mandibu	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 First Premolars	Mandibu	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 Second Premolar	Mandibu	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 Molar	Maxillary	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	4	Knowledge understanding. subject-specific skills	Permanent First Molar	Maxill	Theoretical lecture using Power point, Problem-based learning, collaboration,	Short, semester, mid-year and final exams
			Permanent second and	maxill		

			third molars	discussion, debriefing, information review, practical research, computer-based learning.	
23	4	Knowledge understanding. subject-specific skills	Permanent Mandibular 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 Mandibular 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 physiologic form of teeth and periodontium	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 physiologic form of teeth and periodontium	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	Study unit title
1	Introduction to Dental Anatomy & Carving Instruments
2	Numbering systems.
3	Practical demonstration of Carving a Cube (1cm*1cm*1cm)
4	-Introduction to Anatomical landmarks on Teeth models. -Carving of a cube.
5	Description & Carving of the Labial Aspect of P. Max. Right Central Incisor.
6	Description & Carving of the 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 Canine.
12	Practical Training of Carving of P. Max. Right Canine.
13	Practical Exam. of Carving of P. Max. Right Canine.
14	Mid Year Practical 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 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	Description & Carving of the Buccal & Mesial Aspects of P. Mand. Right 1 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
30	Final Oral & Practical Examination of Tooth Carving

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)	1. Woelfel's Dental Anatomy It's Relevance to Dentistry 2. Wheeler's dental anatomy, physiology and occlusion , By Major M Ash
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

1. Course Name:					
Medical Terminology					
2. Course Code:					
109EL					
3. Semester / Year:					
2 semester/ First stage					
4. Description Preparation Date:					
2025-2026					
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)					
Riham Hussein Noor Riham.husseini@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			
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name Theoretical	Learning method	Evaluation method
1	1	Knowledge and understanding.	Prefixes & suffixes	Problem-based learn collaboration, discuss	Short, semester, mid-year and

				debriefing, informal review, practical research, computer-based learning	final exams
2	1	Knowledge understanding.	Integumentary system	Problem-based learning, collaboration, discussion, debriefing, informal review, practical research, computer-based learning	Short, semester, mid-year and final exams
3	1	Knowledge understanding.	Muscular system	Problem-based learning, collaboration, discussion, debriefing, informal review, practical research, computer-based learning	Short, semester, mid-year and final exams
4	1	Knowledge understanding.	Respiratory system	Problem-based learning, collaboration, discussion, debriefing, informal review, practical research, computer-based learning	Short, semester, mid-year and final exams
5	1	Knowledge understanding.	Digestive system	Problem-based learning, collaboration, discussion, debriefing, informal review, practical research, computer-based learning	Short, semester, mid-year and final exams
6	1	Knowledge and understanding.	Nervous system	Problem-based learning, collaboration, discussion, debriefing, informal review, practical research, computer-based learning	Short, semester, mid-year and final exams
7	1	Knowledge understanding.	Cardiovascular system	Problem-based learning, collaboration, discussion, debriefing, informal review, practical research, computer-based learning	Short, semester, mid-year and final exams
8	1	Knowledge understanding.	Blood and Lymph	Problem-based learning, collaboration, discussion, debriefing, informal review, practical research, computer-based learning	Short, semester, mid-year and final exams
9	1	Knowledge understanding.	Immune system	Problem-based learning, collaboration, discussion, debriefing, informal review, practical research, computer-based learning	Short, semester, mid-year and final exams
10	1	Knowledge understanding.	Endocrine system	Problem-based learning, collaboration, discussion, debriefing, informal review, practical research, computer-based learning	Short, semester, mid-year and final exams
11	1	Knowledge understanding.	Five sense	Problem-based learning, collaboration, discussion, debriefing, informal review, practical research, computer-based learning	Short, semester, mid-year and final exams
12	1	Knowledge understanding.	Genitourinary system	Problem-based learning, collaboration, discussion, debriefing, informal review, practical research, computer-based learning	Short, semester, mid-year and final exams
13	1	Knowledge understanding.	Dental terminology (part I)	Problem-based learning, collaboration, discussion	Short, semester, mid-year and

				debriefing, informal review, practical research, computer-based learning	final exams
14	1	Knowledge understanding.	Dental terminology part II	Problem-based learning, collaboration, discussion, debriefing, informal review, practical research, computer-based learning	Short, semester, mid-year and final exams
15	1	Knowledge understanding.	Dental terminology part III	Problem-based learning, collaboration, discussion, debriefing, informal review, practical research, computer-based learning	Short, semester, mid-year and final exams
16	1	Knowledge understanding.	Small Talk	Problem-based learning, collaboration, discussion, debriefing, informal review, practical research, computer-based learning	Short, semester, mid-year and final exams
17	1	Knowledge understanding.	Common Mistakes	Problem-based learning, collaboration, discussion, debriefing, informal review, practical research, computer-based learning	Short, semester, mid-year and final exams
18	1	Knowledge understanding.	Passive voice	Problem-based learning, collaboration, discussion, debriefing, informal review, practical research, computer-based learning	Short, semester, mid-year and final exams
19	1	Knowledge understanding.	Direct and indirect speech	Problem-based learning, collaboration, discussion, debriefing, informal review, practical research, computer-based learning	Short, semester, mid-year and final exams
20	1	Knowledge understanding.	Synonyms in English	Problem-based learning, collaboration, discussion, debriefing, informal review, practical research, computer-based learning	Short, semester, mid-year and final exams
21	1	Knowledge understanding.	Adjectives	Problem-based learning, collaboration, discussion, debriefing, informal review, practical research, computer-based learning	Short, semester, mid-year and final exams
22	1	Knowledge understanding.	Integrating a quotation into essay	Problem-based learning, collaboration, discussion, debriefing, informal review, practical research, computer-based learning	Short, semester, mid-year and final exams
23	1	Knowledge understanding.	Prepositions in English Grammar with Examples	Problem-based learning, collaboration, discussion, debriefing, informal review, practical research, computer-based learning	Short, semester, mid-year and final exams
24	1	Knowledge understanding.	Idioms and Phrases	Problem-based learning, collaboration, discussion, debriefing, informal review, practical research, computer-based learning	Short, semester, mid-year and final exams
25	1	Knowledge understanding.	Writing assignment	Problem-based learning, collaboration, discussion	Short, semester, mid-year and

				debriefing, informal review, practical research, computer-based learning	final exams
26	1	Knowledge understanding.	Pronunciation rules	Problem-based learning, collaboration, discussion, debriefing, informal review, practical research, computer-based learning	Short, semester, mid-year and final exams
27	1	Knowledge understanding.	Tenses	Problem-based learning, collaboration, discussion, debriefing, informal review, practical research, computer-based learning	Short, semester, mid-year and final exams
28	1	Knowledge understanding.	Synonyms and Antonyms	Problem-based learning, collaboration, discussion, debriefing, informal review, practical research, computer-based learning	Short, semester, mid-year and final exams
29	1	Knowledge understanding.	Paraphrasing	Problem-based learning, collaboration, discussion, debriefing, informal review, practical research, computer-based learning	Short, semester, mid-year and final exams
30	1	Knowledge understanding.	Essay writing skills	Problem-based learning, collaboration, discussion, debriefing, informal review, practical research, computer-based learning	Short, semester, mid-year and final exams

11. Course Evaluation

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

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	• Headway-English Course • Oxford English Grammar Course
Recommended books and references (scientific journals, reports...)	Dictionary of medical Terms Scientific Culture Terminology>
Electronic References, Websites	

1. Course Name:					
Arabic Language					
2. Course Code:					
102 AL					
3. Semester / Year:					
Two semesters - first year					
4. Description Preparation Date:					
2025-2026					
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: Murtaza Razzaq Hill Email : Murtaza. Razzaq@gmail .com					
8. Course Objectives					
Course Objectives		• Introducing the importance of the Arabic language..... • Reducing linguistic errors..... • Developing language skills.....			
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	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 -Reports. -Monthly 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 -Reports. -Monthly 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 -Reports. -Monthly 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 -Reports. -Monthly 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 -Reports. -Monthly 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 and its rulings Numbering and its Rhetoric sections.	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

11. Course Evaluation

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)	Fouad Nehme, Arabic Grammar, Scientific Office of Authorship Beirut 1998. Ahmed Shalabi, Arabic grammar and application to it, Egypt 1957. Abd Aoun Al-Ramadan, Encyclopedia of Poets of the Abbasid Era Clock House, Jordan 2001. Youssef Ezz Al-Din, Iraqi poets of the twentieth century, Saad Press, Baghdad, 1969.
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	https://www.youtube.com/watch?v=rnYYcOrTGfw&t=431s

• Course Name:	
Medical Chemistry	
• Course Code:	
CH106	
• Semester / Year:	
2 Semester/ First stage	
• Description Preparation Date:	
2025-2026	
• Available Attendance Forms:	
Lectures and laboratory	
• Number of Credit Hours (Total) / Number of Units (Total)	
120 hours/ 6 unite	
• Course administrator's name (mention all, if more than one name)	
Name: Dr. Dhurgham Aziz Katia Email: Dhurghamaziz417@mu.edu.iq	
• Course Objectives	
- The medicinal chemistry course aims to identify the 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	Course Objectives
• Teaching and Learning Strategies	
- Knowledge and understanding - Skill goals - Stimulus and response method - Long, short and semester exams - Thinking skills	Strategy

• Course Structure

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

		specific skills		final exams
18	4	Knowledge and understanding. subject-specific skills	Carboxylic Acids And Their Derivatives , part 1	Short, semester, mid-year and final exams
19	4	Knowledge and understanding. subject-specific skills	Carboxylic Acids And Their Derivatives , part 2	Short, semester, mid-year and final exams
20	4	Knowledge and understanding. subject-specific skills	Aldehydes and ketones	Short, semester, mid-year and final exams
21	4	Knowledge and understanding. subject-specific skills	Carbohydrates	Short, semester, mid-year and final exams
22	4	Knowledge and understanding. subject-specific skills	Monosaccharide's	Short, semester, mid-year and final exams
23	4	Knowledge and understanding. subject-specific skills	Disaccharides Carbohydrates and oral health	Short, semester, mid-year and final exams
24	4	Knowledge and understanding. subject-specific skills	Lipids	Short, semester, mid-year and final exams
25	4	Knowledge and understanding. subject-specific skills	Derived lipids The role of lipids in teeth diseases	Short, semester, mid-year and final exams
26	4	Knowledge and understanding. subject-specific skills	Proteins	Short, semester, mid-year and final exams
27	4	Knowledge and understanding. subject-specific skills	Amino acids Effects of protein on oral health	Short, semester, mid-year and final exams
28	4	Knowledge and understanding. subject-specific skills	Nucleic Acids	Short, semester, mid-year and final exams
29	4	Knowledge and understanding. subject-specific skills	Nucleosides, Nucleotides	Short, semester, mid-year and final exams
30	4	Knowledge and understanding. subject-specific skills	Deoxy and ribo Nucleic acids	Short, semester, mid-year and final exams

Lab number	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

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

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

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	

**Academic Program
Description
Second Stage**

1. Course Name:	
General Human Anatomy	
2. Course Code:	
201AN	
3. Semester / Year:	
2 semester/ second year	
4. Description Preparation Date:	
2025-2026	
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 head 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 - Enhancing feedback. - Short and long tests..

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

8.	1	easily.	Face	collaboration, discussion, debriefing, information review, practical research, computer-based learning.	
9.	1		Oral cavity		
10.	1		Oral cavity		
11.	1		Tongue		
12.	1		Temporal region		
13.	1		Parotid gland		
14.	1		Parotid gland		
15.	1		The Pterygopalatine fossa		
16.	1		Temporomandibular joint		
17.	1		Temporomandibular joint		
18.	1		The neck		
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. 3. Gray's Atlas of Anatomy, 3rd edition. Elsevier 2021

Course Name:					
Biochemistry					
Course Code:					
BC212					
Semester / Year:					
2 Semester/ Second stage					
Description Preparation Date:					
2025-2026					
Available Attendance Forms:					
Lectures and laboratory					
Number of Credit Hours (Total) / Number of Units (Total)					
120 hours/ 6 unite					
Course administrator's name (mention all, if more than one name)					
Name: Dr. Dhurgham Aziz Katia Email: Dhurghamaziz417@mu.edu.iq					
Course Objectives					
Course Objectives		An introduction to biochemistry and understanding its functions, resulting variables, irregularities in its levels, biological, patholog implications and methods of measuring their levels			
Teaching and Learning Strategies					
• Knowledge and understanding • Skill goals • Stimulus and response method • Long, short and semester exams Thinking skills					
Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name Theoretical	Learning method	Evaluation method
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	Short, semester, mid-year and final exams

2	4	Knowledge and understanding. subject-specific s	Mechanism of enzyme action	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
3	4	Knowledge and understanding. subject-specific s	Clinical significance of enzyme assays	Problem-based learning, collaboration, discussion, debriefing, information review, practical research,	Short, semester, mid-year and final exams

				computer-based learning.	
4	4	Knowledge and understanding. subject-specific s	Vitamins, definition, classification	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
5	4	Knowledge and understanding. subject-specific s	Digestion and absorption of carbohydrates, lipids ,an proteins	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
6	4	Knowledge and understanding. subject-specific ski	Chemistry of carbohydrates	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
7	4	Knowledge and understanding. subject-specific ski	Metabolism of Carbohydrates: part 1	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
8	4	Knowledge and understanding. subject-specific ski	Metabolism of Carbohydrates: part 2	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
9	4	Knowledge and understanding. subject-specific ski	Carbohydrates metabolism regulation	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
10	4	Knowledge and understanding. subject-specific ski	Chemistry of Proteins and amino acids	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
11	4	Knowledge and understanding. subject-specific ski	Metabolism of Proteins and amino acids	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
12	4	Knowledge and understanding. subject-specific ski	Metabolism of Protein and amino acid regulation	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
13	4	Knowledge and understanding. subject-specific ski	Metabolism of Protein and amino acid inherited disorder	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams

14	4	Knowledge and understanding. subject-specific ski	Exam	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
15	4	Knowledge and understanding. subject-specific ski	Lipid :definition, classification	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
16	4	Knowledge and understanding. subject-specific ski	Metabolism of Lipid: oxidation of Fatty Acids	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
17	4	Knowledge and understanding. subject-specific ski	Biosynthesis of Fatty Acids	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
18	4	Knowledge and understanding. subject-specific ski	Integration of metabolism of carbohydrates, lipid ,an Proteins	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
19	4	Knowledge and understanding. subject-specific ski	Metabolism of Purines and Pyrimidines Derivatives part 2	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
20	4	Knowledge and understanding. subject-specific ski	Metabolism of Purines and pyrimidines disorder	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
21	4	Knowledge and understanding. subject-specific ski	Nucleic Acids Definition and Protein synthesis	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
22	4	Knowledge and understanding. subject-specific ski	Hormone definition, classification	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
23	4	Knowledge and understanding. subject-specific ski	Hormone disorder	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
24	4	Knowledge and	Acid-base balance	Problem-based learning,	Short, semester,

		understanding. subject-specific sk		collaboration, discussion, debriefing, information review, practical research, computer-based learning.	mid-year and final exams
25	4	Knowledge and understanding. subject-specific sk	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 sk	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 sk	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 sk	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 sk	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 sk	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 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

Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	Lippincott's Illustrated Reviews , Biochemistry Tietz Fundamentals of Clinical Chemistry
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

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	Embryogenesis: week, ovulation, fertilization implantation	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
2	2	Knowledge understanding. subject-specific skills	2nd week, Bilaminar germ layer	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
3	2	Knowledge understanding. subject-specific skills	3rd week trilaminar germ layer: gastrulation and neurulation	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
4	2	Knowledge understanding. subject-specific skills	Development of head and neck (pharyngeal arch, pouch & cleft)	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	Development of face and anomalies	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
6	2	Knowledge and understanding. subject-specific skills	Development of tooth and anomalies 2	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
7	2	Knowledge understanding. subject-specific skills	Development of palate and anomalies	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
8	2	Knowledge understanding. subject-specific skills	Slide preparation	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
9	2	Knowledge understanding. subject-specific skills	Tooth development developmental disturbances of teeth	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
10	2	Knowledge understanding. subject-specific	Dentinogenesis dentin structure	Problem-based learning, collaboration, discussion, debriefing, information review,	Short, semester 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, computer-based 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, computer-based 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, computer-based learning.	Short, semeste mid-year and final exams
14	2	Knowledge understanding. subject-specific skills	Cementum and clin consideration 2	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based 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, computer-based 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, computer-based 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, computer-based 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, computer-based 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, computer-based 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, computer-based 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 junction	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester 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, computer-based learning.	Short, semester mid-year and final exams
24	2	Knowledge understanding, subject-specific skills	Shedding of teeth	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
25	2	Knowledge understanding, subject-specific skills	Salivary gland	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
26	2	Knowledge understanding, subject-specific skills	Salivary proteins	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
27	2	Knowledge understanding, subject-specific skills	TMJ	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
28	2	Knowledge understanding, subject-specific skills	Maxillary sinus	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
29	2	Knowledge understanding, subject-specific skills	Histochemistry	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	Age changes of soft and hard tissues	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	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 Resources

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	

1. Course Name:					
Histology					
2. Course Code:					
213 GH					
3. Semester / Year:					
2 semester/ second stage					
4. Description Preparation Date:					
2025-2026					
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					
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 Learning Outcomes	Unit or subject name Theoretical	Learning method	Evaluation method
1	2	Knowledge and understanding, subject-specific skills	Cells, Basic Tissue	Problem-based learning, collaboration, discussion, debriefing,	Short, semester, mid-year and final exams

				information review, practical research, computer-based learning.	
2	2	Knowledge understanding, subject-specific skills	Epithelial Tissue	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
3	2	Knowledge understanding, subject-specific skills	Connective Tissue	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
4	2	Knowledge understanding, subject-specific skills	Respiratory System: conducting portion	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	Respiratory System: respiratory portion	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
6	2	Knowledge and understanding, subject-specific skills	Urinary System: kidney nephrons, collecting tubules ducts	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
7	2	Knowledge understanding, subject-specific skills	Urinary System: ureter, urinary bladder, and male and female urethra	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
8	2	Knowledge understanding, subject-specific	Integumentary System: Skin:	Problem-based learning, collaboration,	Short, semester mid-year and final exams

		skills	epidermis, dermis	discussion, debriefing, information review, practical research, computer-based learning.	
9	2	Knowledge understanding. subject-specific skills	Integumentary System: skin glands, hair, and nails	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
10	2	Knowledge understanding. subject-specific skills	Hemopoiesis: marrow	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	Hemopoiesis: blood cell	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
12	2	Knowledge understanding. subject-specific skills	Circulatory System	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
13	2	Knowledge understanding. subject-specific skills	Circulatory System	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
14	2	Knowledge understanding. subject-specific skills	Lymphoid System	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
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 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
23	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
24	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
25	2	Knowledge understanding. subject-specific skills	Male Reproductive System	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
26	2	Knowledge understanding. subject-specific skills	Male Reproductive System	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
27	2	Knowledge understanding. subject-specific skills	Female Reproductive System	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
28	2	Knowledge understanding. subject-specific skills	Female Reproductive System	Problem-based learning, collaboration, discussion, debriefing, information review, practical research,	Short, semester, mid-year and final exams

				computer-based learning.	
29	2	Knowledge understanding, subject-specific skills	Special Sense Organs: e	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	Special Sense Organs: e	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	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	Slides of skin glands, hair
10	Slides of bone marrow types
11	Slides of blood cells development
12	Slides of large artery (aorta), small artery
13	Slides of medium sized vein
14	Slides of lymph nodes, palatine tonsils
15	Slides of thymus, spleen
16	Slides of nerve fibers, spinal cord
17	Slides of ganglia, cerebrum, and cerebellum
18	Slides of pituitary gland, thyroid gland
19	Slides of parathyroid glands, adrenal glands
20	Slides of pineal gland, endocrine pancreas
21	Slides of lip, tongue, and salivary glands
22	Slides of esophagus, stomach

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	Slides 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	

1. Course Name:					
Dental Material					
2. Course Code:					
209DM					
3. Semester / Year:					
2 semester/ Second stage					
4. Description Preparation Date:					
2025-2026					
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 property 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 skills	Materials • Physical, chemical and biological properties of dental materials	lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	mid-year and final exams
2	3	Knowledge understanding, subject-specific skills	• Mechanical properties	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	Gypsum materials • Definition, requirement, types, • gypsum bonded investment • phosphate bonded investment • ethyl silicate bonded	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	Gypsum materials	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion,	Short, semester, mid-year and final exams

				debriefing, information review, practical research, computer- based learning.	
5	3	Knowledge understanding. subject-specific skills	Impression materials • Definition • Ideal properties of impression Materials • Classification of Impression Materials * Non elastic impression Materials * Impression plaster * Impression compound * Zinc oxide – eugenol * Elastomeric impress 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
6	3	Knowledge and understanding. subject-specific skills	Impression materials	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	3	Knowledge understanding. subject-specific skills	Impression materials	Theoretical lecture using Power point, Problem- based learning, collaboration, discussion, debriefing, information review, practical research, computer- based	Short, semester, mid-year and final exams

				learning.	
8	3	Knowledge understanding. subject-specific skills	Impression materials	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	3	Knowledge understanding. subject-specific skills	Impression materials	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	3	Knowledge understanding. subject-specific skills	Waxes • Definition, • Requirements, • classification of wax according to origin & melting point, • classification of wax according to uses, properties of different waxes.	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
11	3	Knowledge understanding. subject-specific skills	Waxes	Theoretical lecture using Power point, Problem-based learning,	Short, semester, mid-year and final exams

				collaboration, discussion, debriefing, information review, practical research, computer-based learning.	
12	3	Knowledge understanding, subject-specific skills	Polymers • Polymers and polymerization • Definition of polymer, copolymer, cross-link polymer and Degree of polymerization • Factors which control Structure and properties of polymer • Types of polymerization • Heat activated acrylic » Composition » Properties • Chemically activated resin » Composition » Properties	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	Polymers • Chemically activated resin compared to heat activated resins • Polymers used in dentistry • Processing errors	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	3	Knowledge understanding, subject-specific skills	Investment materials • factors affecting setting time, setting expansion, strength, storage and manipulation Of gypsum products, and	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion,	Short, semester, mid-year and final exams

			hygroscopic expansion	debriefing, information review, practical research, computer-based learning.	
15	3	Knowledge understanding. subject-specific skills	Cement materials • Classification of dental cements • Definition • Requirements	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	3	Knowledge understanding. subject-specific skills	Temporary filling • Definition	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	3	Knowledge understanding. subject-specific skills	Metal and metal alloy • indication • Types • Requirements • Metallic denture base Materials • Types of metal and metal Alloys • Definition of alloy • Requirement of casting Alloy • Application of dental alloy • classification of metal • classification of dental	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based	Short, semester, mid-year and final exams

			Alloy • gold foil (advantage, disadvantages) • gold alloys • Composition • Properties	learning.	
18	3	Knowledge understanding. subject-specific skills	Metal and metal alloy	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	Metal and metal alloy • Alternative of gold alloys • Metal ceramic alloys • Requirement • Types • Removable denture base Alloys • Requirements • Types • Co -Cr alloy • Application • Composition • properties, •Advantages • Disadvantages	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	Metal and metal alloy * Titanium and Titanium alloys • Applications • Properties • Ni/Cr alloys • Composition • Indications • Wrought stainless steel allo	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	Filling materials • Direct filling material - Definition - Factors causing loss of tooth substance - Requirement of an ideal Filling material. - Classification of filling Material - 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, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
22	3	Knowledge understanding. subject-specific skills	filling 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
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

				research, computer-based learning.	
24	3	Knowledge understanding, subject-specific skills	Filling materials	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	3	Knowledge understanding, subject-specific skills	Preventive materials • Preventive materials	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	3	Knowledge understanding, subject-specific skills	Root canal filling materials (obturating materials) • Root canal filling materials (obturating 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
27	3	Knowledge understanding, subject-specific	Finishing and polishing material	Theoretical lecture using Power point,	Short, semester, mid-year and final exams

		skills	• Finishing and polish material	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	
28	3	Knowledge understanding, subject-specific skills	Relining material • Definition • Types • Requirements • Indication • Soft liners - Types - Requirements - Indication - Properties	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	Implant materials	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	Maxillofacial materials	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information	Short, semester mid-year and final exams

				review, practical research, computer- based learning.	
Lab number	Study unit title				
1	Introduction and physical properties of dental material				
2	Mechanical properties (stress strain curve)				
3	Showing different types of gypsum materials (plaster and stone)				
4	Steps of mixing plaster and demonstrate the steps of setting				
5	Impression plaster, demonstrate the manipulation of impression compound				
6	Zinc oxide impression material and agar impression demonstrate the mixing of zinc oxide impression				
7	Alginate impression (elastic impression) showing the trays used and the mixing of alginate and water according to manufacturer instructions				
8	Polysulphide, condensation and addition silicon\mixing of heavy body and light body				
9	Polyether, hybrid impression, digital impression				
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	Introduction to polymers				
13	Different types of denture base materials(heat, cold and light activated polymers) demonstrate the mixing of polymer and monomer				
14	Thermoplastic polymers (flexible denture base material)				
15	Investment materials (showing the method of the investment)				
16	Introduction to cement materials				
17	Showing different types of cement materials and the method of mixing of cement				
18	Temporary filling (use and manipulation)				
19	Introduction to metal and metal alloy				
20	Showing the different types of metal and metal alloy				
21	Introduction to crown and bridge material				
22	Introduction to filling material				
23	Amalgam filling showing the amalgam capsules and mixing of amalgam				
24	Composite filing (chemical and light activated)				
25	Micro filled, hybrid, and nano-composite				

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

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)	Philips science of dental materials 2012 edition 12 Craig's Restorative dental materials 2018 edition
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

1. Course Name:					
Prosthodontics					
2. Course Code:					
210 PR					
3. Semester / Year:					
2 Semester/ second Stage					
4. Description Preparation Date:					
2025-2026					
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					
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 Learning	Unit or subject name Theoretical	Learning method	Evaluation 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 components	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	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, computer-based 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 of special tray - □ Types of special tray - □ Techniques or methods for construction of special 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 - • Dental impression – Definition - • Complete denture impression – Definition - • Objective of impression making - • Primary impression – Definition - • Materials used for making primary impression • Primary cast – Definition - • Production of study 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	- Record Base - • Record base – Definition - • Requirements of record base - • Types of materials used in construction of record base	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.	
8	5	Knowledge understanding. subject-specific skills	- Occlusion Rims - • Occlusion rims – Definition - • Requirements of occlusion rim - • Materials used in construction of occlusion rim - • Measurements of maxillary occlusion rim - • Measurements of mandibular occlusion rim - • Uses of occlusion rim - • Occlusal plane • Fox – bite	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	5	Knowledge understanding. subject-specific skills	Anatomy And Physiology Of Temporomandibular Joint • Temporomandibular joint (TMJ) – Definition • Ligaments • Muscles	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	5	Knowledge understanding. subject-specific skills	Anatomy And Physiology Of Temporomandibular Joint • Mandibular axes and mandibular movements • Knowledge of mandibular movements • Mandibular movements	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
11	5	Knowledge understanding. subject-specific skills	Maxillomandibular relation • Types of jaw relation • Vertical jaw relation □ Rest position □ Inter	Theoretical lecture using Power point, Problem-based learning,	Short, semester, mid-year and final exams

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

			☐ Types of face – bow ☐ Important of the face – bow	learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	
16	5	Knowledge understanding. subject-specific skills	Mounting • Mounting ☐ Definition ☐ Preparation of articulator ☐ Preparation of the casts and mounting the upper cast on CL II articulator ☐ Mounting the lower cast ☐ Errors occurred during mounting	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	5	Knowledge understanding. subject-specific skills	Selection Of Artificial Teeth • Selection of anterior teeth ☐ The factors of shade selection - Width ☐ Materials of anterior teeth ☐ Difference between acrylic and porcelain teeth	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
18	5	Knowledge understanding. subject-specific skills	Selection Of Posterior Teeth ☐ Shade ☐ Bucco -lingual width ☐ Mesio -distal length ☐ Occluso -gingival height ☐ Occlusal form ☐ Advantages of casp form teeth ☐ Advantages of non - cusp f teeth	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	5	Knowledge understanding. subject-specific	i. Arrangement Of Artificial Teeth ii. • Guideline of artificial	Theoretical lecture using Power point,	Short, semester mid-year and final exams

		skills	Teeth iii. arrangement iv. □ Arrangement of anterior teeth v. □ Arrangement of upper anterior teeth	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	
20	5	Knowledge understanding. subject-specific skills	Arrangement Of Posterior Teeth Curve of Spee • Compensatory curves • Arrangement of lower posterior teeth • Arrangement of upper posterior teeth • Common errors in arrangement of teeth	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	5	Knowledge understanding. subject-specific skills	Waxing And Carving • Waxing □ Definition □ Requirements of waxing the polish surfaces □ The procedure of waxing □ Establishing the posterior palatalseal area posterior palatal seal area □ Advantages of posterior palatalseal • Esthetic consideration in complete denture	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	5	Knowledge understanding. subject-specific skills	Complete Denture Occlusion • Occlusion denture relation	Theoretical lecture using Power point	Short, semester, mid-year and final exams
23	5	Knowledge understanding. subject-specific skills	Complete Denture Occlusion Eccentric occlusion □ Concepts of complete denture occlusion □ Try -in appointment	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information	Short, semester, mid-year and final exams

				review, practical research, computer- based learning.	
24	5	Knowledge understanding. subject-specific skills	Processing Of The Denture (Flasking) • Flasking of the denture □ Flask techniques	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	5	Knowledge understanding. subject-specific skills	Occlusal Correction • Causes of errors in occlusion • Selective grinding Correction of occlusal errors • Disadvantages of intra – oral correction • Advantages of extra – oral correction • Rules for selective grinding	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	5	Knowledge understanding. subject-specific skills	Finishing And Polishing Of Complete Denture • Procedure of finishing • Grinding and cutting instruments • Polishing of complete denture • Principles of polishing • Procedures of polishing	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	5	Knowledge understanding. subject-specific skills	Repair Of Complete Denture • Types of material used in repair • Causes of denture fracture • Types of repair • Laboratory procedure for repair	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing,	Short, semester mid-year and final exams

			fractured denture base	information review, practical research, computer-based learning	
28	5	Knowledge understanding, subject-specific skills	Repair Of Complete Denture • Replacement of broken or missing tooth • Replacement of missing or lost part • Requirement of repair	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	5	Knowledge understanding, subject-specific skills	Relining And Rebasing • Indication for relining or rebasing • Relining • Contraindications of relining and rebasing • The impression techniques relining and rebasing	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	5	Knowledge understanding, subject-specific skills	Relining And Rebasing • Laboratory procedures for relining • Rebasing • The chair – side relining 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

Lab number	Study unit title
1	Clinical and laboratory steps of complete denture construction
2	Taking primary impression on metal mold by impression compound and beading and boxing and pouring 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

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)	. Textbook of complete denture 6th edition updated 2009 2. Zarb, George A., Rhonda Jacob, and Ste Eckert. Prosthodontic treatment for edentulous 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:					
2025-2026					
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 Learning Outcomes	Unit or subject name Theoretical	Learning method	Evaluation method
1	2	Knowledge and understanding, subject-specific skills	Introduction (Function of the human body) organization of the human body Cell physiology, Cell membrane Cell components , Cell Junction)	Problem-based learning, collaboration	Short, semester, mid-year and final exams

				n, discussion, debriefing, information review, practical research, computer- based learning.	
2	2	Knowledge understanding. subject-specific skills	Body fluid (Type of body fluids, Intracellular and extracellular, Daily intake of water, Daily loss of body water, Constituents of extracellular and intracellular fluids, Major factors contribute to the movement of fluid, Specialized Fluids of the Body) Edema (Types of Edema, Cause of edema, Measurement of body fluid volume, Dehydration, Types of dehydration, Classification, Causes, Signs and Symptoms Dehydrations)	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
3	2	Knowledge understanding. subject-specific skills	Homeostasis and Transport across cell membrane (Diffusion (passive), Carrier-mediated transport (passive or active), Vesicular transport).	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
4	2	Knowledge understanding. subject-specific skills	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), (speech : Definition, Mechanism, Nervous system)	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams

			Control, Applied Physiology)		
5	2	Knowledge understanding. subject-specific skills	Salivary functions and Regulation of Salivary Secretion (Composition of Saliva, Saliva Components, Properties of Saliva, Functions of Saliva, Effect of Drugs and Chemicals on Salivary Secretion, Maintenance of Tooth Integrity, The Diagnostic Applications of Saliva and forensic uses of saliva, Disadvantages/Limitations Saliva)	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
6	2	Knowledge and understanding. subject-specific skills	BLOOD (Composition of blood Hematocrit, Plasma , Function blood), Red blood cells (Genesis of R.B.C, polycythemia, Anemia, Destruction of R.B.C.s)	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
7	2	Knowledge understanding. subject-specific skills	White Blood Cells (Types of W.B.C. , Genesis of the leukocytes, Life span of the W.B.C., Phagocytosis, Inflammation, Leukemia's, Leukopenia)	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
8	2	Knowledge understanding. subject-specific skills	Hemoglobin (Formation of Hemoglobin , Iron Metabolism , Compounds , Destruction of Hemoglobin The common causes of jaundice)	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-	Short, semester mid-year and final exams

				based learning.	
9	2	Knowledge understanding. subject-specific skills	Blood groups (Agglutination, Agglutinins, The Rh Group, Formation of Anti-Rh, agglutinins, Erythroblastosis Fetalis , Effect of the Mother's Antibodies on Fetus, Transfusion Reaction resulting from mismatched Blood Types , Nature of Antibodies)	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
10	2	Knowledge understanding. subject-specific skills	Hemostasis and blood coagulation (Vascular Spasm , Formation of Platelet Plug , Mechanism of Platelet Plug , Mechanism of Blood Coagulation , Prevention of Clotting in the Normal Vascular System Prevention of Blood Coagulation outside the Body , Blood Disease)	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	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)	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
12	2	Knowledge understanding. subject-specific skills	Cardiovascular system: Blood pressure (Cardiac Cycle, Heart Sound, Cardiac Output, Heart Rate Regulation, Arterial Blood Pressure and Regulation of ABP Venous Pressure and Capillary Pressure Arterial Pulse and Venous Pulse Regional Circulation)	Problem-based learning, collaboration, discussion, debriefing, information review, practical research,	Short, semester mid-year and final exams

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

				practical research, computer-based learning.	
17	2	Knowledge understanding. subject-specific skills	SPECIAL SENSATION: Vision, Hearing, taste & smell (Structure of Eye, Visual Process and Field of Vision, Visual Pathway Pupillary Reflexes, Color Vision, and Errors of Refraction. Structure of Ear and Auditory Pathway ,Mechanism of Hearing and Auditory Defects, Sensation of Taste and Smell)	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	Temperature of the Body (Normal body Temperature Physiological Variations of body temperature, Heat Balance, Heat gain or heat production in the body Heat loss from the body, Insulation System of the Body, Blood flow the skin from the body core provide heat transfer, Regulation of body temperature, Mechanisms decrease or increase body temperature, Sympathetic “Chemical” Excitation of heat production)	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	Urinary system (Parts of Renal system, The Kidney, Functions of kidneys, Components of kidney, Parenchyma of kidney, Nephron and Juxtaglomerular Apparatus, Renal corpuscle, Structure of Renal corpuscle, Tubular portion nephron, Collecting duct)	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	Urinary system: Urine formation (Mechanism of urine formation, Glomerular Filtration, Pressure determining filtration, Tubular	Problem-based learning, collaboration, discussion,	Short, semester mid-year and final exams

			Reabsorption, Tubular secretion 2 48 Micturition, Nerve supply to urin bladder and sphincters, Re Function Tests, Relation betw renal disease & oral health)	debriefing, information review, practical research, computer- based 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)	Problem- based learning, collaboratio n, discussion, debriefing, information review, practical research, computer- based learning.	Short, semester, mid-year and final exams
22	2	Knowledge understanding. subject-specific skills	Major Endocrine Glands (Oral manifestations of endocr dysfunction, Control System Involving Hypothalamus Pituitary glands, The pituitary gla Thyroid gland, Pancreas gla Adrenal glands)	Problem- based learning, collaboratio n, discussion, debriefing, information review, practical research, computer- based 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 Secretio Mixing of Stomach Conte Stomach Emptying	Problem- based learning, collaboratio n, discussion, debriefing, information review, practical research, computer- based learning.	Short, semester, mid-year and final exams
24	2	Knowledge understanding. subject-specific skills	Digestive system (small intestine , Secretions of the Small Intestine, Movement in the	Problem- based learning, collaboratio n,	Short, semester, mid-year and final exams

			Small Intestine, Liver, Functions of the Liver, Pancreatic Secretions, Regulation of Pancreatic Secretion, Large Intestine, Movement in Large Intestine Digestion, Absorption, and Transport)	discussion, debriefing, information review, practical research, computer-based learning.	
25	2	Knowledge understanding, subject-specific skills	Muscular system: Muscle structure (Types, Structure, Microscopic Structure, Muscle Physiology, Properties, Contraction, contractile elements, To Electrical and Molecular Changes during Muscular Contraction)	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
26	2	Knowledge understanding, subject-specific skills	Muscular system: Tone , contraction (Molecular Changes During Muscular Contraction, Neuromuscular Junction, Neuromuscular Transmission, Blockers, Nutrition and Metabolism (Energy Requirements))	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
27	2	Knowledge understanding, subject-specific skills	Nervous System: Nerve impulse, synapses (Nervous System Division, Cranial nerves , Neuron and Neuroglia, Receptors, Nerve impulse, Synapse and Neurotransmitters)	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
28	2	Knowledge understanding, subject-specific skills	Nervous System (Reflex Activity, Somatosensory System and Somatomotor System)	Problem-based learning, collaboration	Short, semester, mid-year and final exams

			Physiology of Pain)	n, discussion, debriefing, information review, practical research, computer- based learning.	
29	2	Knowledge understanding, subject-specific skills	Reproductive system: Aging reproductive system (M Reproductive System Fen Reproductive System, Meid Aging and Reproductive system.	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	Aviation and Deep physiology (Body Response in high altitudes, physiological Changes in the Sea deep). Nutrition and metabolism (d energy requirement, obesity fitness)	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	Microscope
2	Collection of Blood Samples
3	Blood Smears
4	Functions of Saliva & Taste Sensation
5	Stimulation and collection of salivary secretion
6	Separation of blood samples
7	Differential WBCs
8	Total Count of WBCs

9	Total Count of RBCs
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	Physiology of Skeletal muscles
28	Examination of reflexes (Motor Function)
29	Seminars and examinations
30	Seminars and examinations

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)	Guyton and Hall Medical physiology 12 th edition
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

1. Course Name:					
Baath crimes					
2. Course Code:					
218DB					
3. Semester / Year:					
Two semesters – second year					
4. Description Preparation Date:					
2025-2026					
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		• Introducing the crimes of the Baath Party..... • Rejecting deviant thought..... • Spreading a culture of moderation.....			
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, practice research, computer-base	Direct questions -Rapid exams -Reports. -Monthly exams - Mid-year exam -final exam

				learning.	
2	1	Rejecting deviant thought and practices	Baath crimes according to law of the Iraqi Supreme Criminal Court 2005	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	Rejecting deviant thought and practices	The concept of crimes and their types	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	Rejecting deviant thought and practices	Definition of crime	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Direct questions -Rapid exams -Reports. -Monthly exams - Mid-year exam
5	1	Rejecting deviant thought and practices	Crime departments	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Direct questions -Rapid exams -Reports. -Monthly exams - Mid-year exam
6	1	Rejecting deviant thought and practices	Baath crimes according to documentation by the Iraqi Supreme	Problem-based learning, collaboration, discussion, debriefing,	Direct questions -Rapid exams -Reports. -Monthly exams - Mid-year exam

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

				learning.	
12	1	Rejecting deviant thought and practices	Psychological effects of crimes	Problem-based learning, collaboration, discussion, debriefing, information review, pract research, computer-base learning.	Direct questions -Rapid exams -Reports. -Monthly exams - Mid-year exam
13	1	Rejecting deviant thought and practices	Social crimes	Problem-based learning, collaboration, discussion, debriefing, information review, pract research, computer-base learning.	Direct questions -Rapid exams -Reports. -Monthly exams - Mid-year exam
14	1	Rejecting deviant thought and practices	Militarization of society	Problem-based learning, collaboration, discussion, debriefing, information review, pract research, computer-base learning.	Direct questions -Rapid exams -Reports. -Monthly exams - Mid-year exam
15	1	Rejecting deviant thought and practices	The Baath regime's position on religion	Problem-based learning, collaboration, discussion, debriefing, information review, pract research, computer-base learning.	Direct questions -Rapid exams -Reports. -Monthly exams - Mid-year exam
16	1	Rejecting deviant thought and practices	Violating Iraqi laws	Problem-based learning, collaboration, discussion, debriefing, information review, pract	Direct questions -Rapid exams -Reports. -Monthly exams - Mid-year exam

				research, computer-base learning.	
17	1	Rejecting deviant thought and practices	Examples of human rights violations and crimes of power	Problem-based learning, collaboration, discussion, debriefing, information review, pract research, computer-base learning.	Direct questions -Rapid exams -Reports. -Monthly exams - Mid-year exam
18	1	Rejecting deviant thought and practices	Examples of decisions regarding political and military violations of the regime Resurrection	Problem-based learning, collaboration, discussion, debriefing, information review, pract research, computer-base learning.	Direct questions -Rapid exams -Reports. -Monthly exams - Mid-year exam
19	1	Rejecting deviant thought and practices	Prison and detention places of the Baath regime	Problem-based learning, collaboration, discussion, debriefing, information review, pract research, computer-base learning.	Direct questions -Rapid exams -Reports. -Monthly exams - Mid-year exam
20	1	Rejecting deviant thought and practices	Chapter III Environment al crimes of the Baath regime in Iraq	Problem-based learning, collaboration, discussion, debriefing, information review, pract research, computer-base learning.	Direct questions -Rapid exams -Reports. -Monthly exams - Mid-year exam
21	1	Rejecting deviant thought and practices	Military and radioactive contaminatio n and mine explosions	Problem-based learning, collaboration, discussion, debriefing, information review, pract research, computer-base learning.	Direct questions -Rapid exams -Reports. -Monthly exams - Mid-year exam

22	1	Rejecting deviant thought and practices	Destruction of cities and villages (scorched earth policy)	Problem-based learning, collaboration, discussion, debriefing, information review, pract research, computer-base learning.	Direct questions -Rapid exams -Reports. -Monthly exams - Mid-year exam
23	1	Rejecting deviant thought and practices	Drying the marshes	Problem-based learning, collaboration, discussion, debriefing, information review, pract research, computer-base learning.	Direct questions -Rapid exams -Reports. -Monthly exams - Mid-year exam
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.	Direct questions -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.	Direct questions -Rapid exams -Reports. -Monthly exams - Mid-year exam
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.	Direct questions -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 -Reports. -Monthly 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 -Reports. -Monthly 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 -Reports. -Monthly 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 -Reports. -Monthly exams - Mid-year exam -final exam

11. Course Evaluation

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

**Academic Program
Description
Third Stage**

Course Name:					
Community dentistry					
Course Code:					
318CM					
Semester / Year:					
2 Semester/ third Stage					
Description Preparation Date:					
2025-2026					
Available Attendance Forms:					
Theoretical lectures and practical laboratory					
Number of Credit Hours (Total) / Number of Units (Total)					
90 hours/ 4 unite					
Course administrator's name (mention all, if more than one name)					
Name: Ahmed Rafea Naji					
Email: Ahmed.rafea@mu.edu.iq					
It gives students information about identifying and measuring oral diseases in the community to achieve the goal of control Preventing diseases in society through preventive programs					
Course Objectives					
• Knowledge and understanding • Skill goals • Stimulus and response method • Long, short and semester exams					
Thinking skills					
Weeks	Hours	Unit or subject name	Required Learning Outcomes	Learning method	Evolution method
1	3	- Dental public health -Public health definition. -Dental 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 administration. 5-Preventive dentistry.	Knowledge and understanding. subject-specific skills	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	Patient's setting & examination-Dental public care - Steps in planning dental care for the patient - Steps in planning dental care for the community - Similarities between personal and community health care: - Differences between private dental practice and public health dentistry	Knowledge and understanding. subject-specific skills	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	Clinical examination Epidemiology . Objectives of epidemiology - Components of - . epidemiological study Essential steps in an - epidemiological .study . Hypothesis - Population at risk. - - . Morbidity Measurements of disease - . frequency . Epidemiological approach - Measurement tools in epidemiology.	Knowledge and understanding. subject-specific skills	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	Epidemiological studies Types of Epidemiological studies: Observational studies Types of of observational studies - Descriptive studies. - Analytical studies. Case control studies Cohort studies	Knowledge and understanding. subject-specific skills	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	3	Experimental studies - Intervention Types of experimental studies	Knowledge and understanding. subject-specific skills	Theoretical lecture using Power point, Problem-based learning,	Short, semester, mid-year and final exams

				collaboration, discussion, debriefing, information review, practical research, computer-based .learning	
6	3	IndicesEpidemiology of dental caries - Definition of dental caries - Epidemiology Etiological factors of dental - caries Types of dental caries - according to their .anatomical (location) site Factors affecting - epidemiology of dental - caries	Knowledge and understanding. subject-specific skills	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	3	Dental cariesEpidemiology of Periodontal Disease Periodontal Diseases- definition Structure of the periodontal tissues Epidemiology- -Etiology of periodontal disease	Knowledge and understanding. subject-specific skills	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	3	Epidemiology of Oral Cancer -Types of cancers -Etiology of oral cancer -Constituents of tobacco smoke -Potentially malignant lesions -Levels of prevention for oral cancer - Rehabilitation after Oral Cancer	Knowledge and understanding. subject-specific skills	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research,	Short, semester, mid-year and final exams

				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	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	3	Dental indices - Index - Uses of dental index - Classification of indices	Knowledge and understanding, subject-specific skills	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
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 Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based .learning	Short, semester, mid-year and final exams

12	3	Dental fluorosis Indices for assessment of dental fluorosis	Knowledge and understanding. subject-specific skills	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	Biostatistics - Data - Types of data - Methods of Data Collection -Sampling Technique -Types of sample design	Knowledge and understanding. subject-specific skills	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 ¹	3	Data presentation - Methods of data presentation -The tabulation of data. -The graphical representation of data	Knowledge and understanding. subject-specific skills	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	3	Measures of central tendency & dispersion -Measures of central tendency -Measures of dispersion.	Knowledge and understanding. subject-specific skills	Theoretical lecture using Power point, Problem-based learning, collaboration,	Short, semester, mid-year and final exams

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

		-Other risks		based .learning	
19	3	Environment and health - Environment -Physical environment: -Biological environment: -Psychological environment - Environmental indicators	Knowledge and understanding, subject-specific skills	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	Effects of air pollution on health -Prevention and control of air pollution - Effects of radiation -Noise pollution	Knowledge and understanding, subject-specific skills	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	BiomechanicsSchool Dental Health Program - Purpose of School Health Program - Guidelines for an ideal school dental program - School dental survey - phases in school oral health program	Knowledge and understanding, subject-specific skills	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	Treatment need and demand - Need - categories of need - Demand - Factors affecting dental demands	Knowledge and understanding. subject-specific skills	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
23	3	Dental manpower - Manpower definition - Dental manpower - Manpower definition	Knowledge and understanding. subject-specific skills	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	3	ethics in dentistry -Definition of ethics - Dentistry as a profession - Ethical principles	Knowledge and understanding. subject-specific skills	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	3	health care for special populations Elderly people: The main oral effects of aging Pregnant women Special Care	Knowledge and understanding. subject-specific skills	Theoretical lecture using Power point, Problem-based learning, collaboration,	Short, semester, mid-year and final exams

		Entistry - Patients with special health care needs		discussion, debriefing, information review, practical research, computer-based .learning	
26	3	TMJ abnormalities(anatomy of TMJ, application)	Knowledge and understanding, subject-specific skills	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	3	forensic dentistry -Introduction -Application of forensic dentistry. -Bit marks -Person identification. -Dental identification.	Knowledge and understanding, subject-specific skills	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	3	Dental auxiliary personal -Introduction. - Dental auxiliary classification. *Non operator auxiliary. * Operator auxiliary. -Four handed relationship.	Knowledge and understanding, subject-specific skills	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	
30	3	Computed tomography(indications ,strength, limitations)	Knowledge and understanding, subject-specific skills	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based .learning	

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	Clinic.....assistant

1. نقيوم المقرر	
Course Evaluation:	:degrees of first semester 10
	degrees of second semester 10
	degrees of mid-year 20
	degrees of final exam 60
2. Learning and Teaching Resources	
	Required textbooks (curricular books, if any)
Preventive and Community Dentistry Public Health Dentistry Third Edition. - A Textbook of Public Health 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 maxillofacial radiology					
Course Code:					
320 RL					
Semester / Year:					
2 Semester/ third Stage					
Description Preparation Date:					
2025-2026					
Available Attendance Forms:					
Theoretical lectures and practical laboratory					
Number of Credit Hours (Total) / Number of Units (Total)					
90 hours/ 4 unite					
Course administrator's name (mention all, if more than one name)					
Name: Ahmed Rafea Naji					
Email: Ahmed.rafea@mu.edu.iq					
The goal of the program is to qualify dentists who are able to read and diagnose radiographs and how to Working on x-ray machines correctly and how to deal with radiation risks					
Course Objectives					
• Knowledge and understanding • Skill goals • Stimulus and response method • Long, short and semester exams Thinking skills					
Weeks	Hours	Unit or subject name	Required Learning Outcomes	Learning method	Evolution method
1	3	Production of radiation(x-ray machine, interaction of x-ray with matter) composition of matter	Knowledge and understanding, subject-specific skills	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	Film imaging (types of x-ray films, processing cycle,dark room, intensifying screen	Knowledge and understanding, subject-specific skills	Theoretical lecture using Power point, Problem-based learning, collaboration,	Short, semester, mid-year and final exams

				discussion, debriefing, information review, practical research, computer-based .learning	
3	3	Factors controlling x-ray beam, - dosimetry and inverse square law	Knowledge and understanding, subject-specific skills	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	Projection geometry (sharpness, distortion, image characteristic and - artifacts)	Knowledge and understanding, subject-specific skills	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	3	Projection geometry (sharpness, distortion, image characteristic and artifacts)	Knowledge and understanding, subject-specific skills	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	
6	3	Safety and Protection (source of exposure dose limits , exposure and , risk and - reducing dental exposure)	Knowledge and understanding, subject-specific skills	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	3	intraoral projection (periapical, bitwing, and occlusal radiography) -	Knowledge and understanding, subject-specific skills	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	3	Digital radiography (strength , limitations , comparing with conventional radiography and indications	Knowledge and understanding, subject-specific skills	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	3	Patient's management (management of pt. child, contrast media & localization Technique)	Knowledge and understanding, subject-specific skills	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	3	Cephalometric imaging (technique, indications, evaluation of the Image)	Knowledge and understanding, subject-specific skills	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
11	3	Panoramic radiography (principles, technique, position and interpretation)	Knowledge and understanding, subject-specific skills	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
12	3	Craniofacial imaging (types, indication and interpretation)	Knowledge and understanding, subject-specific skills	Theoretical lecture using Power point, Problem-based learning, collaboration,	Short, semester, mid-year and final exams

				discussion, debriefing, information review, practical research, computer-based .learning	
13	3	CBCT (principles, components, strength and limitations).	Knowledge and understanding, subject-specific skills	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 ¹	3	CBCT (clinical applications in maxillofacial region, anatomy and interpretations)..	Knowledge and understanding, subject-specific skills	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	3	Radiographic anatomy part1 (teeth, supporting dentoalv structures, maxilla and mid facial bones)	Knowledge and understanding, subject-specific skills	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	
16	3	Raddigraphic anatomy part 2(mandible, Tmj, base of skull, air way,restorative materials)	Knowledge and understanding, subject-specific skills	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	3	Advanced imaging modalities(CT, MRI AND ULTRASOUND)	Knowledge and understanding, subject-specific skills	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
18	3	Radiography & Implantology(modalities, indications)	Knowledge and understanding, subject-specific skills	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	Infection control(infection control in radiography clinic, protection of pt., protection of workers)	Knowledge and understanding, subject-specific skills	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	Prescribing diagnostic imaging(radiologic examination and guide lines for ordering imaging)	Knowledge and understanding, subject-specific skills	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	Radiographical interpretations of common diseases(interpretation of dental caries, and periodontal disease	Knowledge and understanding, subject-specific skills	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	Cysts of the jaw(odontogenic and non odontogenic cysts)	Knowledge and understanding, subject-specific skills	Theoretical lecture using Power point, Problem-based learning, collaboration,	Short, semester, mid-year and final exams

				discussion, debriefing, information review, practical research, computer-based .learning	
23	3	Dental anomalies(acquired and developmental)	Knowledge and understanding, subject-specific skills	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	3	Inflammatory conditions of the jaws(periapical inf disease, osteomyelitis, ericoronitis)	Knowledge and understanding, subject-specific skills	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	3	Trauma(dento alveolar trauma , dental fractures and bone fructues	Knowledge and understanding, subject-specific skills	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	
26	3	TMJ abnormalities(anatomy of TMJ, application)	Knowledge and understanding, subject-specific skills	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	3	Salivary gland disease (imaging modalities, interpretation)	Knowledge and understanding, subject-specific skills	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	3	Craniofacial anomalies (Cleft lip and palat)	Knowledge and understanding, subject-specific skills	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	Computed tomography(indications ,strength, limitations)	Knowledge and understanding, subject-specific skills	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	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

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 journals, reports...)	Text book of oral radiology
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:	
2025-2026	
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

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	Introduction to pathology Clinical pathology Molecular pathology Cell	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
2	2	Knowledge understanding. subject-specific skills	damage reversible cell injury	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
3	2	Knowledge understanding. subject-specific skills	Irreversible cell injury	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
4	2	Knowledge understanding. subject-specific skills		Problem-based learning, collaboration	Short, semester mid-year and final exams

				n, discussion, debriefing, information review, practical research, computer- based learning.	
5	2	Knowledge understanding. subject-specific skills	Deposits and pigmentation	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
6	2	Knowledge and understanding. subject-specific skills	External and internal pigmentation	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
7	2	Knowledge understanding. subject-specific skills	Inflammation	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
8	2	Knowledge understanding. subject-specific	Acute inflammation	Problem-based learning,	Short, semester mid-year and final exams

		skills		collaboration, discussion, debriefing, information review, practical research, computer- based learning.	
9	2	Knowledge understanding. subject-specific skills	Chronic pathology	Problem- based learning, collaboration, discussion, debriefing, information review, practical research, computer- based learning.	Short, semester mid-year and final exams
10	2	Knowledge understanding. subject-specific skills	Chemical mediators	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	Healing and repair	Problem- based learning, collaboration, discussion, debriefing, information review, practical research, computer- based learning.	Short, semester mid-year and final exams
12	2	Knowledge understanding.	Healing of skin wound Healing of bone	Problem- based	Short, semester mid-year and

		subject-specific skills		learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	final exams
13	2	Knowledge understanding. subject-specific skills	Hemodynamic Disorders	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
14	2	Knowledge understanding. subject-specific skills	Thromboembolic Disease, and Shock	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
15	2	Knowledge understanding. subject-specific skills	Genetic	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
16	2	Knowledge	Diseases of the Immune Sys	Problem-	Short, semester

		understanding. subject-specific skills	Hypersensitivity	based learning, collaboratio n, discussion, debriefing, information review, practical research, computer- based learning.	mid-year and final exams
17	2	Knowledge understanding. subject-specific skills	Autoimmune	Problem- based learning, collaboratio n, discussion, debriefing, information review, practical research, computer- based learning.	Short, semeste mid-year and final exams
18	2	Knowledge understanding. subject-specific skills	diseases Transplantation	Problem- based learning, collaboratio n, discussion, debriefing, information review, practical research, computer- based learning.	Short, semeste mid-year and final exams
19	2	Knowledge understanding. subject-specific skills	Neoplasia	Problem- based learning, collaboratio n, discussion, debriefing, information review, practical research, computer- based learning.	Short, semeste mid-year and final exams

20	2	Knowledge understanding. subject-specific skills	benign and malignant	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	Tumors	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
22	2	Knowledge understanding. subject-specific skills	molecular basis of tumors	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
23	2	Knowledge understanding. subject-specific skills	infections Bacterial and viral	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based	Short, semester mid-year and final exams

				learning.	
24	2	Knowledge understanding. subject-specific skills	Infection	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
25	2	Knowledge understanding. subject-specific skills	Environmental and Nutritional	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
26	2	Knowledge understanding. subject-specific skills	Diseases	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
27	2	Knowledge understanding. subject-specific skills	Blood Vessels	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-	Short, semester mid-year and final exams

				based learning.	
28	2	Knowledge understanding. subject-specific skills	The Heart	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
29	2	Knowledge understanding. subject-specific skills	Red Blood Cell and Bleeding	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	Disorders	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	Introduction to general pathology and biopsy
2	Power points slides
3	Power points and histopathological slides demonstrating fatty changes in liver and cloudy swelling in kidney The gross appearance of reversible cell injury
4	Power points and histopathological slides of coagulative necrosis in heart muscles and

	caseous necrosis in lung With explanation of gross appearance
5	Power points and histopathological slides of anthracosis of lung and hemosiderosis in liver With explanation of gross appearance
6	Power points and histopathological slides of amyloidosis in kidney, H With explanation of gross appearance& E. and congo-red stain
7	Power points and histopathological slides of acute appendicitis (appendix),acute osteomyelitis and lobar pneumonia (lung ,)
8	Power points and histopathological slides of chronic cholecystitis in gall bladder and With explanation of gross appearance osteomyelitis in bone
9	Power points and histopathological slides of keloid in skin and granulation tissue
10	Power points and histopathological slides of TB in lung and actinomycosis With explanation of gross appearance
11	Power points and histopathological slides of Sarcoidosis With explanation of gross appearance
12	Power points slides of CVC in lung and liver With explanation of gross appearance
13	Power points slides of blood vessels thrombosis
14	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 appearance
17	Power points and histopathological slides of thyrotoxicosis of thyroid and hashimotois thyroiditis in thyroid With explanation of gross appearance
18	Data show slides
19	Data show slides
20	Power points and histopathological slides of myocardial infarction of heart and atherosclerosis in blood vessels With explanation of gross Appearance
21	Power points and histopathological slides of chronic gastritis in 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 appearance
23	Power points and histopathological slides of emphysema in lung and chronic bronchitis in bronchus With explanation of gross appearance
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)	1) Robbins basic pathology. Kumar, Abbas and Aster. 10th edition. 2018, Elsevier. 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:					
2025-2026					
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					
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 Learning	Unit or subject name Theoretical	Learning method	Evaluation method

		Outcomes			
1	4	Knowledge and understanding. subject-specific skills	- Introduction to Removal of Partial Dentures	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	Classification of Partially Edentulous Arches	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	Surveying	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	4	Knowledge understanding. subject-specific skills	Surveying (continue)	Theoretical lecture using Power point, Problem-based	Short, semester mid-year and final exams

				learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	
5	4	Knowledge understanding. subject-specific skills	Component Parts of a Removable Partial Denture	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 and understanding. subject-specific skills	Maxillary Major Connectors	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	4	Knowledge understanding. subject-specific skills	Mandibular Major Connectors	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.	
8	4	Knowledge understanding. subject-specific skills	Minor Connectors	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	Rests and Rest Seats	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	Knowledge understanding. subject-specific skills	Retention and Removable Partial Denture Retainers clasp design	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
11	4	Knowledge understanding. subject-specific	Extra Coronal Direct Retainers (Types of clasp assemblies)	Theoretical lecture using Power point,	Short, semester mid-year and final exams

		skills		Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	
12	4	Knowledge understanding. subject-specific skills	Intracoronal Direct Retainers (Internal Attachments,	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	Knowledge understanding. subject-specific skills	Stress-Breakers (Stress Equalizers)	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	Indirect Retainers	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information	Short, semester mid-year and final exams

				review, practical research, computer- based learning.	
15		4 Knowledge understanding. subject-specific skills	Indirect Retainers(continue)	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	Laboratory procedures in R construction: Blockout and Relief	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 Knowledge understanding. subject-specific skills	Laboratory procedures in R construction: Duplication RefractoryCast 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
18		4 Knowledge	Laboratory procedures in	Theoretical	Short, semester

		understanding. subject-specific skills	RPD construction: Wax Pattern	lecture using Power point, Problem- based learning, collaboration, discussion, debriefing, information review, practical research, computer- based learning.	mid-year and final exams
19	4	Knowledge understanding. subject-specific skills	Laboratory procedures in RPD construction: Casting and	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	Denture Base in RPD	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	Record Bases, Occlusion Rims,	Theoretical lecture using Power point, Problem- based learning, collaboration, discussion,	Short, semester mid-year and final exams

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

				learning.	
25	4	Knowledge understanding. subject-specific skills	Indirect Retainers(continue)	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	Laboratory procedures in R construction: Blockout and Relief	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	Laboratory procedures in R construction: Duplication RefractoryCast 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
28	4	Knowledge understanding. subject-specific skills	Flexible Removable Partial Dentures	Theoretical lecture using Power point, Problem-based learning,	Short, semester mid-year and final exams

				collaboration, discussion, debriefing, information review, practical research, computer-based learning.	
29		4 Knowledge understanding, subject-specific skills	Repairs and Additions to Removable Partial Dentures	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	Digitally Designed & Fabrication Process of RPD Framework Using CAD/CAM System	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	Study unit title
1	Introduction to Removable Partial Dentures
2	Kennedy Classification
3	Cast Trimming
4	Surveying
5	Surveying
6	Wire Bending

7	Wire Bending
8	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	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:					
2025-2026					
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 local anesthesia, its methods and problems And associated 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 Learning	Unit or subject name Theoretical	Learning method	Evaluation method

		Outcomes			
1	3	Knowledge and 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 Instrument 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 understanding. subject-specific skills	Extraction of teeth and Contra indications of extraction • Extraction of teeth (exodontia). • Definition. • Methods of extraction. • Indications of teeth extraction ✓ Severe caries. ✓ Severe periodontal disease. ✓ Pulp pathology. ✓ Apical pathology. ✓ 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.	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	3	Knowledge and understanding. subject-specific skills	Extraction of teeth and Contra indications of extraction • Contra-indications of teeth extraction. ➤ Local contra-indications. ➤ Systemic contra-indications. • Pre-extraction evaluation. ➤ Clinical preoperative evaluation. ✓ General evaluation. ✓ Local evaluation. ➤ Radiological evaluation. ➤ Objectives and benefits	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	3	Knowledge understanding. subject-specific skills	General arrangement for extraction and Dental forceps (types) • Light. • Position of the operator. • Position of the patient. • Height of the dental chair. • Parts of dental forceps.	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing,	Short, semester, mid-year and final exams

			• Forceps for the maxillary teeth. ✓ Forceps of upper anterior teeth. ✓ Forceps of upper premolars. ✓ Forceps of upper molars. ✓ Bayonet of upper poste teeth.	information review, practical research, computer-based learning.	
8	3	Knowledge understanding. subject-specific skills	General arrangement for extraction and Dental forceps (types) • Forceps for the mandibular teeth. ✓ Forceps of lower anterior teeth. ✓ Forceps of lower premolars. ✓ Forceps of lower molars. ✓ Bayonet of lower posterior teeth. • Mechanical principle of forceps (traditional) extraction. 1 76 • Physic forceps. ✓ Parts. ✓ Mechanical principle 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
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, computer-based learning.	Short, semester mid-year and final exams
10	3	Knowledge understanding. subject-specific skills	Elevators • Line of withdrawal. • Point of application. • Parts of dental elevators.	Theoretical lecture using Power point, Problem-based learning,	Short, semester mid-year and final exams

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

		understanding. subject-specific skills	• Instruments of basic oral surgery. • Instruments to incise tissues. • Instruments for elevating mucoperiosteum. • Instruments for controlling hemorrhage. ✓ Hemostat (artery forceps). • Instruments to grasp tissues. ✓ Toothed-tissue forceps. ✓ Allis tissue forceps. • Instruments for removing bone. ✓ Ronger 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	lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	mid-year and final exams
15	3	Knowledge understanding. subject-specific skills	Introduction to local anesthesia • Neurophysiology • Mode and site of action of local anesthetic • Active forms of local anesthetic	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	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, computer-based learning.	Short, semester, mid-year and final exams
17	3	Knowledge understanding. subject-specific skills	Pharmacology of local anesthesia • Vasoconstrictors • Mode of action • Dilutions of vasoconstrictors • Specific agents	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
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 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-based learning.	Short, semester, mid-year and final exams
21	3	Knowledge understanding. subject-specific skills	Techniques of local anesthesia • Basic injection techniques • Techniques of maxillary anesthesia ✓ Local infiltration. ✓ Posterior superior alveolar nerve block ✓ Middle superior alveolar nerve block ✓ Anterior superior alveolar nerve block (infraorbital nerve block) ✓ Greater palatine nerve Block ✓ Nasopalatine nerve block ✓ Maxillary nerve block	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 understanding. subject-specific skills	Techniques of local anesthesia • Techniques of local anesthesia ✓ Techniques of mandibular anesthesia ✓ Inferior alveolar nerve Block ✓ Buccal nerve block ✓ Mandibular nerve block: The Gow-Gates technique ✓ Vazirani-Akinosi closed-mouth mandibular block ✓ Mental nerve block ✓ Incisive nerve block	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
23	3	Knowledge understanding. subject-specific skills	Techniques of local anesthesia • Supplemental injection techniques ✓ Intraosseous injection	Theoretical lecture using Power point, Problem-based learning,	Short, semester, mid-year and final exams

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

			• Articaine hydrochloride • Local anesthesia reversal • Buffering of local anesthetic solution • Nasal local anesthetic mist maxillary nonmolar teeth	learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	
28	3	Knowledge understanding, subject-specific skills	Conscious sedation • Sedation techniques: Oral, sublingual, transdermal, intranasal, intramuscular, intravenous and inhalational • Nitrous oxide • Complications and medicole considerations	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, computer-based learning.	Short, semester, mid-year and final exams

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). Demonstration of local anesthetic dental syringe, dental injection needles, types of different local anesthetics, topical measures of injection pain reduction, automatized 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:					
2025-2026					
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: Ahmed Matar Mahdi 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 order 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 understanding, subject-specific skills	Pharmacokinetics pharmacodynamics	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
3	2	Knowledge understanding, subject-specific skills	Autonomic	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
4	2	Knowledge understanding, subject-specific skills	perspective (including cholinergic agonist and antagonist)	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	Adrenergic agonists	Problem-based learning, collaboration, discussion, debriefing, information review,	Short, semester mid-year and final exams

				practical research, computer-based learning.	
6	2	Knowledge and understanding. subject-specific skills	Adrenergic antagonists	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
7	2	Knowledge understanding. subject-specific skills	Antihypertensive drugs	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
8	2	Knowledge understanding. subject-specific skills	Management of angina and h failure	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
9	2	Knowledge understanding. subject-specific skills	Management of arrhythmia	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-	Short, semester mid-year and final exams

				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	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
12	2	Knowledge understanding. subject-specific skills	Introduction the pharmacology CNS drugs, sedative, hypnotics antiseizures drugs	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
13	2	Knowledge understanding. subject-specific skills	Antipsychotic and antidepressant drugs	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based	Short, semester mid-year and final exams

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

		subject-specific skills	(antihistamines and corticosteroids)	learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	final exams
19	2	Knowledge understanding. subject-specific skills	Non-steroidal anti-inflammatory 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-inflammatory drugs (NSAIDs) part2 and Steroids in Den	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	(Chemotherapeutic drugs (Principles of antimicrobial therapy	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based 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	Knowledge understanding. subject-specific skills	(Cell wall inhibitors (part 2(	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
24	2	Knowledge understanding. subject-specific skills	Protein synthesis inhibitors	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
25	2	Knowledge understanding. subject-specific skills	Antifungal, antiviral and antiprotozoal drugs	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based 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

				information review, practical research, computer-based learning.	
27	2	Knowledge understanding, subject-specific skills	Thyroid hormones and anti-thyroid drugs	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
28	2	Knowledge understanding, subject-specific skills	Anticancer drugs	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
29	2	Knowledge understanding, subject-specific skills	Dental Pharmacology: drugs chemicals used in dental clinic	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	Anticaries and drugs used prevention of dental plaque	Problem-based learning, collaboration, discussion, debriefing, information review,	Short, semester mid-year and final exams

				practical research, computer- based 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 Steroids 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) Contemporary Dental Pharmacology: Evidence-Based 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:	
2025-2026	
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 Outcomes	Unit or subject name Theoretical	Learning method	Evaluation method
1	2	- Identify microorganisms beneficial to humans and harmful microorganisms - Methods of diagnosis and transmission of microorganisms - Identify the immunity of the human body and its types - The relationship between microorganisms and the human body - Identify sterilization methods - Identify modern methods for diagnosing microorganisms - Identify microorganisms that cause new epidemics	Morphology and Ultra structures, physiology and metabolism of microorganisms: -	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
2	2		Microbial growth, growth curve	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
3	2		Sterilization and Disinfection	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
4	2		Antibiotic and chemotherapy	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-	Short, semester mid-year and final exams

				based learning.	
5	2		Immunology(part1)	Problem-based learning, collaboration discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
6	2		Immunology(part2)	Problem-based learning, collaboration discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
7	2		Immunology(part3)	Problem-based learning, collaboration discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
8	2		Immunology(part 4)	Problem-based learning, collaboration discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams

9	2		Host-parasite relationship Nosocomial infection	Problem-based learning, collaboration discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
10	2		Streptococci	Problem-based learning, collaboration discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
11	2		Staphylococci	Problem-based learning, collaboration discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
12	2		G- negative diplococcus , Vibrio and Moraxella Neisseria gonorrhea, N. meningitidis	Problem-based learning, collaboration discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
13	2		Lactobacilli, Actinomyces and Corynebacterium	Problem-based	Short, semester mid-year and

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

				discussion, debriefing, information review, practical research, computer-based learning.	
18	2		Mycobacterium Tubercu & Lepae	Problem-based learning, collaboration discussion, debriefing, information review, practical research, computer-based learning.	Short, semeste mid-year and final exams
19	2		Brucella, Haemophi Vibrio	Problem-based learning, collaboration discussion, debriefing, information review, practical research, computer-based learning.	Short, semeste mid-year and final exams
20	2		Aggregatibacter, porphyromonas, prevotella, Bacteroids	Problem-based learning, collaboration discussion, debriefing, information review, practical research, computer-based learning.	Short, semeste mid-year and final exams
21	2		Fusiforms and Spirochaet Fusobacterium, leptotrichia	Problem-based learning, collaboration discussion, debriefing, information	Short, semeste mid-year and final exams

				review, practical research, computer- based learning.	
22	2		Treponema and Treponema	Problem- based learning, collaboration discussion, debriefing, information review, practical research, computer- based learning.	Short, semeste mid-year and final exams
23	2		Mycoplasma, Chlamydia Rickittsia	Problem- based learning, collaboration discussion, debriefing, information review, practical research, computer- based learning.	Short, semeste mid-year and final exams
24	2		Ecology of oral flora	Problem- based learning, collaboration discussion, debriefing, information review, practical research, computer- based learning.	Short, semeste mid-year and final exams
25	2		Microbiology of dental caries	Problem- based learning, collaboration discussion, debriefing, information review, practical research,	Short, semeste mid-year and final exams

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

30	2		Oral mycology and Oral parasitology	learning.	Short, semeste mid-year and final exams
				Problem- based learning, collaboration discussion, debriefing, information review, practical research, computer- based learning.	

Lab number	Study unit title
1	Orientation to the Microbiology laboratory
2	The microscope
3	Sterilisation and disinfection:
4	Bacterial growth
5	Types of culture media
6	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 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 tests) (part 1).
17	Serological tests (antigen and antibody detection tests) (part)2.
18	Nucleic acid assays, Animal pathogenicity test
19	Staphylococci
20	Streptococci
21	<u>Corynebacterium</u>
22	Spore-forming Gram-positive bacilli: <u>Bacillus</u> spp.

23	<u>Clostridium</u> spp.
24	<u>Mycobacterium</u> spp.
25	Enterobacteriaceae (part1)
26	Enterobacteriaceae (part2)
27	nterobacteriaceae(part3)
28	<u>Neisseriae</u> 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:					
2025-2026					
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:Ahmad Jameel Abis Email:Ahmed.jameel@mu.ed u.iq					
8. Course Objectives					
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	Definition of operative dentistry	Theoretical lecture using Power point, Problem-	Short, semester mid-year and final exams

				based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	
2	6	Knowledge understanding. subject-specific skills	Definition of operative dentistry	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	6	Knowledge understanding. subject-specific skills	Instruments and general instrumentation of cavity preparation	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	6	Knowledge understanding. subject-specific skills	Instruments and general instrumentation of cavity preparation	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

				discussion, debriefing, information review, practical research, computer-based learning.	
5	6	Knowledge understanding. subject-specific skills	Sterilization of operative instruments	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	6	Knowledge and understanding. subject-specific skills	Sterilization of operative instruments	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	6	Knowledge understanding. subject-specific skills	Amalgam cavity preparations class I	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review,	Short, semester mid-year and final exams

				practical research, computer-based learning.	
8	6	Knowledge understanding. subject-specific skills	Amalgam cavity preparations class I	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	6	Knowledge understanding. subject-specific skills	Amalgam cavity preparations class II	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	6	Knowledge understanding. subject-specific skills	Amalgam cavity preparations class II	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based	Short, semester mid-year and final exams

				learning.	
11	6	Knowledge understanding. subject-specific skills	Amalgam cavity preparations class II (MOD)	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
12	6	Knowledge understanding. subject-specific skills	Amalgam cavity preparations class II (MOD)	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	6	Knowledge understanding. subject-specific skills	Amalgam cavity preparations class III and class V	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	6	Knowledge understanding. subject-specific	Amalgam cavity preparations class III and class V	Theoretical lecture using Power point,	Short, semester, mid-year and final exams

		Skills		Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	
15	6	Knowledge understanding. subject-specific skills	Cavity liners and cement bases (1)	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	6	Knowledge understanding. subject-specific skills	Cavity liners and cement bases (1)	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	6	Knowledge understanding. subject-specific skills	Cavity liners and cement bases (2)	Theoretical lecture using Power point, Problem-based learning, collaboration	Short, semester, mid-year and final exams

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

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

				based learning.	
24	6	Knowledge understanding. subject-specific skills	Failures in amalgam restorations	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	6	Knowledge understanding. subject-specific skills	Tooth colored restorations (composite)	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	6	Knowledge understanding. subject-specific skills	Tooth colored restorations (composite)	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	6	Knowledge understanding.	Cavity preparation for anterior restorations	Theoretical lecture using	Short, semester, mid-year and

		subject-specific skills		Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	final exams
28	6	Knowledge understanding. subject-specific skills	Cavity preparation for ante restorations	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	6	Knowledge understanding. subject-specific skills	Resin 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
30	6	Knowledge understanding. subject-specific skills	Resin material	Theoretical lecture using Power point, Problem-based learning,	Short, semester, mid-year and final exams

				collaboration, discussion, debriefing, information review, practical research, computer- based learning.	
Lab number		Study unit title			
1		Introduction to operative dentistry, and to work in phantom lab. Demonstration about the rotary instrument, and how to cut geometrical cavities (circle, triangle, square, rectangle, and dove-tail), and leave students to work under supervision.			
2		Demonstration of how to use phantom head, working positions for both student and phantom head, also demonstration cavity preparation on buccal pit of lower 1 st molar and palatal pit of upper lateral incisor.			
3		Demonstration of principles of amalgam cavity preparation for CL I on the occlusal surface of lower 2 nd 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 st premolar and Leave students to work under supervision.			
5		Demonstration amalgam CL I cavity for upper 1 st 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 1 st 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 1 st molar. Oral quiz on the hand instrument and their groups.			
8		Demonstration amalgam CL II MO cavity for lower 1 st premolar			
9		Demonstration amalgam CL II MO cavity for upper 1 st molar			
10		Practical assessment for the students in amalgam CL II MO cavity on lower 1 st molar. Quiz in amalgam CL II cavity lectures.			
11		Demonstration amalgam CL II MOD cavity for lower 1 st molar			
12		Demonstration amalgam CL II MOD cavity for upper 2 nd molar			
13		Practical assessment for the students in cavity preparation of amalgam CL II MOD cavity on lower 2 nd molar.			

14	Demonstration amalgam CL V cavity for lower 2 nd premolar, upper 1 st molar and upper 2 nd 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 2 nd premolar.
18	Supervised students in mixing and placing zinc phosphate cement in CL II MO cavity of upper 1 st molar and CL II MOD cavity of lower 2 nd molar..
19	Practical assessment for the students in zinc phosphate mixing and placement in CL II MOD cavity on lower 1 st molar.
20	Amalgam filling of CL I cavity of lower 1 st premolar
21	Amalgam filling of CL II cavity of lower 2 nd premolar.
22	Amalgam filling of CL II cavity of upper 1 st molar.
23	Amalgam filling of CL II MOD cavity of upper 2 nd molar.
24	Practical assessment on Amalgam filling of CL II MOD cavity of lower 1 st molar.
25	Amalgam filling of CL V cavities of upper 1 st molar and lower 2 nd 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 composite 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:	
2025-2026	
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: Jafar Hassan Jabr Email: Jafart.Hassan@mu.edu.iq	
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	

Week	Hours	Required Learning Outcomes	Unit or subject name Theoretical	Learning method	Evaluation method
1	1	Knowledge and understanding. subject-specific skills	Professional Ethics Review What is meant by “ethics? Why are ethics important? Evolution and philosophy of ethics The terms moral and ethical obligation and principle	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
2	1	Knowledge understanding. subject-specific skills	Professional Ethics Review Dental ethics, professionalism, Human Rights and Law What is a “professional? What is a “professionalism?” Dentistry as a Profession Dentistry: The Commercial Picture Dentistry: The Normative Picture The Content of Professional Obligations	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
3	1	Knowledge understanding. subject-specific skills	Professional Ethics Review What is meant by the “best interests” of our patients? What is “paternalism?” good risk management good ethics? What about compromising quality?	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
4	1	Knowledge understanding. subject-specific skills	Professional Ethics Review What are codes of ethics? Should I care more about being legal or being ethical? Do we really have obligations to patients? Can dentistry be both a business and a profession?	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
5	1	Knowledge understanding. subject-specific skills	Principal Features of Dental Ethics What’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 country to another?	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams

6	1	Knowledge and understanding. subj specific skills	Principal Features of Dental Ethics The role of the FDI How does the F decide what is ethical? How do individuals decide what is ethical? How do individuals decide what is ethical?	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
7	1	Knowledge understanding. subj specific skills	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- Va theory (why theory): Ethics and the Sources of Ethical Views and Conviction	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
8	1	Knowledge understanding. subj specific skills	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- Va theory (why theory): Ethics and the Sources of Ethical Views and Conviction	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
9	1	Knowledge understanding. subj specific skills	Fundamental Principles of dental ethics 1- Patient autonomy 2- Non-maleficence 3- Beneficence 4- Justice 5- Veracity	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester, mid-year and final exams
10	1	Knowledge understanding. subj specific skills	Fundamental Principles of dental ethics 1- Patient autonomy	Problem-based learning, collaboration, discussion,	Short, semester, mid-year and

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

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

	1	understanding. subj specific skills	- Importance of Dental Research - Research in Dental Practice - Ethical Requirements - Ethics Review Committee Approva	learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	semester, mid-year and final exams
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, computer-based learning.	Short, semester, mid-year and final exams
22	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 research, computer-based learning.	Short, semester, mid-year and final exams
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 research, computer-based learning.	Short, semester, mid-year and final exams
24	1	Knowledge understanding. subject-specific ski	The standard of care -Who determines how a dentist should behave? -A local or a global standard of care? -Transparency of care, guidelines, and protocols. -Shared decision-making, evidence informed decision making, and evidence guided decision-making. -Individualization 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
		Knowledge	Ethical Decision Making and	Problem-based	Short,

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

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

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

Academic Program Description Fourth Stage

1. Course Name:					
General Medicine					
2. Course Code:					
423GM					
3. Semester / Year:					
2 semester/ fourth stage					
4. Description Preparation Date:					
2025-2026					
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 abdukkarem 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 Learning Outcomes	Unit or subject name Theoretical	Learning method	Evaluation method

1	3	Knowledge and understanding, subject-specific skills	Diabetes Mellitus 1	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	Diabetes Mellitus 2	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	White Blood Cells Disorders 1	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	White Blood Cells Disorders 2	Theoretical lecture using Power point, Problem-	Short, semester, mid-year and final exams

				based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	
5	3	Knowledge understanding. subject-specific skills	Hemostasis and Bleeding Disorder	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	3	Knowledge and understanding. subject-specific skills	Hemostasis and Bleeding Disorder	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	3	Knowledge understanding. subject-specific skills	Adrenal Gland Disorders 1	Theoretical lecture using Power point, Problem-based learning, collaboration,	Short, semester, mid-year and final exams

				discussion, debriefing, information review, practical research, computer-based learning.	
8	3	Knowledge understanding. subject-specific skills	Adrenal Gland Disorders 2	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	3	Knowledge understanding. subject-specific skills	Gastrointestinal Diseases	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	3	Knowledge understanding. subject-specific skills	Peptic Ulcer Disease 1	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review,	Short, semester, mid-year and final exams

				practical research, computer-based learning.	
11	3	Knowledge understanding. subject-specific skills	Peptic Ulcer Disease 2	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
12	3	Knowledge understanding. subject-specific skills	Intestine	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	Inflammatory Bowel Disease 1	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based	Short, semester mid-year and final exams

				learning.	
14	3	Knowledge understanding. subject-specific skills	Inflammatory Bowel Disease 2	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	3	Knowledge understanding. subject-specific skills	Pseudomembranous Colitis	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	3	Knowledge understanding. subject-specific skills	Hypertension	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	3	Knowledge understanding. subject-specific	Infective Endocarditis	Theoretical lecture using Power point,	Short, semester, mid-year and final exams

		skills		Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	
18	3	Knowledge understanding. subject-specific skills	Ischemic Heart Disease	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	Heart Failure	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	Cardiac Arrhythmias	Theoretical lecture using Power point, Problem-based learning, collaboration	Short, semester, mid-year and final exams

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

				review, practical research, computer- based learning.	
24	3	Knowledge understanding. subject-specific skills	Liver Diseases	Theoretical lecture using Power point, Problem- based learning, collaboratio n, discussion, debriefing, information review, practical research, computer- based learning.	Short, semester, mid-year and final exams
25	3	Knowledge understanding. subject-specific skills	Pulmonary Diseases	Theoretical lecture using Power point, Problem- based learning, collaboratio n, discussion, debriefing, information review, practical research, computer- based learning.	Short, semester, mid-year and final exams
26	3	Knowledge understanding. subject-specific skills	Red Blood Cells Disorders	Theoretical lecture using Power point, Problem- based learning, collaboratio n, discussion, debriefing, information review, practical research, computer-	Short, semester, mid-year and final exams

				based learning.	
27	3	Knowledge understanding. subject-specific skills	Drug and Alcohol Abuse	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	3	Knowledge understanding. subject-specific skills	Psychiatric Disorders	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	Anxiety and Eating Disorders	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.	Neurologic Disorders	Theoretical lecture using	Short, semester, mid-year and

		subject-specific skills		Power point Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	final exams

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	Drug 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

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	1. Dental Management of Medically Compromised Patients Ninth Edition, 2018 2. Essentials of Medicine for Dental Students
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

1. Course Name:					
General Surgery					
2. Course Code:					
424GS					
3. Semester / Year:					
2 semester/ fourth stage					
4. Description Preparation Date:					
2025-2026					
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 abdukkarem 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	Hours	Required Learning Outcomes	Unit or subject name Theoretical	Learning method	Evaluation method

1	3	Knowledge and 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-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	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-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	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-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	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-based learning, collaboration discussion, debriefing, information	Short, semester, mid-year and final exams

				review, practical research, computer- based learning	
5	3	Knowledge understanding, subject-specific skills	Surgical wound infections Surgical sepsis Types of wounds Infecting organisms (Exogenous organisms, Endogenous organisms) Prevention of wound Infection Clinical features of wound Se Diagnosis of wound se Treatment	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
6	3	Knowledge and understanding, subject-specific skills	Hemorrhage Introduction Pathophysiology Definitions (Revealed and concealed hemorrhage, Primary, reactionary and secondary hemorrhage Surgical and non- surgical hemorrhage) Degree and classification Management (Identify hemorrha Immediate resuscitative maneuv Identify the site of hemorrha Hemorrhage control) Dam control surgery	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
7	3	Knowledge understanding, subject-specific skills	Hemorrhage Introduction Pathophysiology Definitions (Revealed and concealed hemorrhage, Primary, reactionary and secondary hemorrhage Surgical and non- surgical hemorrhage) Degree and classification Management (Identify hemorrha Immediate resuscitative maneuv Identify the site of hemorrha Hemorrhage control) Dam control surgery	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
8	3	Knowledge understanding, subject-specific skills	Shock Introduction Pathophysiology Ischemia–reperfusion syndrome Classification of shock Consequences	Theoretical lecture using Power point, Problem-base learning, collaboration	Short, semester, mid-year and final exams

			Unresuscitatable shock Multiple organ failure RESUSCITATION Fluid therapy	discussion, debriefing, information review, practical research, computer- based learning	
9	3	Knowledge understanding, subject-specific skills	Shock Introduction Pathophysiology Ischemia–reperfusion syndrome Classification of shock Consequences Unresuscitatable shock Multiple organ failure RESUSCITATION Fluid therapy	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
10	3	Knowledge understanding, subject-specific skills	Shock Introduction Pathophysiology Ischemia–reperfusion syndrome Classification of shock Consequences Unresuscitatable shock Multiple organ failure RESUSCITATION Fluid therapy	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
11	3	Knowledge understanding, subject-specific skills	Blood transfusion Introduction Blood and blood products Indications for blood transfusion Blood groups and cross-matching Transfusion reactions Cross-matching Complications of blood transfus Management of coagulopathy	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
12	3	Knowledge understanding, subject-specific skills	Blood transfusion Introduction Blood and blood products Indications for blood transfusion Blood groups and	Theoretical lecture using Power point, Problem-base learning,	Short, semester, mid-year and final exams

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

			Abnormalities of electrolytes Fluid replacement Acid-base balance Abnormalities of acid-base balance	learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning	
17	3	Knowledge understanding, subject-specific skills	Fluid balance Abnormalities of body water Fluid overload and oedema Abnormalities of electrolytes Fluid replacement Acid-base balance Abnormalities of acid-base balance	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
18	3	Knowledge understanding, subject-specific skills	Electrolytes balance Introduction Principles of electrolyte balance Normal homeostasis Barriers between compartments, osmolality and electrolyte concentrations Homeostatic mechanisms	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	Cerebral blood flow Initial evaluation and management Mechanism Neurological progression Examination: primary survey Glasgow Coma Score secondary survey CLASSIFICATION SEVERITY TYPE OF HEAD INJURY	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	Preoperative preparation (History Taking) Introduction	Theoretical lecture using Power point,	Short, semester, mid-year and final exams

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

		understanding, subject-specific skills	SYSTEM-SPECIFIC POSTOPERATIVE COMPLICATIONS Respiratory complications Cardiovascular complications Renal and urinary complications COMPLICATIONS RELATED TO SPECIFIC SURGICAL SPECIALTIES Paralytic ileus Compartment syndrome Neck surgery Neurosurgery	lecture using Power point, Problem-based learning, collaboration discussion, debriefing, information review, practical research, computer-based learning	mid-year and final exams
25	3	Knowledge understanding, subject-specific skills	GENERAL POSTOPERATIVE PROBLEMS AND MANAGEMENT Nausea and vomiting Bleeding Deep vein thrombosis Hypothermia and shivering Fever Pressure sores Drains	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	3	Knowledge understanding, subject-specific skills	Day case surgery Definition SELECTION CRITERIA PREOPERATIVE ASSESSMENT SURGERY DISCHARGE,	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	3	Knowledge understanding, subject-specific skills	Day case surgery Definition SELECTION CRITERIA PREOPERATIVE ASSESSMENT SURGERY DISCHARGE,	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	
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-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	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-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	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-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	History taking
2	General examination
3	Pulse rate examination
4	Blood pressure measurement
5	Temperature measurement
6	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

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:	
2025-2026	
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 dentiststo 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 staining techniques to identify and be familiar with the differential diagnosis of various diseases by laboratory methods.
9. Teaching and Learning Strategies	
Strategy	- Knowledge and understanding - Skill goals - Stimulus and response methods - 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	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 understanding. subject-specific skills	Periapical lesions	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	Osteomyelitis	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	Developmental disorder of teeth	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	5	Knowledge understanding. subject-specific skills	Developmental disorder of soft hard tissue	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research,	Short, semester mid-year and final exams

				computer-based learning.	
9	5	Knowledge understanding. subject-specific skills	Non odontogenic cysts	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	5	Knowledge understanding. subject-specific skills	Odontogenic cysts	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
11	5	Knowledge understanding. subject-specific skills	Odontogenic tumors 1	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
12	5	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.	Short, semester, mid-year and final exams
13	5	Knowledge	Benign epithelial lesions, leukoplaki	Theoretical	Short, semester,

		understanding. subject-specific skills		lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	mid-year and final exams
14	5	Knowledge understanding. subject-specific skills	Epithelial Hyperplasia, atrophy dysplasia	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	5	Knowledge understanding. subject-specific skills	Squamous cell carcinoma and o malignant epithelial neoplasms	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	5	Knowledge understanding. subject-specific skills	Fibro osseous lesions, metabolic genetic conditions	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	5	Knowledge understanding. subject-specific skills	Giant cell lesions	Theoretical lecture using Power point, Problem-based	Short, semester, mid-year and final exams

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

				debriefing, information review, practical research, computer-based learning.	
22	5	Knowledge understanding. subject-specific skills	Immune mediated disorder 1	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
23	5	Knowledge understanding. subject-specific skills	Immune mediated disorder 2	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	5	Knowledge understanding. subject-specific skills	Connective tissue lesions	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	5	Knowledge understanding. subject-specific skills	Connective tissue lesions	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.	
26	5	Knowledge understanding. subject-specific skills	Salivary gland disorders	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	5	Knowledge understanding. subject-specific skills	Salivary gland neoplasms	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	5	Knowledge understanding. subject-specific skills	Physical and chemical injuries	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	5	Knowledge understanding. subject-specific skills	Hematopoietic tumors	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	5	Knowledge understanding, subject-specific skills	Forensic dentistry	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	Study unit title
1	Data show and demonstration of biopsy processing
2	Data show about Healing in oral pathology
3	Acute and chronic dental caries
4	Acute pulpitis, chronic pulpitis and pulp polyp
5	Periapical granuloma, cyst and abscess
6	Acute and chronic osteomyelitis and sequestrum
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	Dentigerous cyst, keratocyst, calcifying odontogenic cyst and eruption cyst
11	Ameloblastoma, adenomatoid odontogenic tumor and odontoma
12	Ameloblastic fibroma odontoma
13	Leukoplakia, squamous cell papilloma
14	Epithelial dysplasia
15	Squamous cell carcinoma
16	Fibro dysplasia, ossifying fibroma
17	Giant cell lesions, central and peripheral giant cell granuloma
18	Osteoma
19	Osteosarcoma
20	Data show about viral infections
21	Data show about bacterial and fungal infection
22	Lichen planus
23	Pemphigus 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, Douglas Damm, Carl Allen and Jerry Bouquet. 4 th edition. 2016, Elsevier. Robinson, Max, Keith Hurst, Michael Pemberton and Philip Sloan. Soames & Southam's Oral Pathology. 2018, Oxford University 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:	
2025-2026	
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 mouth, 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 Learning Outcomes	Unit or subject name Theoretical	Learning method	Evaluation method
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	→ Cardiac arrhythmia • Dental management → Infective endocarditis • Dental management → Rheumatic fever and rheumatic heart Disease • Dental management → Congenital heart disease • 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
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 Myeloma • 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 hyper- and 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

			• Oral complications and manifestations → Diabetes Mellitus • Dental management of the patient with diabetes mellitus	Research, Computer Learning	
5	5	Knowledge and understanding . subject-specific skills	Pulmonary diseases → Chronic obstructive pulmonary diseases (COPD) • Dental management • Oral complications and manifestations → Asthma • Dental management • Management of asthmatic attack • Oral complications and manifestations → Tuberculosis • 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
6 6	5	Knowledge and understanding . subject-specific skills	Liver Diseases → Viral hepatitis • Dental management • Oral manifestations and complications → Alcoholic liver disease • 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
7	5	Knowledge and understanding . subject-specific skills	Chronic kidney disease and dialysis • Chronic kidney disease • Dental management } Patients receiving conservative care } Dialysis } Renal transplant • 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
8	5	Knowledge and understanding . subject-specific skills	Neurologic disorders → Epilepsy • Dental management • Oral complications and manifestations → Cerebrovascular accidents (stroke) • Medical management • Dental management	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	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 and understanding . subject-specific skills	Patients on radiotherapy and chemotherapy • Patients on radiotherapy ↳ Radiation effects on normal tissues in the path of the external beam ↳ Dental Management • Patients on chemotherapy ↳ The effect of chemotherapy on normal tissues ↳ 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
14	5	Knowledge and understanding . subject-specific skills	Odontogenic infections and fascial space infections • Odontogenic Infections • Spread of odontogenic infections • The factors that influence the spread of odontogenic infections	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	5	Knowledge and understanding . subject-specific skills	• Fascial space infections • Infection of spaces in relation to the lower jaw • Infections of spaces in relation to the upper jaw • Cavernous sinus thrombosis	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	5	Knowledge and understanding . subject-specific skills	• Principles of treatment of odontogenic infections • Principles for the use of appropriate antibiotics • Sinus formation • Necrotizing fasciitis	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	5	Knowledge and understanding . subject-	Principles of Flaps, suturing and management of difficult extraction → Flaps in oral cavity • Incision	Theoretical lecture using Power point, Problem-Based	Short, semester, mid-year and final exams

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

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

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

			• Excisional Biopsy • Incisional Biopsy • Surgical technique	,Debriefing ,Information Review, Practical Research, Computer Learning	
30	5	Knowledge and understanding . subject-specific skills	Diagnostic imaging in oral and maxillofacial surgery • Classification: Invasive and Non-invasive • Types of non-invasive imaging • Conventional radiography (Plain x-ray) • Ultrasonography (USG): • Computed tomography scanning (CT scan): Spiral CT, Cone Beam CT (CBCT) • Magnetic resonance imaging (MRI) • MRI vs. CT scan • Radionuclide (scintigraphy or skeletal scan) • Positron emission tomography (PET) Scan • PET-CT • Single Photon Emission Computed Tomography (SPECT) scan	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)	4 hours/ week 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)	1. Dental Management of the Medically Compromised Patient, Ninth Edition, 2018 2. Contemporary oral and maxillofacial surgery 7th edition 2019 (Elsevier).
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:					
2025-2026					
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 Learning	Unit or subject name Theoretical	Learning method	Evaluation 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 Research Computer Learning	Short, semester mid-year and final exams
2	5	Knowledge 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 Research Computer Learning	Short, semester 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, Practical Research, Computer Learning	Short, semester 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, Practical Research, Computer Learning	Short, semester mid-year and final exams
5	5	Knowledge	- Theories of bone growth	Theoretical	Short, semester

		understanding. subject-specific skills	Definitions of growth site, growth center, displacement, and drift	lecture using Power point, Problem-Based Learning, Collaborate Discussion, Debriefing, Information Review, Practical Research, Computer Learning	mid-year and final exams
6	5	Knowledge and understanding. subject-specific skills	- Growth curve and maximum growth spurt - Prenatal and postnatal growth and development of hard tissues	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	5	Knowledge understanding. subject-specific skills	- Prenatal and postnatal growth and development of soft tissues Developmental 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
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, Practical Research, Computer Learning	Short, semester mid-year and final exams
9	5	Knowledge understanding. subject-specific skills	Deciduous and permanent dentition a-Stages of tooth development: (Formation,	Theoretical lecture using Power point, Problem-Based	Short, semester mid-year and final exams

			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

				,Debriefing ,Information Review, Pract Research, Computer Learning	
14	5	Knowledge understanding. subject-specific skills	-Classification of etiological factors a. General factors i. Skeletal factors	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Pract Research, Computer Learning	Short, semes mid-year and final exams
15	5	Knowledge understanding. subject-specific skills	ii. Soft tissue factors	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Pract Research, Computer Learning	Short, semes mid-year and final exams
16	5	Knowledge understanding. subject-specific skills	iii. dental factors	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Pract Research, Computer Learning	Short, semes mid-year and final exams
17	5	Knowledge understanding. subject-specific skills	b. Local factors (definitions without treatment)	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Pract	Short, semes mid-year and final exams

				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 and moment of couple. iii. Types of tooth movement Rate of tooth movement and factors 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

22	5	Knowledge understanding. subject-specific skills	Anchorage (definition, indications, types)	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Pract Research, Computer Learning	Short, semes mid-year and final exams
23	5	Knowledge understanding. subject-specific skills	Orthodontic appliances a. Overview: i. passive orthodontic appliances(habit breaker, retainer and space maintainer) ii. active orthodontic appliances iii. (removable, fixed, orthopedic and myofunctional, and combination) iii. Other active appliances: sp regainer, Invisalign	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Pract Research, Computer Learning	Short, semes mid-year and final exams
24	5	Knowledge understanding. subject-specific skills	b. Removable Orthodontic Appliance: i. Properties of various components (SS wire, acrylic) ii. Components: 1) active components (springs,screws and elastics) 2) retentive components (clasps) 3) acrylic base plate and biteplanes anchorage	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Pract Research, Computer Learning	Short, semes mid-year and final exams
25	5	Knowledge understanding. subject-specific skills	iii. Design of a removableorthodontic appliance iv. Construction of a removableorthodontic appliance v. Soldering and welding Post-insertion instructions guidelines	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Pract Research, Computer Learning	Short, semes mid-year and final exams
26	5	Knowledge understanding. subject-specific	c. Fixed orthodontic appliance: Types, components, advantages,limitation,	Theoretical lecture using Power point,	Short, semes mid-year and final exams

		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	<i>continue</i> 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, perman fixation, precision)	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate	Short, semes mid-year and final exams

				Discussion ,Debriefing ,Information Review, Pract Research, Computer Learning	
Lab number	Study unit title				
1	Seminar 1 (Introduction to orthodontics)				
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				
13	Review				
14	Buccal Canine Retractor				
15	Modified Buccal Canine Retractor				
16	Review				
17	Quarterly Exam				
18	Adams' Clasps on Upper Right 1 st Molar				
19	Adams' Clasps on Upper Left 1 st Molar				
20	Adams' Clasps on Upper Right 1 st Premolar				
21	Double Adams' Clasps on Upper Right 2 nd premolar & 1 st 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)	1. An Introduction to Orthodontics 5th Edition Simon J. Littlewood and Laura Mitchell 2019. 2. Orthodontics: Principles and Practice: Principles and Practice 2nd Edition 2017
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:

2025-2026

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 Learning	Unit or subject name Theoretical	Learning method	Evaluation 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
5	3	Knowledge	Systemic (disease) Factors	Theoretical	Short, semester,

		understanding. subject-specific skills	which cause late eruption Deciduous Dentition Period, Ugly Duckling Stage	lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	mid-year and final exams
6	3	Knowledge and understanding. subject-specific skills	Morphology of the primary teeth	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	3	Knowledge understanding. subject-specific skills	Normal morphology of all primary teeth and their clinical consideration	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	3	Knowledge understanding. subject-specific skills	Morphological differences between primary permanent teeth	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	3	Knowledge understanding. subject-specific skills	Functions of primary teeth	Theoretical lecture using Power point, Problem-based	Short, semester, mid-year and final exams

				learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	
10	3	Knowledge understanding. subject-specific skills	Dental caries; Definition Classification	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
11	3	Knowledge understanding. subject-specific skills	Rampant dental caries, Early childhood 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
12	3	Knowledge understanding. subject-specific skill	Restorative dentistry for children Isolation & maintenance of dry field application of the rubber Dam	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	Morphological consideration ,cavity preparation Cavity preparat on primary teeth,	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion,	Short, semester, mid-year and final exams

				debriefing, information review, practical research, computer-based learning.	
14	3	Knowledge understanding. subject-specific skills	- Restorative materials used on pediatric dentistry	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	3	Knowledge understanding. subject-specific skills	Matrices & retainers	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	3	Knowledge understanding. subject-specific skills	Chrome steel crowns, ART	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	3	Knowledge understanding. subject-specific skills	Treatment of deep caries	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.	
18	3	Knowledge understanding. subject-specific skills	Indirect pulp treatment	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	Vital pulp therapy pulpotomy	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 understanding. subject-specific skills	Local anesthesia and pain control for children Type of space maintainer (indication and 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
23	3	Knowledge understanding. subject-specific skills	Anesthetizing mandibular maxillary teeth and soft tissue	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	3	Knowledge understanding. subject-specific skills	complications after a local anesthetic	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	3	Knowledge understanding. subject-specific skills	supplemental injection techniques	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	3	Knowledge understanding. subject-specific	Oral surgery for children, indication	Theoretical lecture using Power point,	Short, semester, mid-year and final exams

		skills	contraindications for extraction of primary teeth,	Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	
27	3	Knowledge understanding. subject-specific skills	technique for extraction primary teeth	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	3	Knowledge understanding. subject-specific skills	extraction complications	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	postoperative extraction complication radiographic survey of teeth extracted	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	Infections manifestation management	Theoretical lecture using Power point, Problem-based learning, collaboration,	Short, semester, mid-year and final exams

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

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 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. McDONALD AND AVERY'S DENTISTRY CHILD and ADOLESCENT 2022 by Elsevier hand book of pediatric dentis (Cameron) mosby
Recommended books and references (scientific journals, reports...)	
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:					
2025-2026					
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 Learning	Unit or subject name Theoretical	Learning method	Evaluation method

		Outcomes			
1	4	Knowledge and understanding. subject-specific skills	Terms & definitions frequently used in periodontology	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	Anatomy of the periodontium Oral mucosa	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	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, Problem-based learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	Short, semester mid-year and final exams
4	4	Knowledge understanding. subject-specific skills	- Anatomy of the periodontium - Cementum o Definition o Function of cementum o Classification of	Theoretical lecture using Power point, Problem-based	Short, semester mid-year and final exams

			cementum: - i- Acellular afibrillar cementum - ii- Acellular extrinsic fiber cementum - iii- Cellular mixed stratified squamous epithelium - iv- Cellular intrinsic fiber cementum	learning, collaboration, discussion, debriefing, information review, practical research, computer-based learning.	
5	4	Knowledge understanding. subject-specific skills	- Anatomy of the periodontium - Alveolar process Definition - o Function of alveolar process - o Parts of the alveolar process - i- Alveolar bone proper - ii- An external plate of cortical bone - iii- Cancellous trabeculae or spongy bone	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 and understanding. subject-specific skills	Classification of periodontal diseases and conditions (2017) - Reasons for classification - Major changes from previous classification - Periodontal health and gingival diseases and conditions Periodontal health and gingival health: - o Clinical gingival health on an intact periodontium - o Clinical gingival health on a reduced periodontium: i- Stable periodontitis - ii- Non-periodontitis patients - The classification of dental biofilm induced gingivitis: - o Associated with bacterial dental 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	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

			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 understanding, subject-specific skills	- Classification of periodontal diseases and conditions (2017) - Periodontitis (Extent, Staging, Grading, Status, Risk factors) - o Necrotizing periodontal diseases: - i- Necrotizing gingivitis - ii- Necrotizing periodontitis iii- Necrotizing Stomatitis) - o Periodontitis as a manifestation of systemic disease - Peri-implant disease and conditions: § - o Peri- implant health - o Peri-implant mucositis - o Peri-implantitis - o Peri-implant soft and hard tis deficiency	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	Knowledge understanding, subject-specific skills	- Classification of periodontal diseases and conditions (2017) Other conditions affecting the periodontium associated with trauma and iatrogenic factors	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	Etiology of periodontal disease Periodontal disease pathogenesis o Mechanisms of pathogenicity - o Histopathology of periodontal disease: i- Clinically healthy gingival tissues - ii- Histopathology of gingivitis and periodontitis: • The initial lesion • The early lesion	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review,	Short, semester mid-year and final exams

			• The established lesion • The advanced lesion o Inflammatory responses in the periodontium: i- Microbial virulence factors: • Lipopolysaccharide • Bacterial enzymes • Microbial invasion • Fimbriae • Bacterial DNA ii- Host-Derived Inflammatory Mediators: • Cytokines • Prostaglandins • Matrix metalloproteinases	practical research, computer-based learning.	
10	4	Knowledge understanding. subject-specific skills	Etiology of periodontal disease Etiology of periodontal disease and risk factors Etiology of periodontal disease and risk factors Dental plaque biofilm and periodontal microbiology - Definitions: o Supragingival plaque o Subgingival plaque - Structure of a mature dental plaque biofilm - Accumulation of a dental plaque biofilm: o Formation of the pellicle o Initial adhesion/attachment of bacteria 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	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
11	4	Knowledge understanding. subject-specific skills	Microbiologic specificity of periodontal diseases Traditional nonspecific plaque hypothesis - Specific plaque hypothesis	Theoretical lecture using Power point, Problem-based	Short, semester, mid-year and final exams

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

			Malocclusion v- Associated with orthodontic therapy o Local anatomic risk factors	practical research, computer-based learning.	
15	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-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	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	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 Effects of smoking on the etiology and pathogenesis of periodontal disease: i- Microbiology ii- Immune–inflammatory responses iii- Physiology o Effects of smoking on the response to periodontal therapy: i- Nonsurgical Therapy ii- Surgical Therapy and Implants iii- Maintenance Therapy o Effects of smoking cessation periodontal treatment outcomes	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	Knowledge understanding, subject-specific skills	Impact of periodontal infection on systemic health Focal infection theory revisited - Subgingival environment as a reservoir for bacteria - Periodontal disease, coronary heart disease, and atherosclerosis: o Ischemic heart disease o Atherosclerosis - Periodontal disease and stroke - Periodontal disease and diabetes mellitus: o Periodontal infection associated	Theoretical lecture using Power point, Problem-based learning, collaboration, discussion, debriefing, information review, practical research,	Short, semester mid-year and final exams

			glycemic control in diabetes	computer-based learning.	
18	4	Knowledge understanding. subject-specific skills	Impact of periodontal infection on systemic health Periodontal disease and asthma - Periodontal disease and pregnancy outcome - Periodontal disease and chronic obstructive pulmonary disease - Periodontal disease and acute respiratory infections	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	Periodontal indices Definition o Gingival index (Loe and Silness) o Plaque index (Silness and Loe) o Plaque index (O'leary) o Plaque index (Quigley Hein) o Probing pocket depth o Clinical attachment loss o Basic Periodontal Examination (BPE) o Modified Gingival Index o Bleeding on probing o Furcation involvement index o Calculus index o Recession index (Miller) o Recession index (Cairo)	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	The periodontal pocket Classification - Clinical features - Pathogenesis - Histopathology: o Bacterial invasion o Microtopography of the gingival wall o Periodontal pockets as healing lesions o Pocket contents o Root surface walls	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	The periodontal pocket Periodontal disease activity - Pulp changes associated with periodontal pockets	Theoretical lecture using Power point, Problem-	Short, semester mid-year and final exams

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

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

			- 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 resharpener	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	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 - 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)	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	Systemic anti-infective	Theoretical	Short, semester,

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

Clinical and preclinical requirement

Preclinical:

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

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 Periodontology Thirteenth 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:	
2025-2026	
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 Learning Outcomes	Unit or subject name Theoretical	Learning method	Evaluation method
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

				Review, Practical Research, Computer Learning	
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 ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
6 6	4	Knowledge and understanding. subject- specific skills	Preparation of the mouth to receive an RPD (Continued).	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	Classification of impression technique	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	Classification of impression technique (To be continue)	Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information	Short, semester, mid-year and final exams

				Review, Practical Research, Computer Learning	
9	4	Knowledge and understanding. subject- specific skills	Designing 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
10	4	Knowledge and understanding. subject- specific skills	Fitting the removable partial denture framework	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	Occlusal Relationship for Removable Partial 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
12	4	Knowledge and understanding. subject- specific skills	Jaw relation in RPD	Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information	Short, semester, mid-year and final exams

				Review, Practical Research, Computer Learning	
13	4	Knowledge and understanding. subject- specific skills	Trial 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
14	4	Knowledge and understanding. subject- specific skills	Initial placement and adjustment of 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
15	4	Knowledge and understanding. subject- specific skills	Pre- prosthetic 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
16	4	Knowledge and understanding. subject- specific skills	Pre-prosthetic Surgical Considerations (Continued)	Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information	Short, semester, mid-year and final exams

				Review, Practical Research, Computer Learning	
17	4	Knowledge and understanding. subject- specific skills	Diagnosis and treatment plan 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
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 and understanding. subject- specific skills	Record Bases, OcclusionRims,	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	Biomechanics ofRemovable 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
23	4	Knowledge and understanding. subject- specific skills	Stress-Breakers (StressEqualizers)	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	Indirect Retainers	Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information	Short, semester, mid-year and final exams

				Review, Practical Research, Computer Learning	
25	4	Knowledge and understanding. subject- specific skills	Indirect Retainers(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
26	4	Knowledge and understanding. subject- specific skills	Laboratory procedures in RPD construction: Blockout and Relief	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	4	Knowledge and understanding. subject- specific skills	Laboratory procedures in RPD construction: Duplication and Refractory Cast Construction	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	4	Knowledge and understanding. subject- specific skills	Flexible Removable Partial Dentures	Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information Review,	Short, semester, mid-year and final exams

				Practical Research, Computer Learning	
29	4	Knowledge and understanding. subject-specific skills	Repairs and Additions to Removable 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 Framework Using 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 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

	protheses.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:					
Conservative dentistry					
2. Course Code:					
419CV					
3. Semester / Year:					
2 Semester/ Fourth Stage					
4. Description Preparation Date:					
2025-2026					
5. Available Attendance Forms:					
Theoretical lectures and practical clinics and laboratory					
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: 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 Learning	Unit or subject name Theoretical	Learning method	Evaluation method

		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, semester, mid-year and 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, semester, mid-year and 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, semester, mid-year and 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, semester, mid-year and 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, semester , 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, semester , 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, semester , 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, semester , mid-year and final exams

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

				review, practical research, computer- based learning.	
13	7	Knowledge understanding. subject-specific skills	Indirect aesthetic adhesive restorations Inlays and Onlays (materials ,techniques) CAD/CAM Technology.	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	7	Knowledge understanding. subject-specific skills	Direct tooth-colored restorations(Composite)	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	7	Knowledge understanding. subject-specific skills	Dental Laser	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	7	Knowledge understanding. subject-specific skills	Application of Laser Conservative Dentistry.	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,	
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, semester, 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, semester, mid-year and final exams
19	7	Knowledge understanding, subject-specific skills	Techniques of posterior composite Inlay/Onlay restoration system 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, semester, 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, semester, mid-year and final exams

				debriefing, information review, practical research, computer-based learning,	
21	7	Knowledge understanding. subject-specific skills	Ceramic veneers, inlays onlays, clinical procedures.	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	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, semester, 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, semester, 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, semester, mid-year and final exams

				discussion, debriefing, information review, practical research, computer-based learning,	
25	7	Knowledge understanding. subject-specific skills	Basic Phases of Treatment	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	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, semester, 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, semester, mid-year and final exams
28	7	Knowledge understanding. subject-specific skills	Access Opening Preparation	Theoretical lecture using Power point, Problem-based learning,	Short, semester, 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, semester, 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, semester, mid-year and final exams
Operative Dentistry(clinical requirement)					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 III, Class IV, and Class V					3h/wk
Preclinical endodontics					
Study unit title					Hours
Introduction					3
Block construction					3
Diagnosis					3

Quiz 1 in lab 1,2&3 +Access opening	3
Quiz 2 in lab 4 +Clinical access opening to one anterior tooth and two premolar teeth	3
Instrument	3
Equipment and materials	3
Quiz 3 clinical quiz in lab 8&9, Working length estimation demonstration .	3
Quiz 4 in lab 11 + clinical working length estimation on the same three teeth .	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 same 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 Resources

Required textbooks (curricular books, if any)	
Main references (sources)	1- Summitt's fundamentals of operative dentistry: A contemporary approach. 4th edition. 2- Dental composite materials for direct restorations Vesna Miletic Springer, eBook, 2018.

	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	

Academic Program Description Fifth Stage

1. Course Name:	
Prosthodontics	
2. Course Code:	
510 PR	
3. Semester / Year:	
2 Semester/ Fifth Stage	
4. Description Preparation Date:	
2025-2026	
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 Learning Outcomes	Unit or subject name Theoretical	Learning method	Evaluation method
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

				,Debriefing ,Information Review, Practical Research, Computer Learning	
5	7	Knowledge and understanding. subject- specific skills	Classification of Post-Insertion Denture problems	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	7	Knowledge and understanding. subject- specific skills	PostInsertion Problems (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
7	7	Knowledge and understanding. subject- specific skills	Complications of 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
8	7	Knowledge and understanding. subject- specific skills	Complications Of Complete Denture (Continue)	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	Immediate 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
10	7	Knowledge and understanding. subject- specific skills	Immediate 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	7	Knowledge and understanding. subject- specific skills	Classification system for completely edentulous 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
12	7	Knowledge and understanding. subject- specific skills	Classification system for completely edentulous patients (Continue)	Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion	Short, semester, mid-year and final exams

				,Debriefing ,Information Review, Practical Research, Computer Learning	
13	7	Knowledge and understanding. subject- specific skills	Posterior palatal seal area	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	Single 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
15	7	Knowledge and understanding. subject- specific skills	Single CD (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
16	7	Knowledge and understanding. subject- specific skills	Geriatric dentistry	Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing	Short, semester, mid-year and final exams

				,Information Review, Practical Research, Computer Learning	
17	7	Knowledge and understanding. subject-specific skills	Maxillofacial Prosthesis	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 understanding. subject-specific skills	Maxillofacial Prosthesis (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
19	7	Knowledge and understanding. subject-specific skills	Residual Ridge resorption	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	Residual Ridge resorption (Continue)	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	7	Knowledge and understanding. subject- specific skills	Dental implantology	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	Dental implantology (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
23	7	Knowledge and understanding. subject- specific skills	Esthetics 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
24	7	Knowledge and understanding. subject- specific skills	Characteristics Of Ideal Materials For Dental Implant	Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information	Short, semester, mid-year and final exams

				Review, Practical Research, Computer Learning	
25	7	Knowledge and understanding. subject- specific skills	Copy 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
26	7	Knowledge and understanding. subject- specific skills	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
27	7	Knowledge and understanding. subject- specific skills	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
28	7	Knowledge and understanding. subject- specific skills	Neutral zone in CD	Theoretical lecture using Power point, Problem- Based Learning ,Collaborate Discussion ,Debriefing ,Information	Short, semester, mid-year and final exams

				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:					
2025-2026					
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	Unit or subject name Theoretical	Learning method	Evaluation method
1	5	Knowledge and understanding.	The principles of o	Theoretical lecture using	Short, semester, mid-year and

		subject-specific skills	diagnosis	Power point	final exams
2	5	Knowledge understanding. subject-specific skills	The principles of 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 Vesiculo-bullus lesions	Theoretical lecture using Power point	Short, semester, mid-year and final exams
12	5	Knowledge understanding. subject-specific skills	Oral ulceration 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	Knowledge understanding. subject-specific	Early detection of oral can	Theoretical lecture using	Short, semester, mid-year and

		skills		Power point	final exams
17	5	Knowledge understanding. subject-specific skills	Pigmented oral lesions	Theoretical lecture using Power point	Short, semester, mid-year and final exams
18	5	Knowledge understanding. subject-specific skills	Pigmented oral lesions	Theoretical lecture using Power point	Short, semester, mid-year and final exams
19	5	Knowledge understanding. subject-specific skills	Benign, Premalignant and malignant lesions of the oral cavity	Theoretical lecture using Power point	Short, semester, mid-year and final exams
20	5	Knowledge understanding. subject-specific skills	Benign, Premalignant and malignant lesions of the oral cavity	Theoretical lecture using Power point	Short, semester, mid-year and final exams
21	5	Knowledge understanding. subject-specific skills	Neuromuscular disorder	Theoretical lecture using Power point	Short, semester, mid-year and final exams
22	5	Knowledge understanding. subject-specific skills	Neuromuscular disorder	Theoretical lecture using Power point	Short, semester, mid-year and final exams
23	5	Knowledge understanding. subject-specific skills	Salivary gland diseases	Theoretical lecture using Power point	Short, semester, mid-year and final exams
24	5	Knowledge understanding. subject-specific skills	Salivary gland diseases	Theoretical lecture using Power point	Short, semester, mid-year and final exams
25	5	Knowledge understanding. subject-specific skills	Salivary gland diseases	Theoretical lecture using Power point	Short, semester, mid-year and final exams
26	5	Knowledge understanding. subject-specific skills	Autoimmune diseases	Theoretical lecture using Power point	Short, semester, mid-year and final exams
27	5	Knowledge understanding. subject-specific skills	Autoimmune diseases	Theoretical lecture using Power point	Short, semester, mid-year and final exams
28	5	Knowledge understanding. subject-specific skills	Oral manifestation of allergic reaction	Theoretical lecture using Power point	Short, semester, mid-year and final exams
29	5	Knowledge understanding. subject-specific skills	Oral manifestation of allergic reaction	Theoretical lecture using Power point	Short, semester, mid-year and final exams
30	5	Knowledge understanding. subject-specific skills	Oral manifestation of allergic 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	oral 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 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. Burket's oral medicine. Mich Glick, Martin Greenberg, Pe Lockhart and Dstephen Challacom 13th edition.2021, Wiley Black we
2. Bumann, A., & Lotzmann, U. T 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:					
2025-2026					
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 ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	mid-year and final exams
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 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. subject-specific skills		lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	semester, mid-year and final exams
17	7	Knowledge and understanding. subject-specific skills	Implant Treatment: Advanced Concepts	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 understanding. subject-specific skills	Implant Treatment: Advanced Concepts	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	7	Knowledge and understanding. subject-specific skills	Salivary gland 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
20	7	Knowledge and understanding. subject-specific skills	Salivary gland disease	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	Temporomandibula r joint (TMJ) disorders	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	Temporomandibula r joint (TMJ) disorders	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	7	Knowledge and understanding. subject-specific skills	Orthognathic 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	
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 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 Contemporary oral & maxillofacial surgery 7th ed 2019 (Elsevier. (2. Perry M, Brown A, Banks (2015). Fractures of The Facial Skeleton, second edition. Wi Blackwell.
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

1. Course Name:					
Orthodontics					
2. Course Code:					
526OD					
3. Semester / Year:					
2 semester/ Fifth stage					
4. Description Preparation Date:					
2025-2026					
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			
10. Course Structure					
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

			c- Clinical examination i. General body stature	Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	
2	5	Knowledge and understanding. subject-specific skills	ii. Face examination in 3 dimensions iii. skeletal examination iv. Soft tissue 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	5	Knowledge and understanding. subject-specific skills	v. Occlusion	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	vi. Dentition vii. Temporomandibular joint	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	5	Knowledge and understanding. subject-specific skills	d- Diagnostic aids i. Cephalometrics	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	5	Knowledge and understanding. subject-specific skills	ii. Orthopantomography iii. Other views	Theoretical lecture using Power point, Problem-Based	Short, semester, mid-year and final exams

				Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	
7	5	Knowledge and understanding. subject-specific skills	iv. Study models	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	5	Knowledge and understanding. subject-specific skills	v. Photography vi. 3D imaging	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and 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

				Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	
12	5	Knowledge and understanding. subject-specific skills	Space analysis, Bolton's ratio	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 and understanding. subject-specific skills	Teeth extraction in orthodontics	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	5	Knowledge and understanding. subject-specific skills	Serial extraction	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	5	Knowledge and understanding. subject-specific skills	Vertical and transverse problems: a. Deep bite	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	5	Knowledge and understanding. subject-specific skills	b. Open bite	Theoretical lecture using Power point, Problem-Based Learning	Short, semester, mid-year and final exams

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

				Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	
22	5	Knowledge and understanding. subject-specific skills	<i>Continue</i> class I treatment (method of space creation)	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	5	Knowledge and understanding. subject-specific skills	b. Class II div. 1 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
24	5	Knowledge and understanding. subject-specific skills	c. Class II div. 2 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
25	5	Knowledge and understanding. subject-specific skills	d. Class III 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
26	5	Knowledge and understanding. subject-specific skills	Treatment of adults a- Periodontal problems	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate	Short, semester, mid-year and final exams

				Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	
27	5	Knowledge and understanding. subject-specific skills	b- 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
28	5	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
29	5	Knowledge and understanding. subject-specific skills	<i>Continue</i> 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
30	5	Knowledge and understanding. subject-specific skills	Digital orthodontics (digital approach in orthodontic diagnosis and 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

Clinical requirements

Item	Minimum Requirements	Hours
	Treatment of at least one patient: 1- Diagnosis :(Mandatory)	The student should receive at least one orthodontic case to

	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

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	1. An Introduction to Orthodontics 5th Edition Simon J. Littlewood and Laura Mitchell 2019. 2. Orthodontics: Principles Practice: Principles and Practice Edition 2017
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

1. Course Name:					
Pedodontics dentistry					
2. Course Code:					
530PAPD					
3. Semester / Year:					
2 Semester/ Fifth Stage					
4. Description Preparation Date:					
2025-2026					
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			
10. Course Structure					
Week	Hours	Required	Unit or subject name	Learning	Evaluation

		Learning Outcomes	Theoretical	method	method
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 Learning	
5	4	Knowledge and understanding. subject-specific skills	Pharmacologic management of patient behavior Degree of sedation, Indications for pharmacological behavior management technique, Pretreatment documentation and assessment,	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	Sedation in pediatric dentistry 4 Conscious sedation, Routes of drug administration, Enteral sedation ,Rectal route, Intra muscular route, Intravenous route, Inhalation, Drugs and agents used Sedation in pediatric dentistry 4 Conscious sedation, Routes of drug administration, Enteral sedation ,Rectal route, Intra muscular route, Intravenous route, Inhalation, Drugs and agents used	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	management of traumatic injuries to the teeth and supporting tissues of children,	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	classification of injuries to the anterior teeth of children classification methods of clinical examination	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review,	Short, semester, mid-year and final exams

				Practical Research, Computer Learning	
9	4	Knowledge and understanding. subject-specific skills	Traumatic injuries of the primary teeth and its effect on permanent teeth	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	Treatment of injury of permanent teeth, emergency treatment, temporary restoration preparation methods	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	Advances in Pediatric Dentistry: 4 Advances in diagnostic aids, Advances in 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
12	4	Knowledge and understanding. subject-specific skills	Advances in endodontics, Advances in local anesthesia	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review,	Short, semester, mid-year and final exams

				Practical Research, Computer Learning	
13	4	Knowledge and understanding. subject-specific skills	Advances in restorative materials, Advances in surgical procedures, Miscellaneous	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	4	Knowledge and understanding. subject-specific skills	Acquired disturbances of oral structures	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	Developmental disturbances of oral 4 Structures	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	Gingivitis and periodontal disease in children: Introduction simple gingivitis, eruption gingivitis, acute gingival disease; herpes simplex viral infection.	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical	Short, semester, mid-year and final exams

				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 Learning	
25	4	Knowledge and understanding. subject-specific skills	Arch length analysis; Nance analysis, Moyers mixed dentition analysis, Tanaka and Johnston analysis, Bolton analysis	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	4	Knowledge and understanding. subject-specific skills	Dental problems of the disabled child first dental visit, Radiographic examination, Preventive dentistry, Management of a child with special care needs during dental treatment , immobilization,	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	4	Knowledge and understanding. subject-specific skills	Mental disability, Down syndrome,Intellectual disability, Learning disability	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	4	Knowledge and understanding. subject-specific skills	Fragile X syndrome, cerebral palsy, autism,	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research,	Short, semester, mid-year and final exams

				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	Extraction
3	Restoration (cl I, cl II, I 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 and 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	

1. Course Name:					
Prevention					
2. Course Code:					
531PD					
3. Semester / Year:					
2 semester/ Fifth stage					
4. Description Preparation Date:					
2025-2026					
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 and its applications for individuals and society, especially for Widespread diseases, such as tooth decay and gum 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			
10. Course Structure					
Week	Hours	Required Learning	Unit or subject name Theoretical	Learning method	Evaluation 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	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

			• Non-specific immune factors • Specific immune factors • Immunization of dental caries	Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	
13	4	Knowledge and understanding. subject-specific skills	Caries risk assessment • Goals of Caries Risk Assessment • Caries Disease Indicators • Caries Risk Factors • Caries Protective Factors • Factors in Low, Moderate and High Caries • Cariogram	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	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

			• Essential oil mouthwashes or Listerine • Enzymes • Sanguinarine extracts • Metal ions • Antibiotics • Dentifrices • Composition of dentifrices	,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	
17	4	Knowledge and understanding. subject-specific skills	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	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	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	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

			nutrients on dental caries • Nutrition and eruption of teeth	Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	
21	4	Knowledge and understanding. subject-specific skills	Prevention of periodontal disease and oral cancer by nutrition • Nutrition and periodontal health • The mechanisms by which nutrition may affect periodontal disease • Effect of food texture on periodontal health • Nutrition and oral mucosal disease • Nutrition and oral cancer • Primary prevention • Secondary prevention	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	Probiotics and dental health • Caries-related mechanisms of probiotic activity • Probiotics and counts of <i>mutans streptococci</i> • Probiotics and caries occurrence • Probiotics and periodontal health	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	Diagnosis and prevention of dental erosion • Prevalence • Early detection • Etiology • Protection against erosion • Prevention of erosion	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	Prevention of malocclusion • Normal development • Etiology of malocclusion • Interceptive measures • Tooth anomalies • Risk assessment	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate	Short, semester, mid-year and final exams

				Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	
25	4	Knowledge and understanding. subject-specific skills	preventive measure for population with developmental disabilities • Disability definition • Classification of disabling conditions • The issues regarding the delivery of care to people with disabilities • Dental management and preventive measures among disabled individuals • The risk factors for dental caries among disabled individuals • People with physical (neurological) impairment • Visual Deficits • Hearing problems • Mentally retardation • Specialized Equipment for disabled patient management • Dental care for Institutionalized disabled individual	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	4	Knowledge and understanding. subject-specific skills	preventive treatment strategies for medically compromised populations • Introduction • Eating disorders: Characteristics and preventive treatment strategies • Depression: Characteristics and preventive treatment strategies • Diabetes mellitus: Characteristics and preventive treatment strategies • Epilepsy: Characteristics and preventive treatment strategies • Blood disorders: Characteristics and preventive treatment strategies	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	4	Knowledge and understanding. subject-specific skills	Ozone in the prevention of dental diseases • Definition and physical properties • Mode of action • Safety • Application of ozone in dentistry • Effects of ozone on oral microorganisms and oral cells • Ozone for disinfecting dentures • Ozone instruments designed for dentistry • Ozone in the management of incipient caries • Ozone in the management of open caries • Treating root caries with ozone	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	4	Knowledge and	Geriatric dentistry • population characteristics	Theoretical lecture using	Short, semester, mid-year and

		understanding. subject-specific skills	• Physiologic Changes • Functional status • common oral manifestation • preventive measures • long term care	Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	final exams
29	4	Knowledge and understanding. subject-specific skills	Implant care • Dental implant parts • Dental implant and biofilm • Implant Maintenance • Professional care in dental clinic • Home care	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	Protection of the dentition • Impact of dental trauma • Types of traumatic dental injuries to teeth • Sports dentistry • Protective mouth-guards • Evidence of effectiveness • mouth-guards and oral & systemic infections	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams

Lab number	Study unit title
1	Diagnosis and treatment planning
2	Diagnosis and treatment planning
3	Preliminary medical and dental history,Clinical examination , Radio graphic examination
4	Preliminary medical and dental history,Clinical examination , Radio graphic examination
5	Demonstration and use of Primary prevention program by removal of dental plaque and calculus and application of fluoride and fissure sealants
6	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	Infection 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

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...)	
Electronic References, Websites	

1. Course Name:					
Periodontic					
2. Course Code:					
528PT					
3. Semester / Year:					
2 Semester/ Fifth Stage					
4. Description Preparation Date:					
2025-2026					
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			
10. Course Structure					
Week	Hours	Required Learning	Unit or subject name Theoretical	Learning method	Evaluation method

		Outcomes			
1	4	Knowledge and understanding. subject-specific skills	Periodontal examination and diagnosis - Overall appraisal of the patient - Medical history - Dental history: o Chief complaint - Photographic documentation - Clinical Examination: o Extraoral examination o Intraoral examination o Examination of the periodontium o Visual examination of biofilm and calculus o Visual examination of the gingiva - Probing force and angulation - Periodontal examination: o Suppuration o Probing depth o Probing around implants o 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 - o Trauma from occlusion - Digital intraoral radiography	Research, Computer Learning	
4	4	Knowledge and understanding. subject-specific skills	- Advanced diagnosis - Objectives of diagnosis - Advances in periodontal probing - Generations of periodontal probes: - o First-generation (conventional) probes - o Second-generation (constant-pressure) probes i- Pressure-sensitive probe - ii- Electronic pressure-sensitive (Yeaple) probe - o Third-generation (automated) probes: i- Foster-Miller probe - ii- Florida Probe® - iii- Toronto Automated probe iv- InterProbe™ - 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)	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	4	Knowledge and understanding. subject-specific skills	- Periodontal response to external forces - Occlusion - Assessment of occlusion - Adaptive capacity of the periodontium to occlusal forces - Trauma from occlusion: - o Classification of trauma from	Theoretical lecture using Power point, Problem-Based Learning, Collaborate	Short, semester, mid-year and final exams

			occlusion: i- Acute and chronic ii- Primary and secondary - Stages of tissue response to trauma from occlusion: o Stage I: Injury o Stage II: Repair o Stage III: Adaptive remodeling of the periodontium - 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 - Treatment	Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	
6 6	4	Knowledge and understanding. subject-specific skills	Immunology - Innate immunity o Components of innate immunity: i- Saliva: • Salivary peroxidase system • Lactoferrin • Lysozyme ii- Gingival epithelial barrier iii- Gingival crevicular fluid o Pathogen recognition and activation of cellular innate responses: i- Toll like receptors ii- Pro inflammatory cytokines o Cells of innate immunity: i- Neutrophils ii- Macrophages	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	Immunology - Adaptive immunity o Characteristics o Cellular elements o Cellular immunity to dental plaque o The humoral response to plaque o Osteo-immunology in periodontal diseases - Therapeutic Strategies	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	Tooth mobility - Introduction - Types: o Physiologic mobility o Pathologic mobility - Directions of movement: o Horizontal o Vertical - Factors influencing tooth mobility - Classification of tooth mobility - Initial & secondary tooth mobility	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review,	Short, semester, mid-year and final exams

			- Sign & symptoms - Treatment: - o Situation 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 - o Situation III: Increased mobility of a tooth with reduced height of alveolar bone & normal width of PDL - o Situation 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

			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		
11	4	Knowledge and understanding, subject-specific skills	Interrelationships of periodontal disease and therapy with other dental 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	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	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

			- o Surgical chisels - o Tissue forceps - 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	Learning	
13	4	Knowledge and understanding, subject-specific skills	Sonic and ultrasonic instrumentation and irrigation - Power-driven instruments: overview - Mechanism of action of power scalers - Type of power instruments - Mechanized instruments vs manual instruments - Clinical outcomes of power-driven instruments: - o Special considerations - o Root surface roughness - o Aerosol production - o Cardiac pacemakers - Principles of instrumentation - Power-driven devices and COVID-19- associated limitations - Irrigators: - o Mechanism of action of irrigation - o Clinical outcomes of irrigation - o Individuals with special considerations	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	4	Knowledge and understanding, subject-specific skills	Gingivectomy and local excision - Gingivectomy: - o Indications and contraindication - o Advantages and disadvantages - o Surgical procedure - Gingivoplasty - Gingival curettage - Periodontal dressings (Periodontal Packs) - o Zinc oxide–eugenol dressing - o Non-eugenol dressing - Postoperative instructions - Management of postoperative pain	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	Flap surgery - Objectives, indication, and contraindications - Flap techniques: § - o Modified Widman flap - o Undisplaced flap - o Apically displaced flap - o Distal wedge flap - o Papilla preservation flap - Full and partial thickness flap - Osteoplasty - Suturing techniques For each surgical technique	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research,	Short, semester, mid-year and final exams

			demonstrate advantage, disadvantage, and surgical technique	Computer Learning	
16	4	Knowledge and understanding, subject-specific skills	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 reminder of the concept and technique is only required	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	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 Tooth extraction - 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 - o Erbium: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 peri-implantitis - 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: - o Chlorhexidine-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 understanding. subject-specific skills	compromised patients - Endocrine/metabolic disorders: o Diabetes mellitus o Thyroid disorders o Adrenal Insufficiency - Pregnancy - Hemorrhagic disorders - Blood dyscrasias - Liver diseases - Neurologic Disorders: o Epilepsy - Infectious diseases: o COVID-19 o Hepatitis o AIDS o Tuberculosis	lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	mid-year and final exams
22	4	Knowledge and understanding. subject-specific skills	Gingival crevicular fluid (GCF) - Introduction - Permeability of junctional and sulcular epithelia - Function - Amount: o Methods for estimating GCF amount - Composition: o Cellular elements o Electrolytes o Organic compounds - Methods of collection: o Absorbing paper strip: i- Intra-crevicular method ii- Extra-crevicular method o Crevicular washing 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 o Drugs in GCF - GCF as a diagnostic/prognostic tool for periodontal disease	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	Dentin hypersensitivity 605.e1 - Introduction - Epidemiology - Etiology - Theories of dentin hypersensitivity: o Direct innervation o Odontoblast receptor o Fluid movement/hydrodynamic - Diagnosis - Measurement methods - Prevention and management o Classification of desensitizing agents: i- Mode of administration ii- Mechanism of action	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.	Tissue regeneration. General principles Periodontal Wound Healing - Wound healing: Outcomes and	Theoretical lecture using Power point,	Short, semester, mid-year and final exams

		subject-specific skills	definitions - o Healing patterns in the periodontal tissues - o Outcomes of periodontal wound healing: i- Repair ii- Reattachment iii- New attachment iv- Regeneration v- Resorption vi- Ankylosis - Phases of wound healing: - o Inflammation phase - o Granulation phase - o Matrix formation and remodeling (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	Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	
25	4	Knowledge and understanding. subject-specific skills	Regenerative periodontal therapy - Regenerative capacity of bone cells - Regenerative capacity of gingival connective tissue cells - Regenerative capacity of periodontal ligament cells - Role of epithelium in periodontal wound healing - 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	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	4	Knowledge and understanding. subject-specific skills	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 • Xenograft • Alloplastic (synthetic) materials	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review,	Short, semester, mid-year and final exams

			- Guided tissue regeneration (principle, advantages, disadvantages, and indications)	Practical Research, Computer Learning	
27	4	Knowledge and understanding. subject-specific skills	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	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	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	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

			complications: o Screw loosening and fracture o Implant fracture o Fracture of restorative materials - Aesthetic and phonetic complications: o Aesthetic complications o Phonetic problems		
30	4	Knowledge and understanding, subject-specific skills	Oral implantology Supportive implant 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	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

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

Required textbooks (curricular books, if any)	
Main references (sources)	1-Clinical Periodontology and Implant Dentistry, Seventh Edition, Niklaus P. Lang and Jan Lindhe, 2002 2-Newman and Carranza's Clinical Periodontology, Thirteenth 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:					
2025-2026					
5. Available Attendance Forms:					
Theoretical lectures and practical clinics and laboratory					
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: 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		<i>Gain knowledge about the causes of various dental injuries and methods of diagnosing and treating them.</i> <i>Identify the anatomical shape of the dental nerve and how to treat various Roots.</i>			
10. Course Structure					
Week	Hours	Required	Unit or subject name	Learning	Evaluation

		Learning Outcomes	Theoretical	method	method
1	7	Knowledge and understanding. subject-specific skills	Endodontic 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	7	Knowledge and understanding. subject-specific skills	Pain control in Endodontics	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	Endodontic radiography	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	Working length Determination	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	Microbiology	Theoretical	Short, semester,

		understanding. subject-specific skills		lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	mid-year and final exams
6 6	7	Knowledge and understanding. subject-specific skills	Microbiology	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	Intracanal instruments	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	Intracanal instruments	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	Short, semester, mid-year and final exams
9	7	Knowledge and understanding. subject-specific skills	Obturation of the root canal system	Theoretical lecture using Power point, Problem-Based Learning	Short, semester, mid-year and final exams

				,Collaborate Discussion ,Debriefing ,Information Review, Practical Research, Computer Learning	
10	7	Knowledge and understanding. subject-specific skills	Obturation of the root canal 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	7	Knowledge and understanding. subject-specific skills	Endodontic Emergency 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
12	7	Knowledge and understanding. subject-specific skills	Restoration of Endodontically Treated Teeth	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	Endodontic-Periodontal Relations	Theoretical lecture using Power point, Problem-Based Learning ,Collaborate Discussion ,Debriefing ,Information	Short, semester, mid-year and final exams

				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 understanding. subject-specific skills	Components of Fixed Bridge; Retainers.-----	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	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 Ratio. _Splinting of teeth. _Patient Occlusal Status. _General 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

				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 , Occlusion and Aesthetics (Principles of occlusion occlusal plane, Anterior guidance) Bite Registration, 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 , Occlusion and Aesthetics (Principles of occlusion occlusal plane, Anterior guidance) Bite Registration, 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 Learning	
27	7	Knowledge and understanding. subject-specific skills	Try-in and Shade Selection (Colour dimensions Hue,Chroma,and Value).	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	
(clinical 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 Resources

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,
Quintessence Pub. SHILLINGBURG, H. T. & SATHER, A.
2- Contemporary Fixed Prosthodontics, 2016 Elsev
ROSENSTIEL, S. F., LAND, M. F. & FUJIMOTO, J.

Recommended books and references
(science journals, reports...)

Electronic References, Websites