Ministry of Higher Education and Scientific Research

Apparatus for Supervision and Scientific Evaluation

Quality Assurance and Academic Accreditation Directorate

Accreditation Division

2025

Academic program description

Academic Program Description Form

University Name: Al-Turath University

College / Institute: College of Health and Medical Technologies

Scientific Department: Department of Dental Technology

Name of the Academic/Professional Program: Bachelor's Degree (Final Certificate)

Academic System: Semester-based

Date of Description Preparation: 2025-2026

Date of Filing: 2025-2026

Signature :

Head of Department Name:
Dr.Eman Khalaf Abdul Razzaq
Date : 22-8-2026

Signature
Scientific Assistant name:
dr. sanan thaer abdul wahab
Date : 22-8-2026

Reviewed by:

Quality Assurance and University Performance Division

Name of the Director of the Quality Assurance and University Performance Division:

Date: 22-8-2026

Signature:

Dr. Mohammed Anwar Abbood

Dean's Approval

أ.م.د. عباس هاشم عبد السلام
عميد الكلية التقني

Introduction

An academic program is a coordinated and organized package of courses that includes procedures and experiences formulated in the form of curricula. It aims primarily to build and refine graduates' skills and prepare them to meet labor-market requirements. The program is subject to annual review and evaluation through internal or external audit procedures and programs, such as the external examiner program.

The academic program description provides a concise summary of the program's most important characteristics and courses, and highlights the skills students are expected to acquire in line with the program's academic objectives. The importance of this description lies in being the foundational step toward obtaining program accreditation, as the teaching staff participate in its preparation under the supervision of the scientific committees within the academic departments.

This second edition of the guide includes an updated description of the academic program, along with a review of the terminology and sections of the previous guide to reflect the latest developments in the Iraqi educational system. The guide covers the traditional academic program description (both the annual and semester-based systems), in addition to adopting the standardized academic program description issued under the letter of the Studies Directorate No. T.M.3/2906 dated 3 May 2023, concerning programs that adopt the Bologna Process.

Concepts and Terminology

- **Academic Program Description:** Provides a concise summary of the program's most important characteristics and the expected learning outcomes the student is assumed to achieve, clarifying whether the student has made the fullest use of the available opportunities; it is accompanied by a description of each course within the program.
- **Course Description:** Provides a concise summary of the course's most important characteristics and the expected learning outcomes the student is assumed to achieve, clarifying whether the student has made the fullest use of the available learning opportunities; it is derived from the program description.
- **Program Vision:** An aspirational image of the academic program's future, aiming for it to be an advanced, inspiring, motivating, realistic, and applicable program.
- **Program Mission:** Briefly explains the objectives and the activities necessary to achieve them, in addition to defining the pathways and directions for the program's development.
- **Program Objectives:** Statements describing what the academic program intends to achieve within a specified time frame, and which are measurable and observable.
- **Curriculum Structure:** All courses/subjects included in the academic program according to the approved learning system (semester-based, annual, Bologna Process), whether they are requirements (ministerial, university, college, or departmental), with a statement of the number of credit units.
- **Learning Outcomes:** A consistent set of knowledge, skills, and values that the student acquires after successfully completing the academic program. Learning outcomes must be defined for each course in a way that achieves the program's objectives.
- **Teaching and Learning Strategies:** The strategies used by faculty members to develop student teaching and learning; these are plans followed to reach learning objectives, i.e.

they describe all classroom and extracurricular activities aimed at achieving the program's learning outcomes.

1. Program Vision

Leadership in providing an innovative academic program in dental technology that combines modern digital technology with technical skill, to prepare competitive competencies that meet labor-market needs and contribute to raising the level of healthcare locally and regionally.

2. Program Mission

The program's mission is to provide high-quality education that achieves excellence in teaching and learning in the field of dental technology, relying on the use of modern educational techniques to keep pace with digital transformation. We seek to prepare qualified graduates by developing scientific and professional skills, with a focus on linking scientific research to practical application and encouraging innovation. We are also committed to promoting a culture of teamwork that ensures meeting labor-market needs and making an effective contribution to community service.

3. Program Objectives

1. Graduating Laboratory Competencies: Graduating dental-technology technicians who are scientifically and professionally qualified to manage and operate dental laboratories with high efficiency and productivity.
2. Developing Equipment-Use Skills: Developing applied laboratory skills and training students on the latest technologies (such as CAD/CAM systems and 3D printing) and how to handle laboratory equipment and develop its uses.
3. Innovation in Dental Materials: Encouraging scientific research and critical thinking in exploring and developing modern dental materials (such as zirconia and advanced polymers) and improving their properties to suit precision restorations.
4. Establishing Safety Standards and Values: Promoting professional ethics and strict adherence to occupational safety standards when handling chemicals and laboratory equipment, to ensure the manufacture of safe, high-quality prosthetics.
5. Meeting Labor-Market Requirements: Responding to the needs of health institutions and private laboratories by supplying them with technical staff capable of keeping pace with the rapid technological development in laboratory equipment and materials.

6. Commitment to Quality Standards: Ensuring the quality of learning outcomes through continuous updating of the curricula for teaching dental materials and laboratory-equipment techniques, in line with the requirements of national and international academic accreditation.

4. Program Accreditation

We seek to obtain program accreditation.

5. Other External Influences

1. Twinning and Academic Partnerships: Concluding scientific twinning agreements with colleges of health and medical technologies and corresponding departments at other universities, with the aim of exchanging expertise, unifying visions and curricula, and raising the scientific and laboratory standard of the program.
2. Compliance with Legislation and Regulations: Operating fully in accordance with the instructions and regulations issued by the Ministry of Higher Education and Scientific Research, to ensure the program's alignment with national standards for higher education and academic accreditation.
3. Practical Training and Employment: Coordinating with dental laboratories and health institutions to facilitate students' field training, and providing employment opportunities for graduates.
4. Logistical Support: Ongoing cooperation with medical companies supplying laboratory equipment and dental materials to provide training workshops for students on the latest technologies.

6. Program Structure

Program Structure	Number of Courses	Credit Units	Percentage	Notes
Institution Requirements	9 courses (general subjects)	12	7.2%	Includes general subjects such as: Arabic Language, Human Rights, Computer Science, and others.
College Requirements	3 courses	11	6.6%	Shared scientific subjects at the college level.
Department Requirements	36 courses (specialized and supportive)	144	86.2%	Core and specialized courses for dental technology.
Summer Training	-	-	-	30 days at 6 practical hours daily (second and third

Program Structure	Number of Courses	Credit Units	Percentage	Notes
				stage); a graduation requirement.
Grand Total	48 courses	167 theoretical	100%	Distributed over 4 years and 8 academic semesters.

7. Program Description

Study Stage (2025-2026)	Course Name	Course Code	Credit Hours	
			Theory	Practical
Stage 1 / Semester 1	Dental Materials (Basic)	DM-11	2	5
Stage 1 / Semester 1	Dental Equipment Technology (Basic)	DET11	2	5
Stage 1 / Semester 2	Dental Anatomy (Basic)	DA1	2	5
	Occupational Safety	OS1	2	-
	English Language	EL1	2	-
	Human Rights and Democracy	HRD1	2	-
	Dental Materials (Intermediate)	DM12	2	5
	Dental Equipment Technology (Advanced)	DET12	2	5
	Dental Anatomy (Advanced)	DA-2	2	5
	General Physics	GP2	2	4
	Arabic Language 2	AL2-12	2	-
	Computer Principles	CP1	1	2

Study Stage (2025-2026)	Course Name	Course Code	Credit Hours	
			Theory	Practical
Stage 2 / Semester 1	Dental Materials (Advanced)	DM-21	2	5
	Complete Denture (Basic)	CD-21	2	5
	Crowns (Basic)	CR-21	2	5
	Oral Tissues	OH-21	2	3
	Chemistry (Basic)	CH-21	2	4
	Crimes of the Ba'athist Regime in Iraq	ARC-21	2	-
Stage 2 / Semester 2	Removable Partial Denture (Basic)	PT-22	2	5
	Crowns (Advanced)	CR-22	2	5
	Oral Physiology	OP-22	2	4
	Head and Neck Anatomy	AHN-22	2	4
	Chemistry (Advanced)	CH-22	2	4
	Arabic Language 2	AL2-22	2	-
	Computer Applications	CA-22	1	2

Study Stage (2025-2026)	Course Name	Course Code	Credit Hours	
			Theory	Practical
Stage 3 / Semester 1	Removable Partial Denture (Intermediate)	RPD-31	2	4
	Complete Denture (Intermediate)	CD_31	2	4
	Bridges (Basic)	BR-31	2	4
	Orthodontics (Basic)	OR-31	2	4
	Oral Diseases	OP-31	1	2
Stage 3 / Semester 2	Bridges (Advanced)	BR-32	2	5
	Maxillofacial Prosthetics (Basic)	MP-32	2	5
	Orthodontics (Intermediate)	OR_32	2	5
	Oral Bacteria	OP-32	2	3
	Scientific Research Methods	RM-32	1	-

Study Stage (2025-2026)	Course Name	Course Code	Credit Hours	
			Theory	Practical
Stage 4 / Semester 1	Advanced Removable Partial Denture 1	RPD1	2	4
	Advanced Complete Denture 1	CD-41	2	4
	Crowns and Bridges (Basic)	CAB-41	2	4
	Orthodontics Advanced 1	OR_41	2	4
	Maxillofacial Prosthetics (Intermediate)	MP-41	2	4
	Dental Implants	DI-41	2	4
Stage 4 / Semester 2	Advanced Removable Partial Denture 2	RPD-2-42	2	4
	Advanced Complete Denture 2	CD 2-42	2	4
	Crowns and Bridges (Advanced)	CAB-42	2	4
	Orthodontics Advanced 2	ORTHO 2-42	2	4
	Maxillofacial Prosthetics (Advanced)	MAXP2-42	2	4
	Professional Ethics	PE242	2	-
	Graduation Project	GP-42	-	6

8. Program's Intended Learning Outcomes

Knowledge	
Learning Outcome Statement	**Learning Outcome Code**
1. Explains the properties of the various dental materials used in the field of dental technology. 2. Describes the manufacturing steps of the various fixed dental restorations, including crowns, bridges, veneers, and implant crowns. 3. Lists the manufacturing stages of the various removable restorations, whether complete or partial (acrylic or metal). 4. Explains how to design and manufacture various maxillofacial prosthetics. 5. Explains the mechanisms for manufacturing removable and fixed orthodontic appliances. 6. Summarizes the workflow in digital dentistry, including optical scanning of dental models, CAD/CAM systems, and the properties of advanced aesthetic materials.	
Skills	
Learning Outcome Statement	**Learning Outcome Code**
1. Uses the various devices and equipment specific to dental technology safely and with high efficiency. 2. Designs and produces maxillofacial prosthetic devices (such as eye, ear, and nose prostheses, and maxillary obturators) to help patients restore natural function and appearance. 3. Applies sculpting, shaping, and ceramic build-up techniques to manufacture crowns, bridges, and aesthetic restorations that replicate the natural shape and color of the teeth (Digital Smile Design). 4. Carries out laboratory procedures and steps with the utmost precision to avoid errors while working in health institutions.	

5. Collaborates professionally with dentists, and handles impressions and models received from clinics with professionalism and precision to ensure the manufacture of restorations that conform to the required medical specifications. 6. Masters wire-bending and soldering skills for manufacturing various fixed and removable orthodontic appliances and space maintainers. 7. Selects and mixes dental materials (such as plaster, acrylic, and various metal alloys) in precise scientific proportions that conform to manufacturers' specifications, to ensure optimal physical and mechanical properties of the restoration.	
Values	
Learning Outcome Statement	**Learning Outcome Code**
Adheres to the ethics of the dental-technology profession and bears full professional responsibility for the quality of laboratory work. Participates actively in workshops, scientific seminars, and activities related to developing specialization skills. Takes the initiative toward continuous learning and is keen to develop personal and professional capabilities to keep pace with the latest technical developments in dental technology. Believes in the importance of teamwork and effective communication, and cooperates positively and with mutual respect with dentists and colleagues to ensure the success of the patient's treatment plan. Demonstrates a high level of discipline in time management and adheres to meeting deadlines for delivering dental restorations accurately without compromising the quality of the work. Takes the initiative toward continuous learning and is keen to continuously develop personal and professional capabilities to keep pace with the latest developments and digital systems in dental technology.	

9. Teaching and Learning Strategies

1. Adopting theoretical lectures and using teaching and illustrative aids (such as projectors and smart boards)
2. Practically applying theoretical knowledge in specialized laboratories
3. Conducting field visits to centers specialized in dental technology
4. Assigning groups of students to prepare seminars on topics related to dental technology

10. Assessment Methods

1. Daily assessments (theoretical and practical)
2. Midterm and final semester examinations
3. Scientific seminars

4. Scientific activities and participation in scientific exhibitions

Professional Development

Orientation of New Faculty Members

Organizing orientation workshops for new faculty members to clarify the academic program's vision, mission, and objectives, training them in the use of modern teaching and assessment strategies, in addition to familiarizing them with safety regulations in dental-technology laboratories and academic accreditation systems.

Professional Development for Faculty Members

Involving the teaching staff in advanced training courses on the latest dental and dental-technology techniques (such as CAD/CAM systems), encouraging them to publish research in reputable international indexes, and to attend specialized conferences and seminars to develop their academic and laboratory competence.

11. Admission Criteria

Admission to the program is subject to the central admission regulations issued by the Ministry of Higher Education and Scientific Research. Graduates of the preparatory (secondary) stage, Scientific/Biology branch, are admitted according to competitive averages and through the electronic admission form, provided the student passes the eligibility examination administered by the competent committee in accordance with the approved regulations.

12. Main Sources of Information about the Program

1. The college's official website and the student guidance manual.
2. Instructions of the Ministry of Higher Education and Scientific Research.
3. E-learning platforms approved by the department and direct academic communication with the department chair.
4. Feedback from the labor market.
5. The academic program description and technological developments in the field of specialization.

13. Program Development Plan

1. **Updating Curricula and Outcomes:** Periodic review of syllabi and learning outcomes to keep pace with the latest scientific developments and labor market requirements.
2. **Developing Teaching Strategies:** Enhancing active learning methods (student-centered) and utilizing interactive educational platforms to present information.
3. **Updating Assessment Methods:** Diversifying measurement tools and examinations (theoretical and practical) to ensure accurate assessment of the student's skills and values.
4. **Relying on Feedback:** Utilizing surveys from students, alumni, and employers for the evaluation and continuous improvement of the program.

Program Skills Map

The (✓) mark indicates that the corresponding program learning outcome is included and is being assessed.

Study Stage	Course Name	Course Type	A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
Stage 1 / Semester 1	Dental Materials (Basic)	Specialized	✓				✓						✓	
	Dental Equipment Technology (Basic)	Specialized	✓						✓				✓	
	Dental Anatomy (Basic)	Specialized		✓				✓					✓	
	Occupational Safety	Specialized				✓		✓			✓			
	English Language	General			✓		✓					✓		
	Human Rights and Democracy	General				✓				✓		✓		
Stage 1 / Semester 2	Dental Materials (Intermediate)	Specialized		✓			✓						✓	
	Dental Equipment Technology (Advanced)	Specialized		✓					✓				✓	
	Dental Anatomy (Advanced)	Specialized		✓				✓					✓	
	General Physics	Supportive	✓				✓							✓

Study Stage	Course Name	Course Type	A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
	Arabic Language 2	General			✓		✓					✓		
	Computer Principles	General	✓						✓					✓

Study Stage	Course Name	Course Type	A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
Stage 2 / Semester 1	Dental Materials (Advanced)	Specialized		✓			✓						✓	
	Complete Denture (Basic)	Specialized	✓					✓	✓				✓	
	Crowns (Basic)	Specialized	✓					✓	✓				✓	
	Oral Tissues	Supportive	✓				✓							✓
	Chemistry (Basic)	Supportive	✓				✓							✓
	Crimes of the Ba'athist Regime in Iraq	General				✓				✓	✓			
Stage 2 / Semester 2	Removable Partial Denture (Basic)	Specialized	✓					✓	✓				✓	
	Crowns (Advanced)	Specialized		✓				✓	✓				✓	
	Oral Physiology	Supportive	✓				✓							✓

Study Stage	Course Name	Course Type	A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
	Head and Neck Anatomy	Supportive	✓					✓						✓
	Chemistry (Advanced)	Supportive		✓			✓							✓
	Arabic Language 2	General			✓		✓					✓		
	Computer Applications	General		✓					✓					✓

Study Stage	Course Name	Course Type	A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
Stage 3 / Semester 1	Removable Partial Denture (Intermediate)	Specialized		✓				✓		✓			✓	
	Complete Denture (Intermediate)	Specialized		✓				✓		✓			✓	
	Bridges (Basic)	Specialized		✓				✓		✓			✓	
	Orthodontics (Basic)	Specialized	✓					✓	✓				✓	
	Oral Diseases	Supportive		✓	✓		✓							✓
Stage 3 / Semester 2	Bridges (Advanced)	Specialized		✓				✓		✓			✓	
	Maxillofacial Prosthetics (Basic)	Specialized	✓					✓	✓				✓	

Study Stage	Course Name	Course Type	A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
	Orthodontics (Intermediate)	Specialized		✓				✓		✓			✓	
	Oral Bacteria	Supportive		✓	✓		✓							✓
	Scientific Research Methods	General				✓	✓			✓	✓			

Study Stage	Course Name	Course Type	A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
Stage 4 / Semester 1	Advanced Removable Partial Denture 1	Specialized		✓				✓		✓			✓	
	Advanced Complete Denture 1	Specialized		✓				✓		✓			✓	
	Crowns and Bridges (Basic)	Specialized		✓				✓		✓			✓	
	Orthodontics Advanced 1	Specialized		✓				✓		✓			✓	
	Maxillofacial Prosthetics (Intermediate)	Specialized		✓				✓		✓			✓	
	Dental Implants	Specialized		✓				✓		✓			✓	

Study Stage	Course Name	Course Type	A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
Stage 4 / Semester 2	Advanced Removable Partial Denture 2	Specialized		✓				✓		✓			✓	
	Advanced Complete Denture 2	Specialized		✓				✓		✓			✓	
	Crowns and Bridges (Advanced)	Specialized		✓				✓		✓			✓	
	Orthodontics Advanced 2	Specialized		✓				✓		✓			✓	
	Maxillofacial Prosthetics (Advanced)	Specialized		✓				✓		✓			✓	
	Professional Ethics	General				✓				✓	✓	✓		
	Graduation Project	Specialized		✓			✓			✓		✓		

Course Description Form

Details	Item
Dental Materials (basic) - Dental Materials (Basic)	1. Course Name
DM-11	2. Course Code
First Semester / First Stage/Academic Year 2025-2026	3. Semester / Year
2025-2026	4. Date of Preparation of this Description
Compulsory in-person attendance (theoretical and practical)	5. Available Attendance Modes
105 total hours (30 theoretical + 75 practical) / 4 credits	6. Number of Study Hours / Credits
Name: Asst. Lecturer Zainab Diaa Fawzi Email: Ecc0059@mtu.edu.iq	7. Course Coordinator
• Introduce the student to the materials used in dental technology and how to handle them. • Enable the student to study and use all common laboratory materials used in the preparation of dental and maxillofacial prostheses. • Study the physical, chemical, mechanical, and biological properties of dental materials.	8. Course Objectives
• Use theoretical lectures supported by illustrative aids (presentations). • Direct practical application of theoretical knowledge in specialized laboratories. • Use brainstorming and interactive discussions. • Conduct surprise tests and continuous assessments of students' laboratory skills.	9. Teaching and Learning Strategies

10. Course Structure

Assessment Method	Learning Method	Unit or Topic Name (Theoretical + Practical)	Required Learning Outcomes	Hours 2 theoretical / 5 practical	Week
Direct questions and	Lecture + Laboratory application	**Theoretical: Basics of materials science**	Identifies the fundamentals of materials	2 theoretical	1

10. Course Structure					
practical assessment		**Practical: The unit conversion used in D.M.**	science and unit conversions	/ 5 practical	
Discussion and practical assessment	Lecture + Laboratory application	**Theoretical: Requirements and evaluation of dental materials - Practical: The unit conversion used in D.M.**	Explains the requirements for dental materials and their evaluation	2 theoretical / 5 practical	2
Daily exam (Quiz)	Lecture + Laboratory application	**Theoretical: The structure of the solid materials and interatomic bonds - Practical: Application of mechanical properties (impact, flexural, and fatigue tests)**	Describes the structure of solid materials and interatomic bonds	2 theoretical / 5 practical	3
Student performance assessment	Lecture + Laboratory application	**Theoretical: The mechanical properties of the solid materials (Part I) Practical: Lab application of Mechanical properties (basic strength and fracture resistance tests)**	Analyzes the mechanical properties of materials	2 theoretical / 5 practical	4
Discussion and practical assessment	Lecture + Laboratory application	**Theoretical: The mechanical properties of the solid materials (Part II) Practical: Lab application of mechanical properties (hardness tests)**	Analyzes the advanced mechanical properties of materials.	2 theoretical / 5 practical	5

10. Course Structure					
Daily exam theoretical and practical	Lecture + Laboratory application	**Theoretical: The mechanical properties of the solid materials (Rheological properties)** **Practical: Lab application of mechanical properties (abrasion and friction tests)**	Explains the rheological properties of materials	2 theoretical /5 practical	6
Student performance assessment	Lecture + Laboratory application	**Theoretical: The physical properties of the solid materials (adhesion and cohesion** **Practical: Application of physical properties (adhesion and peel tests)**	Explains the adhesion and cohesion properties of materials	2 theoretical /5 practical	7
Mid-term exam	Lecture + Laboratory application	**Theoretical: The physical properties of the solid materials (thermal properties)** **Practical: Lab application of physical properties (thermal conductivity test)**	Tests the thermal properties of materials	2 theoretical /5 practical	8
Discussion and practical assessment	Lecture + Laboratory application	Theoretical: The physical properties of the solid materials (electrical properties) **Practical: Lab application of**	Tests the electrical properties of materials	2 theoretical /5 practical	9

10. Course Structure					
		physical properties (surface charge test)			
Student performance assessment	Lecture + Laboratory application	**Theoretical: The physical properties of the solid materials (surface physico-chemistry** **Practical: Lab application of physical properties (surface wettability tests)**	Explains the surface physicochemistry of materials.	2 theoretical / 5 practical	10
Daily exam (Quiz)	Lecture + Laboratory application	**Theoretical: The physical properties of the solid materials (surface texture)** **Practical: Application of physical properties (surface roughness test)**	Distinguishes the surface texture of dental materials	2 theoretical / 5 practical	11
Discussion and practical assessment	Lecture + Laboratory application	**Theoretical: The physical properties of the solid materials (optical properties)** **Practical: Lab application of physical properties (EIC and RGB color space tests)**	Explains the optical properties of materials	2 theoretical / 5 practical	12
Student performance assessment	Lecture + Laboratory application	**Theoretical: The biological properties of the solid materials (Biocompatibility)**	Analyzes the biocompatibility of dental materials	2 theoretical / 5 practical	13

10. Course Structure					
		Practical: Microscopic analysis of biofilm formation			
Daily exam theoretical and practical	Lecture + Laboratory application	**Theoretical: The biological properties of the solid materials (Biofilm formation and bio adhesion)** - Practical: Microscopic analysis of biofilm formation	Explains biofilm formation and bioadhesion	2 theoretical / 5 practical	14
Assessment of preparation for the final exam	Lecture + Laboratory application	**Theoretical: The chemical properties of the solid materials** **Practical: Chemical resistance of dental materials**	Tests the chemical resistance of materials	2 theoretical / 5 practical	15

11. Course Assessment	
Distribution Details	
20 points (for theoretical midterm and daily exams)	
15 points (for laboratory assessment and practical exams)	
5 points (for attendance, participation, and activity)	
60 points (distributed between the theoretical and practical components)	

12. Learning and Teaching Resources	
Advanced ceramic for dentistry Applied dental materials	Required Textbooks (Prescribed Curriculum, if any)

Basic dental materials Biocompatibility of dental materials Philips science of dental materials	Main References (Sources)
Biomaterials, principles and application	Recommended Supporting Books and References
Educational videos approved on YouTube and recent scientific articles in dental journals (Google Scholar).	Electronic References and Websites

Details	Item
Dental Equipment Technologies (basic) - Dental Equipment Technologies (Basics)	**1. Course Name**
DET-11	**2. Course Code**
First Semester / First Stage Academic Year 2025-2026	**3. Semester / Year**
2025-2026	**4. Date of Preparation of this Description**
Compulsory in-person attendance (theoretical and practical)	**5. Available Attendance Modes**
105 total hours (30 theoretical + 75 practical) / 4 credits (2 theoretical / 5 practical)	**6. Number of Study Hours / Credits**
Name: Lecturer Sarah Kadhim Raouf Email: Sarah.mouala@uoturath.edu.iq	**7. Course Coordinator**
• Introduce the student to dental devices and technologies, identify their components, and explain their operation and maintenance. • Enable Dental Technology Department students to use, operate, and maintain laboratory devices.	**8. Course Objectives**
• Adopt theoretical lectures supported by illustrative aids. • Provide direct practical training on devices within laboratories. • Conduct continuous practical assessment of equipment-use and maintenance skills.	**9. Teaching and Learning Strategies**

10. Course Structure

Assessment Method	Learning Method	Unit or Topic Name (Theoretical + Practical)	Required Learning Outcomes	Hours	Week
Discussion and practical assessment	Lecture + Laboratory application	**Theoretical: Introduction. Dental laboratories, The work in the lab, The principle of the ideal lab**	Identifies the ideal laboratory environment and work principles	2 theoretical / 5 practical	1

10. Course Structure					
		Practical: Dental laboratories and lab requirements			
Daily exam daily (Quiz)	Lecture + Laboratory application	**Theoretical: Hand instruments used in Dental laboratories** **Practical: Uses of Cutting Hand Instruments and Filings Hand Instruments in the Dental Laboratories**	Uses hand instruments safely	2 theoretical /5 practical	2
Student performance assessment	Lecture + Laboratory application	**Theoretical: Dental Impression Trays** Practical: Uses of Carving Hand Instruments and Mixing Hand Instruments in the Dental laboratories	Distinguishes types of dental impressions and carving tools	2 theoretical /5 practical	3
Discussion and practical assessment	Lecture + Laboratory application	**Theoretical: The burner used in Prosthodontic Dentistry** **Practical: How to use the types of Dental Impression Trays in Dental laboratories**	Applies the uses of the burner and impression tools.	2 theoretical /5 practical	4
Daily exam theoretical and practical	Lecture + Laboratory application	**Theoretical: Dental Pliers** **Practical: Practical applications of Burner use in Prosthodontic Dentistry**	Uses pliers dental (Pliers) in work	2 theoretical /5 practical	5

10. Course Structure					
Student performance assessment	Lecture + Laboratory application	**Theoretical: Articulators, Face Bow and Die-lock tray** **Practical: Practical Applications of Dental Pliers**	Identifies the articulator and its accessories	2 theoretical /5 practical	6
Daily exam daily (Quiz)	Lecture + Laboratory application	**Theoretical: Dental Surveyors** **Practical: How to use the types of Dental Brush, Burs and Disc**	operates dental surveyor (Surveyor)	2 theoretical /5 practical	7
Mid-term exam	Lecture + Laboratory application	**Theoretical: Dental Packing & Duplication tools, and Dental Press** **Practical: Practical applications of Articulator**	Applies acrylic packing and processing tools	2 theoretical /5 practical	8
Student performance assessment	Lecture + Laboratory application	**Theoretical: Dental Trimmer and Vibrator** **Practical: How to use the Face Bow and Die-lock tray**	Operates the trimming and vibrator devices	2 theoretical /5 practical	9
Discussion and practical assessment	Lecture + Laboratory application	**Theoretical: Wax extraction unit** **Practical: Practical Applications of Dental Surveyors**	Identifies wax unit	2 theoretical /5 practical	10
Daily exam theoretical and practical	Lecture + Laboratory application	Theoretical: Polymerization devices (Water Bath devices,	Uses polymerization devices various	2 theoretical /5 practical	11

10. Course Structure					
		hydraulic flask and microwave oven) **Practical: Practical Applications of Packing, Duplication Tools, and Dental Press**			
Student performance assessment	Lecture + Laboratory application	Theoretical: Curing Light device and Injector flexible machine **Practical: Practical Applications of Dental Trimmer and Vibrator**	distinguishes between devices curing and material injection	2 theoretical / 5 practical	12
Discussion and practical assessment	Lecture + Laboratory application	**Theoretical: Dental Brush, Burs and Disc tools** **Practical: Practical applications of Water Bath device**	Applies the uses of polishing devices for dental prostheses.	2 theoretical / 5 practical	13
Daily exam daily (Quiz)	Lecture + Laboratory application	**Theoretical: Laboratory Engines and Handpiece** **Practical: Practical applications of the hydraulic flask and microwave oven**	operates device (Engines)	2 theoretical / 5 practical	14
Assessment of preparation for the final exam	Lecture + Laboratory application	Theoretical: Dental lathe polishing machine	masters use polishing machine (Lathe machine)	2 theoretical / 5 practical	15

10. Course Structure					
		Practical: Practical applications of Wax eliminator and Dental lathe machine			

11. Course Assessment
Distribution Details
20 points (for theoretical midterm and daily exams)
15 points (for laboratory assessment and practical exams)
5 points (for attendance, participation, and activity)
60 points (distributed between the theoretical and practical components)

12. Learning and Teaching Resources	
• Dental Instruments, 2nd Edition. Linda Bartolomucci Boyd • Book on dental devices and laboratories, by Faiz Fuad Dawood	Required Textbooks(Prescribed curriculum, if any)
• Basic guide to dental instruments. SCHELLER Carmen. 2006 • Dental Instruments Packet. Dr. Randall Taylor	Main References(Sources)
• guidelines companies manufactured for devices Laboratory and instructions maintenance attached with them.	Recommended Supporting Books and References (scientific journals, reports, ...)
• www.mestra.es • https://www.renfert.com/usa-en/PM/Product	Electronic References and Websites

Details	Item
Dental Anatomy (basic) Dental Anatomy (Basic)	1. Course Name
DA-11	2. Course Code
First Semester / First Stage Academic Year 2025-2026	3. Semester / Year
2025-2026	4. Date of Preparation of this Description
Compulsory in-person attendance (theoretical and practical)	5. Available Attendance Modes
105 Total hours (30 theoretical + 75 practical (2 theoretical / 5 practical) / 4 credits	6. Number of Study Hours / Credits
Name: Fakhriya Ismail Alwan fkhrih.ismail@uoturath.edu.iq email	27. Course Coordinator
• Introduce the student to scientific terminology related to teeth and provide information on their anatomical aspects. • Through practical work, the student studies drawing and carving of teeth for use in technical work.	8. Course Objectives
• Use theoretical lectures supported by illustrative aids (presentations). • Direct practical application of drawing and carving in specialized laboratories. • Periodic assessment of completed models and provision of feedback.	9. Teaching and Learning Strategies

10. Course Structure

Assessment Method	Learning Method	Unit or Topic Name (Theoretical + Practical)	Required Learning Outcomes	Hours	Week
Discussion and practical assessment	Lecture + Laboratory application	Theoretical: Introduction of dental anatomy Practical: Instruments & materials used in dental carving	Identifies science Dental Anatomy and its terminology	2 theoretical / 5 practical	1

10. Course Structure					
Daily exam daily (Quiz)	Lecture + Laboratory application	Theoretical: Anatomy of tooth structure Practical: Drawing some engineering pattern	Describes the anatomy of tooth structure	2 theoretical -5 practical	2
Assessment of carved pieces	Lecture + Laboratory application	Theoretical: The numbering system of the teeth Practical: Carving some engineering pattern of soap according to certain design and size in millimetres	Distinguishes tooth numbering systems and their surfaces	2 theoretical /5 practical	3
Discussion and practical assessment	Lecture + Laboratory application	Theoretical: The surfaces and ridges for anterior and posterior teeth Practical: Carving some designs on the engineering pattern of soap	Explains the general form of the tooth and its function	2 theoretical /5 practical	4
Daily exam theoretical and practical	Lecture + Laboratory application	Theoretical: Fundamental of the tooth form Practical: Guidelines of carving the aspects of anterior teeth	Explains the fundamentals and principles of tooth form	2 theoretical /5 practical	5
Assessment of laboratory drawings	Lecture + Laboratory application	Theoretical: Proximal contact area: importance and function Practical: Drawing and demonstration of upper Central incisor	Demonstrates the importance of the contact area between teeth	2 theoretical /5 practical	6

10. Course Structure					
Daily exam (Quiz)	Lecture + Laboratory application	Theoretical: Physiology of teeth (Function)and tooth form Practical: Carving upper right Central incisor	Identifies the anatomical landmarks of anterior teeth.	2 theoretical /5 practical	7
Mid-term exam	Lecture + Laboratory application	Theoretical: Anatomical landmarks (anterior teeth) Practical: Carving upper left Central incisor	Identifies the anatomical landmarks of anterior teeth.	2 theoretical /5 practical	8
Assessment of carved pieces	Lecture + Laboratory application	Theoretical: Anatomical landmarks (posterior teeth) Practical: Drawing and demonstration of the upper lateral incisor	identifies anatomical landmarks for teeth posterior	2 theoretical /5 practical	9
Discussion and practical assessment	Lecture + Laboratory application	Theoretical: Maxillary central Incisor Practical: Carving upper lateral incisor	Accurately describes the maxillary lateral incisor.	2 theoretical /5 practical	10
Daily exam theoretical and practical	Lecture + Laboratory application	Theoretical: Maxillary lateral Incisor Practical: Drawing and demonstration of upper canine	describes lateral incisor maxillary accurately	2 theoretical /5 practical	11
Assessment of laboratory drawings	Lecture + Laboratory application	Theoretical: Mandibular central Incisor Practical: Carving upper right canine	Accurately describes the mandibular central incisor.	2 theoretical /5 practical	12

10. Course Structure					
Discussion and practical assessment	Lecture + Laboratory application	Theoretical: Mandibular lateral Incisor Practical: Carving upper left canine	Accurately describes the mandibular lateral incisor.	2 theoretical / 5 practical	13
Daily exam (Quiz)	Lecture + Laboratory application	Theoretical: maxillary Canine Practical: Drawing and demonstration of lower canine	Describes the maxillary canine and its landmarks.	2 theoretical / 5 practical	14
Assessment and preparation for the daily exam.	Lecture + Laboratory application	Theoretical: mandibular canine Practical: Carving lower canine	Describes the mandibular canine and its landmarks and applies comprehensive carving skills.	2 theoretical / 5 practical	15

11. Course Assessment	
Distribution Details	
20 points (for theoretical midterm and daily exams)	
15 points (for laboratory assessment and practical exams)	
5 points (for attendance, participation, and activity)	
60 points (distributed between the theoretical and practical components)	

12. Learning and Teaching Resources	
Wheeler's Dental Anatomy, Physiology and Occlusion 10th Edition, PDF 2021	**Required Textbooks (Prescribed Curriculum, if any)**
Textbook of Dental Anatomy and Oral Physiology. Manjunatha BS, 1st PDF edition 2018	**Main References (Sources)**
PDF Woelfel's Dental Anatomy 8th Edition PD. 2018	**Recommended Supporting Books and References**

12. Learning and Teaching Resources	
Specialized educational platforms for three-dimensional dental anatomy and illustrative videos of tooth carving on YouTube.	Electronic References and Websites

Details	Item
Occupational Safety - Occupational safety	1. Course Name
OS-11	2. Course Code
First Semester / First Stage Academic Year 2025-2026	3. Semester / Year
2025-2026	4. Date of Preparation of this Description
Compulsory in-person attendance	5. Available Attendance Modes
30 Total hours (theoretical only) / 2 credits	6. Number of Study Hours / Credits
Name: Dr. Tariq Mahdi Saleh tarekmsaleh@uoturath.edu.iq Email:	7. Course Coordinator
• • Introduce the student to occupational and laboratory hazards affecting workers' health. • Enable the student to prevent occupational hazards in laboratories and workshops and follow correct safety procedures.	8. Course Objectives
• Theoretical lectures supported by presentations and illustrative images. • Discussion and brainstorming to solve hypothetical accident problems.	9. Teaching and Learning Strategies

10. Course Structure					
Assessment Method	Learning Method	Unit or Topic Name (theoretical only)	Required Learning Outcomes	Hours	Week

10. Course Structure					
questions and discussion	Lecture interactive	Introduction & terms used in occupational safety, The staff of the occupational health center	Identifies safety terminology and occupational health staff roles.	2	1
Daily exam daily	Lecture interactive	Work hazards in an industrial environment in general work - Physical hazards	Identifies physical hazards in the work environment.	2	2
Oral discussion	Lecture interactive	Noise, and protection from noise - Source of noise in general work	distinguishes sources noise and methods prevention from them	2	3
Daily exam daily	Lecture interactive	Prevention from the heat in general work - Chemical hazards in general work	Explains methods of preventing heat exposure and chemical hazards.	2	4
Short daily exam	Lecture interactive	The most important route of entry of chemical, Elimination of chemical substances, Type of toxicity Chronic toxicitt	Explains routes of entry of chemicals and their toxicity	2	5
questions and discussion	Lecture interactive	Occupational cancer, Respiratory disease associated with occupational cancer, Occupational Asthma / properties prevention / treatment	Relates respiratory diseases to occupational cancer	2	6
Daily exam	Lecture interactive	Introduction to Biosafety and Security • Key components of Biorisk Management • Components of safety in all laboratories • Universal safety precautions Biosafety barriers in laboratories • Personal protective equipment(PPE) • Facility Design	Explains the fundamentals of biological safety and security.	2	7
Mid-term	Lecture interactive	• \Biosafety level	Identifies biosafety	2	8

10. Course Structure					
		• Risk Assessment Strategy • Hazard groups, biosafety levels, practices and equipment • Standard practices required in biology laboratories • Biological Agents • Routes of infection • Basis for control measures • Hazard group classification system • Biosafety cabinet (BSC)	levels, risk-assessment strategies, and laboratory safety practices		
Oral discussion	Lecture interactive	Biorisk and biohazards • Control of substances hazardous to health • Assessing risk for work with human blood and tissues hazards • Control measures for work with human blood and tissue • Containment level	assesses hazards biological for blood and tissues human	2	9
Daily exam	Lecture interactive	Biorisk management system • Assess the capability of the laboratory staff to control hazards • Relation of risk groups to biosafety levels , practices of and equipment • Mitigation Control Measures • Sustainability of the bio-risk management system • Strengthening biorisk management	Analyzes the biological risk management system	2	10
questions and discussion	Lecture interactive	Types of biological wastes • Categories of biological wastes • Decontamination of biological wastes	Classifies biological waste and methods of transporting it	2	11

10. Course Structure					
		Transportation of biological wastes • International Transport Regulations • The Basic Triple Packaging System			
Daily exam	Lecture interactive	Accident response • spill cleanup procedure • Investigation of an accident inside the laboratory Overview of biological safety and security equipment	Responds to accidents and spills and applies spill-cleaning and laboratory accident-investigation procedures	2	12
Oral discussion	Lecture interactive	Introduction to Biosecurity • Risks Characterization in biosecurity • Vulnerability assessment13 • Component o14f Laboratory Biose15curity	Identifies biosecurity and assesses vulnerabilities	2	13
Student interaction assessment.	Simulation and virtual application	biosafety Practical part biosafety rules simulation 3D https://www.labster.com/3d-biosafety-simulution	Applies safety rules through simulation.	2	14
Assessment and preparation for the final exam.	Theoretical and practical training	Biosafety training	practices on procedures safety comprehensive	2	15

11. Course Assessment

Distribution Details
30 points (for midterm and daily exams and reports)
10 points (for attendance, participation, and activity)
60 points (for the comprehensive final written exam)

12. Learning and Teaching Resources	
Occupational Safety and Health for Technologists, Engineers, and Managers (9th ed.)	**Required Textbooks (Prescribed Curriculum, if any)**
Occupational Health and Safety Management: A Practical Approach (3rd ed.)	**Main References (Sources)**
Fundamentals of Occupational Safety and Health (2nd ed.) Introduction to Health and Safety at Work (6th ed.	**Recommended Supporting Books and References**
Virtual simulation programs such as: https://www.labster.com/3d-biosafety-simulutionhttps://www.labster.com/3d-biosafety-simulutionhttps://www.labster.com/3d-biosafety-simulution	**Electronic References and Websites**

information course basic	
English Language – English Language	1. Course Name
ENG-11	2. Course Code
First Semester / First Stage / Academic Year 2025-2026	3. Semester / Year/stage
2025-2026	4. Date of Preparation of this Description
registration attendance Compulsory	5. Available Attendance Modes
30 total hours (30 theoretical + 0 practical) / 2 credits	6. Number of Study Hours / Credits
Name: Prof. Balqees Mohammed Diaa Hussein – Email: Balqees.mohamed@uoturath	7. Course Coordinator
General Objective: Teaching English to students in health and medical specialties. Specific Objective: Teaching English to students in health and medical specialties, focusing on the requirements of health and medical curricula.	8. Course Objectives
• Lectures and discussions open (Lectures and discussions). • strategy brainstorming (Brainstorming strategy). • strategy dialogue and exchange opinions (Strategy for dialogue and exchange of opinions).	9. Teaching and Learning Strategies

10. Course Structure

Assessment Method	Learning Method	Unit or Topic Name (theoretical only)	Required Learning Outcomes	Hours	Week
General questions and participation	Lecture and discussion	Theoretical: Medical terminology Language of medicine, Medical terms, Spelling of medical terms, Pronunciation of medical terms, Focus on reading,	Identifies medical terminology basic and masters pronunciation and writing medical terminology	2	1
Daily exam (Quiz)	Lecture and discussion			2	2

10. Course Structure					
General questions and participation	Lecture and discussion	Vocabulary development, Focus on grammar, Oral skills, Focus on writing, Pronunciation exercise, Review exercises, Self-assessment	practices on skills reading and writing	2	3
Daily exam (Quiz)	Lecture and discussion	Theoretical: Suffixes Medical terms, Suffixes, Focus on reading, Vocabulary development, Focus on grammar, Case report, Oral communication skills, Focus on writing, Pronunciation of medical terms, Review exercises, Self assessment	Identifies suffixes medical applies suffixes medical in sentences discusses reports case medical	2	4
General questions and participation	Lecture and discussion			2	5
Daily exam (Quiz)	Lecture and discussion			2	6
General questions and participation	Lecture and discussion	Theoretical: Prefixes Theoretical: Medical terms, Prefixes, Focus on reading, Vocabulary development, Focus on grammar Oral communication skills, Focus on writing, Pronunciation of medical terms, Review exercises, Self-assessment	Identifies prefixes medical applies prefixes in conversation Practices self-assessment of prefixes	2	7
Mid-term exam	Lecture and discussion			2	8
General questions and participation	Lecture and discussion			2	9
Daily exam (Quiz)	Lecture and discussion	Theoretical: Body structure Theoretical: Body structure, Principal body systems, Planes of the body, Orientation and directional terms, Body positions, Body cavities, Focus on reading, Vocabulary development, Focus on grammar, Oral communication skills, Focus on writing, Review exercises, Self-assessment	Identifies body structure and cavities describes levels anatomical with English Practices directional and positional terminology	2	10
General questions and participation	Lecture and discussion			2	11
Daily exam (Quiz)	Lecture and discussion			2	12

10. Course Structure					
General questions and participation	Lecture and discussion	Theoretical: Body systems Theoretical: Body systems, Focus on reading, Vocabulary development, Focus on grammar, Oral communication skills, Focus on writing, Pronunciation of medical terms, Review exercises, Self-assessment	Identifies body systems medical applies terms body systems in reading Reviews language skills comprehensively	2	13
Daily exam (Quiz)	Lecture and discussion			2	14
Assessment and preparation for the final exam.	Lecture and discussion			2	15

11. Course Assessment	
Distribution Details	
30 points (for midterm and daily exams and reports)	
10 points (for attendance, participation, and activity)	
60 points (for the comprehensive final written exam)	

12. Learning and Teaching Resources	
English for Medicine and Health Sciences Shehdeh Fareh, PhD	**Required Textbooks (Prescribed Curriculum, if any)**
English for Medicine and Health Sciences Shehdeh Fareh, PhD	**Main References (Sources)**
Approved medical dictionaries (Medical Dictionaries).	**Recommended Supporting Books and References**
platforms educational dedicated for terminology medical with English Language.	**Electronic References and Websites**

Item	Details
1. Course Name	Human Rights and Democracy - Human Rights and Democracy
2. Course Code	HRD-11
3. Semester / Year	First Semester / First Stage Academic Year 2025-2026
4. Date of Preparation of this Description	2025-2026
5. Available Attendance Modes	Attendance registration
6. Number of Study Hours / Credits	30 Total hours (theoretical only) / 2 credits
7. Course Coordinator	Prof. Balqees Mohammed Diaa Hussein Al-Dabbagh balqees.mohamed@uoturath.edu.iq
8. Course Objectives	• Introduce the student to the historical development of human rights and democracy, their types, and their impact. • Highlight the role of international organizations in ensuring the protection and respect of human rights. • Enable students in the Dental Technology Department to understand human rights, democratic principles, and environmental awareness.
9. Teaching and Learning Strategies	• Theoretical lectures supported by historical and contemporary examples. • Open discussions, dialogue, and exchange of opinions. • Assign students to prepare simplified reports on the role of humanitarian organizations and environmental awareness.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or Topic Name (theoretical only)	Learning Method	Assessment Method
1	2	Understands the nature and fundamentals of human rights	Concept of human rights, definition of rights, definition of the human person, and the most important basic characteristics	Lecture and discussion	General questions and participation

10. Course Structure					
General questions and participation	Lecture and discussion	most important characteristics basic for rights human	understands characteristics	2	2
Daily exam (Quiz)	Lecture and discussion	Types of human rights (in terms of importance, persons, and subject matter)	classifies human rights according to types	2	3
General questions and participation	Lecture and discussion	Categories of human rights (first, second, and third generations)	Distinguishes between the different generations of human rights	2	4
Oral discussion General questions and participation	Lecture and discussion	• Mesopotamian civilization • India and China • Pharaonic Egypt • Greek civilization • Roman civilization	Traces the development of human rights in ancient civilizations and explains the contributions of Mesopotamia, India, China, Pharaonic Egypt, Greece, and Rome	2	5
Daily exam (Quiz)	Lecture and discussion	human rights in eras medieval	Explains human rights in the medieval era.	2	6
General questions and participation	Lecture and discussion	Human rights in Islam and the revealed religions	Explains human rights in the revealed religions	2	7
Daily exam Mid-term	Lecture and discussion	Human rights in Renaissance societies: the Magna Carta, Petition of Right, Habeas Corpus Act, Declaration of Rights, contributions of thinkers (Hobbes, John Locke, Rousseau, Voltaire, Montesquieu, and others), the Declaration of Independence of the United	Analyzes the impact of the Renaissance on human rights and explains modern international declarations and charters	2	8

10. Course Structure					
		States, the French Revolution, and the Declaration of the Rights of Man.			
General questions and participation	Lecture and discussion	Human rights in the modern era (October Revolution, League of Nations, Universal Declaration of 1948)	Analyzes human rights in the modern era.	2	9
Daily exam (Quiz)	Lecture and discussion	Human rights in the modern era: United Nations Charter, the two international covenants, and regional charters	Identifies United Nations charters, the two international covenants, and regional human-rights charters.	2	10
Oral discussion	Lecture and discussion	Non-governmental organizations and human rights (Red Cross, Amnesty International), human-rights monitoring organizations, and national human-rights organizations	Explains the role of non-governmental and national organizations in protecting and monitoring human rights.	2	11
General questions and participation	Lecture and discussion	Guarantees for the respect and protection of human rights at the national and international levels: constitution and laws ▪ Freedom of the press and public opinion Civil society organizations ▪ Regional organizations: Organization of American States, regional organizations, Arab League United Nations and its specialized agencies		2	12
Daily exam (Quiz)	Lecture and discussion	Water and environmental awareness in Iraq, dimensions of water awareness, and water uses	Explains concepts of water-related and environmental awareness.	2	13

10. Course Structure

General questions and participation	Lecture and discussion	Water and environmental awareness in Iraq Challenges facing water awareness and proposed measures to solve the water-shortage crisis	Analyzes water-related challenges and proposes solutions	2	14
Assessment and preparation for the final exam.	Lecture and discussion	Concept of equality, historical development, equality between genders and individuals, and modern development of the concept of equality	Explains the concepts and types of equality	2	15

11. Course Assessment

Distribution Details	
30 points (for midterm and daily exams and reports)	
10 points (for attendance, participation, and activity)	
60 points (for the comprehensive final written exam)	

12. Learning and Teaching Resources

Al-Waseet in Public International Law and Human Rights / Alwan Abdul Karim (2006)	Required Textbooks
Islam and Human Rights: Necessities, Not Rights / Mohammed Emara (1985) Lectures on Political Systems / Tayseer Awwad (2 theoretical / 5 practical)	Main References (Sources)
Political Systems and Constitutional Law / Fuad Al-Attar (1992 theoretical / 5 practical)	Recommended Supporting Books and References
United Nations human-rights website and news websites concerned with environmental and water issues.	Electronic References and Websites

Details	Item
Dental Materials (intermediate) - Dental Materials (Intermediate) PDF	1. Course Name
DM-12	2. Course Code
Second Semester /First Stage Academic Year 2025-2026	3. Semester / Year
2025-2026	4. Date of Preparation of this Description
Compulsory in-person attendance (theoretical and practical)	5. Available Attendance Modes
105 Total hours (30 theoretical + 75 practical (2 theoretical / 5 practical) / 4 credits	6. Number of Study Hours / Credits
Name: Asst. Lecturer Zainab Diaa Fawzi Ecd0059@mtu.edu.iq Email:	7. Course Coordinator
• Introduce the student to the materials used in dental technology and how to handle them. • enabling student department technologies teeth from study and use all Materials Laboratory common in field preparation and manufacturing prostheses dental and face and jaws. • Studies the physical, chemical, and biological properties of materials.	8. Course Objectives
• Theoretical lectures supported with illustrative aids. • Direct practical application of chemical and physical reactions of materials in the laboratory. • conducting tests and continuous assessments for the skills Laboratory.	9. Teaching and Learning Strategies

10. Course Structure

Assessment Method	Learning Method	Unit or Topic Name (Theoretical + Practical)	Required Learning Outcomes	Hours	Week
Discussion and practical assessment	Lecture + Laboratory application	Theoretical: Polymers in dentistry (Basic structure of polymer)	Explains the basic structure of polymers	2 theoretical / 5 practical	1

10. Course Structure					
		Practical: Application of polymerization reaction			
Daily exam (Quiz)	Lecture + Laboratory application	Theoretical: Polymers in dentistry (polymerization and crosslinking reactions) Practical: Crosslinking reaction (swelling technique)	Analyzes polymerization and cross-linking reactions	2 theoretical / 5 practical	2
Student performance assessment	Lecture + Laboratory application	Theoretical: Resins, artificial teeth materials Practical: Acrylic resin polymerization	Distinguishes types of resins and artificial dental materials	2 theoretical / 5 practical	3
Discussion and practical assessment	Lecture + Laboratory application	Theoretical: Acrylic resin material (denture base materials) Practical: Auto-cured acrylic resin mixing and setting	Uses acrylic resin materials	2 theoretical / 5 practical	4
Daily exam theoretical and practical	Lecture + Laboratory application	Theoretical: Classification and properties of dental acrylic resin materials Practical: Heat-cured acrylic resin mixing and setting	classifies and explains properties resins acrylic	2 theoretical / 5 practical	5
Student performance assessment	Lecture + Laboratory application	Theoretical: Denture liner materials	Applies denture-relining materials	2 theoretical / 5 practical	6

10. Course Structure					
		Practical: Light-cured acrylic resin mixing and setting			
Daily exam (Quiz)	Lecture + Laboratory application	Theoretical: Wax (composition and properties) Practical: Dental wax melting range test	Identifies the structure and properties of wax used for dental applications	2 theoretical / 5 practical	7
Daily exam Mid-term	Lecture + Laboratory application	Theoretical: Dental wax (Thermal, physical, and chemical properties) - Practical: Dental wax dimensional stability	Analyzes the thermal and physical properties of wax	2 theoretical / 5 practical	8
Student performance assessment	Lecture + Laboratory application	Theoretical: Dental wax (types and uses) Practical: Dental plaster mixing and setting	Distinguishes types of wax and their uses	2 theoretical / 5 practical	9
Discussion and practical assessment	Lecture + Laboratory application	Theoretical: Gypsum products (chemistry and composition) Practical: Dental stone mixing and setting	Explains the chemistry and composition of gypsum products.	2 theoretical / 5 practical	10
Daily exam theoretical and practical	Lecture + Laboratory application	Theoretical: Gypsum products (types and uses) Practical: Dental plaster and dental stone hardness and roughness tests	Classifies types of gypsum products and their uses	2 theoretical / 5 practical	11

10. Course Structure

Student performance assessment	Lecture + Laboratory application	Theoretical: Gypsum products (setting reaction and properties) Practical: Dental abrasives types	Explains the setting reaction of gypsum products	2 theoretical / 5 practical	12
Discussion and practical assessment	Lecture + Laboratory application	Theoretical: Dental abrasives (definition and concept) Practical: Dental abrasives handling	Knows the concepts of dental abrasives	2 theoretical / 5 practical	13
Daily exam daily (Quiz)	Lecture + Laboratory application	Theoretical: Dental abrasives types Practical: Finishing and polishing of acrylic resin	Applies types and procedures of abrasive materials	2 theoretical / 5 practical	14
Assessment and preparation for the final exam.	Lecture + Laboratory application	Theoretical: Dental abrasives (procedure and application) Practical: Finishing and polishing of metals and ceramics	Masters abrasion and polishing procedures	2 theoretical / 5 practical	15

11. Course Assessment

Distribution Details	
20 points (for theoretical midterm and daily exams)	
15 points (for laboratory assessment and practical exams)	
5 points (for attendance, participation, and activity)	
60 points (distributed between the theoretical and practical components)	

12. Learning and Teaching Resources

Advanced ceramic for dentistry Applied dental materials	Required Textbooks
Basic dental materials Biocompatibility of dental materials Philips science of dental materials	Main References (Sources)
Biomaterials, principles and application Delmar's dental materials guide Polymers of dental and orthopedic appliances	Recommended Supporting Books and References
educational videos approved and research published in scientific journals.Google Scholar	Electronic References and Websites

Details	Item
Dental Equipment Technologies (advanced) - Dental Equipment Technologies (Advanced)	1. Course Name
DET-12	2. Course Code
Second Semester /First Stage Academic Year 2025-2026	3. Semester / Year
2025-2026	4. Date of Preparation of this Description
Compulsory in-person attendance (theoretical and practical)	5. Available Attendance Modes
105 Total hours (30 theoretical + 75 practical (2 theoretical / 5 practical) / 4 credits	6. Number of Study Hours / Credits
Name: Lecturer Sarah Kadhim Raouf Email: Sarah.mouala@uoturath.edu.iq	7. Course Coordinator
• Introduce the student to dental devices and technologies, identify their components, and explain their operation and maintenance. • Enable Dental Technology Department students to use, operate, and maintain advanced dental laboratory devices.	8. Course Objectives
• Theoretical lectures supported by illustrative aids. • Provide direct practical training on devices within laboratories. • Conduct continuous practical assessment of equipment-use and maintenance skills.	9. Teaching and Learning Strategies

10. Course Structure

Assessment Method	Learning Method	Unit or Topic Name (Theoretical + Practical)	Required Learning Outcomes	Hours	Week
Student performance assessment	Lecture + application practical	Theoretical: Agar-ager melting machine and Flask cooling unit Practical: Practical applications of Agar-agar melting machine and Flask cooling unit	Operates the agar melting and cooling unit	2 theoretical / 5 practical	1

10. Course Structure					
Daily exam daily	Lecture + application practical	Theoretical: Burn-out Furnace and casting ring Practical: Practical applications of and Burn-out Furnace and Casting ring	Uses the burnout furnace and casting devices	2 theoretical /5 practical	2
Oral discussion	Lecture + application practical	Theoretical: Conventional Centrifuge casting machine Practical: Practical applications of Centrifugal casting machine	Operates the conventional central centrifuge	2 theoretical /5 practical	3
Student performance assessment	Lecture + application practical	Theoretical: Electric and Induction Centrifuge casting machine Practical: Practical applications of Centrifugal casting machine	Distinguishes between electrical and induction centrifugal devices	2 theoretical /5 practical	4
Daily exam theoretical and practical	Lecture + application practical	Theoretical: Ultrasonic cleaning machine, and Mechanical mixer (vacuum) Practical: Practical applications of Ultrasonic cleaning machine and Mechanical mixer (vacuum) and Sandblasting machine	Operates the ultrasonic cleaning device	2 theoretical /5 practical	5
Oral discussion	Lecture + application practical	Theoretical: Sand blast machine	Uses the sandblasting device	2 theoretical	6

10. Course Structure					
		Practical: Practical applications of Ultrasonic cleaning machine, Mechanical mixer (vacuum) and Sandblasting machine		/5 practical	
Daily exam Mid-term	Lecture + application practical	Theoretical: Dental Ceramic Furnace Practical: Practical applications of Dental Ceramic Furnace	Identifies the ceramic furnace	2 theoretical /5 practical	7
Student performance assessment	Lecture + application practical	Theoretical: Soldering and welding Practical: Practical applications of Soldering and welding	Applies soldering techniques	2 theoretical /5 practical	8
Daily exam daily	Lecture + application practical	Theoretical: Dental Biostar Practical: Practical applications of Dental Biostar	Uses device (Dental Biostar)	2 theoretical /5 practical	9
Oral discussion	Lecture + application practical	Theoretical: Dental-Arch Trimmer Practical: Practical applications of Dental-Arch Trimmer and Dental Pindex machine	Operates the gypsum model trimming device	2 theoretical /5 practical	10
Student performance assessment	Lecture + application practical	Theoretical: Dental Pindex machine	operates device (Pindex machine)	2 theoretical	11

10. Course Structure					
		Practical: Practical applications of Dental-Arch Trimmer and Dental Pindex machine		/5 practical	
Daily exam theoretical and practical	Lecture + application practical	Theoretical: Electronic spatula for wax modelling Practical: Practical applications of electronic spatula for wax modelling and Dipping wax heater	Uses device waxing electronic	2 theoretical /5 practical	12
Student performance assessment	Lecture + application practical	Theoretical: Induction wax modelling and Dipping wax unit Practical: Practical applications of electronic spatula for wax modelling and Dipping wax heater	Identifies the wax dipping unit	2 theoretical /5 practical	13
Daily exam daily	Lecture + application practical	Theoretical: General measurement instruments and Hopper duplicator Practical: Practical applications of General measurement instruments and Hopper duplicator	Uses tools measurement and device (Hopper)	2 theoretical /5 practical	14
Assessment and preparation for the final exam.	Lecture + application practical	Theoretical: CAD-CAM production methods	Identifies devices and technologies (CAD-CAM)	2 theoretical /5 practical	15

10. Course Structure

		Practical: Practical applications of CAD-CAM system machine			

11. Course Assessment

Distribution Details

20 points (for theoretical midterm and daily exams)

15 points (for laboratory assessment and practical exams)

5 points (for attendance, participation, and activity)

60 point (distributed between the theoretical and practical components)

12. Learning and Teaching Resources

Dental Instruments Packet. Dr. Randall Taylor. University of California, San Diego Pre-Dental Society. Basic Guide to Dental Instruments. SCHELLER Carmen. 2006. Dental Instruments, 2nd Edition, Linda Bartolomucci Boyd CDA RDA BA. Book on dental devices and laboratories, by Faiz Fuad Dawood.	**Required Textbooks (Prescribed Curriculum, if any)**
Basic guide to dental instruments. SCHELLER Carmen. 2006 Dental Instruments Packet. Dr. Randall Taylo	**Main References (Sources)**
guidelines companies manufactured for devices Laboratory and instructions maintenance attached with them.	**Recommended Supporting Books and References**
1. www.mestra.es 2. https://www.renfert.com/usa-en/PM/Products	**Electronic References and Websites**

Details	Item
Dental Anatomy (advanced) - Dental Anatomy (advanced)	1. Course Name
DA-12	2. Course Code
Second Semester /First Stage Academic Year 2025-2026	3. Semester / Year
2025-2026	4. Date of Preparation of this Description
Compulsory in-person attendance (theoretical and practical)	5. Available Attendance Modes
105 Total hours (30 theoretical + 75 practical (2 theoretical / 5 practical) / 4 credits	6. Number of Study Hours / Credits
Name: Fakhriya Ismail Alwan email fkhrih.ismail@uoturath.edu.iq	7. Course Coordinator
• Introduce the student to scientific terminology related to teeth and provide information on their anatomical aspects. • Through practical work, the student studies drawing and carving of teeth for use in technical work.	8. Course Objectives
• Use theoretical lectures supported by illustrative aids. • Direct practical application of drawing and carving in specialized laboratories. • Periodic assessment of carved models and provision of feedback.	9. Teaching and Learning Strategies

10. Course Structure

Assessment Method	Learning Method	Unit or Topic Name (Theoretical + Practical)	Required Learning Outcomes	Hours	Week
Discussion and practical assessment	Lecture + application practical	Theoretical: Maxillary 1st premolar teeth: description and anatomical landmarks Practical: Guidelines of carving the aspects of posterior teeth	describes premolar first maxillary and its landmarks	2 theoretical / 5 practical	1

10. Course Structure					
Daily exam	Lecture+ application practical	Theoretical: Maxillary 1st premolar teeth: description buccal, lingual, mesial, distal, and occlusal aspects Practical: Drawing of maxillary 1st premolar	identifies surface different for the premolar first maxillary	2 theoretical /5 practical	2
Assessment of laboratory drawings	Lecture+ application practical	Theoretical: Maxillary 2nd premolar teeth: description and comparison to the maxillary 1st premolar Practical: Demonstration of carving maxillary 1st premolar	compares between premolar first andSecond maxillary	2 theoretical /5 practical	3
Assessment of carved pieces	Lecture+ application practical	Theoretical: Mandibular 1st premolar: description, aspects, and anatomical landmarks Practical: Carving of maxillary right 1st premolar	describes premolar first mandibular and its landmarks	2 theoretical /5 practical	4
Daily exam theoretical and practical	Lecture+ application practical	Theoretical: Mandibular 2nd premolar: description, aspects, and anatomical landmarks Practical: Carving of maxillary left 1st premolar	describes premolar Second mandibular and its landmarks	2 theoretical /5 practical	5

10. Course Structure					
Assessment of laboratory drawings	Lecture + application practical	Theoretical: Maxillary 1st molar teeth: description and anatomical landmarks of maxillary first molar Practical: Drawing of mandibular 1st premolar	describes molar First maxillary and its landmarks	2 theoretical /5 practical	6
Daily exam Mid-term	Lecture + application practical	Theoretical: Maxillary 1st molar teeth: description the buccal, lingual, mesial, distal, and occlusal aspect Practical: Demonstration of carving mandibular 1st premolar	identifies surface different for molars First maxillary	2 theoretical /5 practical	7
Assessment of carved pieces	Lecture + application practical	Theoretical: Maxillary 2nd molar teeth: description the aspects in comparison to the Maxillary 1st molar Practical: Carving of mandibular right 1st premolar	compares between molar First and Second maxillary	2 theoretical /5 practical	8
Daily exam	Lecture + application practical	Theoretical: Maxillary 3rd molar teeth: description the aspects in comparison to the Maxillary 1st molar and 2nd molar Practical: Carving of mandibular left 1st premolar	Describes the maxillary third molar and compares it	2 theoretical /5 practical	9

10. Course Structure					
Discussion and practical assessment	Lecture+ application practical	Theoretical: Mandibular 1st molar teeth: description and anatomical landmarks Practical: Drawing and demonstration of carving of maxillary 1st molar	describes molar First mandibular and its landmarks	2 theoretical /5 practical	10
Assessment of carved pieces	Lecture+ application practical	Theoretical: Mandibular 1st molar teeth: description the buccal, lingual, mesial, distal, and occlusal aspect Practical: Carving of maxillary right 1st molar	identifies surface different for molars First mandibular	2 theoretical /5 practical	11
Daily exam theoretical and practical	Lecture+ application practical	Theoretical: Mandibular 2nd molar: description the aspects in comparison to the Mandibular 1st molar Practical: Carving of maxillary left 1st molar	compares between molar First and Second mandibular	2 theoretical /5 practical	12
Assessment of laboratory drawings	Lecture+ application practical	Theoretical: Mandibular 3rd molar: variation and comparison to the Mandibular 2nd molar Practical: Drawing and demonstration of carving of	Describes the mandibular third molar and its variations	2 theoretical /5 practical	13

10. Course Structure					
		mandibular 1st molar			
Daily exam	Lecture + application practical	Theoretical: Occlusion: definition, types, and features Practical: Carving of right mandibular 1st molar	Explains dental occlusion, its types, and its features	2 theoretical / 5 practical	14
Assessment and preparation for the final exam.	Lecture + application practical	Theoretical: Review of the posterior teeth Practical: Carving of left mandibular 1st molar	reviews anatomy posterior teeth in a comprehensive	2 theoretical / 5 practical	15

11. Course Assessment
Distribution Details
20 points (for theoretical midterm and daily exams)
15 points (for laboratory assessment and practical exams)
5 points (for attendance, participation, and activity)
60 point (distributed between the theoretical and practical components)

12. sources education and teaching	
Wheeler's Dental Anatomy, Physiology and Occlusion 10th Edition, 2021	**Required Textbooks (Prescribed Curriculum, if any)**
Textbook of Dental Anatomy and Oral Physiology. Manjunatha BS, 1st edition 2018	**Main References (Sources)**
Woelfel's Dental Anatomy 8th Edition PD. 2018	**Recommended Supporting Books and References**
Specialized educational platforms for three-dimensional dental anatomy and illustrative videos of tooth carving on YouTube.	**Electronic References and Websites**

Details	Item
Physics General - General physics	1. Course Name
GP-12	2. Course Code
Second Semester /First Stage Academic Year 2025-2026	3. Semester / Year
2025-2026	4. Date of Preparation of this Description
Attendance registration theCompulsory	5. Available Attendance Modes
90 Total hours (30 theoretical + 60 practical) / 4 credits	6. Number of Study Hours / Credits
Name: Prof. Balqees Mohammed Diaa Hussein Email: Balqees.mohamed@uoturath.edu.iq	7. Course Coordinator
• General Objective: Introduce students to the general principles of physics. • Specific Objective: Enable students to conduct analytical physical experiments.	8. Course Objectives
• Theoretical lectures supported by illustrative aids and problem solving. • Direct practical application through physical experiments in the laboratory. • Conduct tests and continuous assessments to measure the accuracy of scientific results.	9. Teaching and Learning Strategies

10. Course Structure

Assessment Method	Learning Method	Unit or Topic Name (Theoretical + Practical)	Required Learning Outcomes	Hours 2 theoretical / 4 practical	Week
Discussion and practical assessment	Lecture + application practical	Theoretical: Review of general physics, concept and laws	reviews concepts and laws physics general	6	1

10. Course Structure					
		Practical: Ohms law (Part 1)			
Daily exam daily (Quiz)	Lecture + application practical	Theoretical: Atomic structure - Practical: Ohms law (Part 2)	Explains the atomic structure of materials	6	2
Student performance assessment	Lecture + application practical	Theoretical: Ohms law, series and parallel circuits Practical: Determination of electromotive force (e.m.f) and internal resistance (Part 1)	Applies Ohm's law in series and parallel circuits	6	3
Daily exam theoretical and practical	Lecture + application practical	Theoretical: Capacitor, series and parallel capacitors Practical: Determination of electromotive force (e.m.f) and internal resistance (Part 2)	Analyzes capacitor circuits in series and parallel	6	4
assessment test Practical	Lecture + application practical	Theoretical: Electromotive force (e.m.f) Practical: Test (Practical Evaluation)	Calculates electromotive force	6	5
Oral discussion	Lecture + application practical	Theoretical: Mechanics of elastic solid Practical: Hooks law (Part 1)	Explains the mechanics of elastic solid materials	6	6

10. Course Structure					
Daily exam (Quiz)	Lecture + application practical	Theoretical: Stress-Strain curve Practical: Hooks law (Part 2)	Draws and analyzes the stress-strain curve	6	7
Mid-term exam	Lecture + application practical	Theoretical: Heat and latent heat Practical: The simple pendulum (Part 1)	Distinguishes between sensible and latent heat	6	8
Student performance assessment	Lecture + application practical	Theoretical: Heat and first law of thermodynamics Practical: The simple pendulum (Part 2)	Applies the first law of thermodynamics	6	9
assessment test Practical	Lecture + application practical	Theoretical: Heat transfer by conduction, transition and radiation Practical: Test (Practical Evaluation)	Explains methods of heat transfer.	6	10
Discussion and practical assessment	Lecture + application practical	Theoretical: Sound Practical: The moment of inertia of a flywheel (Part 1)	Explains the physical properties of sound.	6	11
Daily exam theoretical and practical	Lecture + application practical	Theoretical: Work, Power, Energy Practical: The moment of inertia of a flywheel (Part 2)	solves problems work andenergy and power	6	12

10. Course Structure					
Student performance assessment	Lecture + application practical	Theoretical: Velocity, Acceleration, Newton's law Practical: Determination of the friction of wood (Part 1)	Applies Newton's laws and principles of velocity and acceleration.	6	13
Daily exam daily (Quiz)	Lecture + application practical	Theoretical: Gases, pressure, law of pressure Practical: Determination of the friction of wood (Part 2)	Explains gas laws and pressure.	6	14
Assessment and preparation for the final exam.	Lecture + application practical	Theoretical: Force and momentum Practical: Test (Practical Evaluation)	calculates force momentum	6	15

11. Course Assessment	
Distribution Details	
20 points (for theoretical midterm and daily exams)	
15 points (for laboratory assessment and practical exams)	
5 points (for attendance, participation, and activity)	
60 points (distributed between the theoretical and practical components)	

12.sources education and teaching	
Young, H. D., & Freedman, R. A. (2020). University Physics with Modern Physics (15th ed.). Pearson.	**Required Textbooks (Prescribed Curriculum, if any)**
Halliday, D., Resnick, R., & Walker, J. (2013). Fundamentals of Physics (10th ed.). Wiley.	**Main References (Sources)**

12.sources education and teaching	
Serway, R. A., & Jewett, J. W. (2018). Physics for Scientists and Engineers (10th ed.). Cengage Learning. Morin, D. (2008). Introduction to Classical Mechanics: With Problems and Solutions. Cambridge University.	**Recommended Supporting Books and References**
platforms educational dedicated for experiments physical virtual and sections illustrative for laws physical on YouTube.	**Electronic References and Websites**

Details	Item
Arabic Language - Arabic Language	**1. Course Name**
ARB-12	**2. Course Code**
Second Semester /First Stage Academic Year 2025-2026	**3. Semester / Year**
2025-2026	**4. Date of Preparation of this Description**
Attendance registration electronically the Compulsory	**5. Available Attendance Modes**
30 Total hours (theoretical only) / 2 credits	**6. Number of Study Hours / Credits**
Name: Prof. Balqees Mohammed Diaa Hussein Email: Balqees.mohamed@uoturath.edu.iq	**7. Course Coordinator**
• educate students with rules Arabic Language basic and avoid errors linguistic and spelling common. • development ability the student on formulation correspondence and correspondence administrative in a accurate and correct.	**8. Course Objectives**
• Theoretical lectures supported with examples applicational • discussions open and participation effective within classroom. • exercises written for improvement skills expression and formulation linguistic.	**9. Teaching and Learning Strategies**

10. Course Structure					
Assessment Method	**Learning Method**	**Unit or Topic Name (theoretical only)**	**Required Learning Outcomes**	**Hours**	**Week**
Daily exam (Quiz)	Lecture and discussion	Introduction about errors linguistic - taa tied and long and taa open	distinguishes between types taa and avoids errors	2	1
General questions and participation	Lecture and discussion	Rules for writing alif maddah and alif maqsurah - solar and lunar letters	masters writing alif and letters solar and lunar	2	2
exercise written	Lecture and discussion	dad and dha	Distinguishes between the letters dad and dha	2	3
Daily exam (Quiz)	Lecture and discussion	writing hamza	rules hamza	2	4
General questions and participation	Lecture and discussion	numbering between them	Uses punctuation marks in their correct places	2	5
exercise written	Lecture and discussion	Noun and verb and distinguishing between them	Clearly distinguishes between parts of the word (noun and verb)	2	6
Daily exam (Quiz)	Lecture and discussion	objects	Identifies types of objects in the Arabic sentence	2	7
Daily exam Mid-term	Lecture and application practical	number	Writes numbers and matches them correctly with the counted noun	2	8
General questions and participation	Lecture and application practical	applications errors linguistic common (part first)	Applies linguistic correction rules professionally	2	9

10. Course Structure					
Daily exam (Quiz)	Lecture and discussion	applications errors linguistic common (part Second)	Identifies and corrects common linguistic errors	2	10
Homework assessment	Lecture and discussion	Noon and tanween; meanings of prepositions	Uses prepositions and their meanings accurately	2	11
General questions and participation	Lecture and discussion	Formal aspects of administrative correspondence	Identifies formal grammar for correspondence	2	12
Daily exam (Quiz)	Lecture and application practical	language discourse administrative (part first)	Formulates language for official correspondence	2	13
assessment participation the student	Mini workshop	language discourse administrative (part Second)	Enhances his skills in writing administrative correspondence	2	14
Assessment and preparation for the final exam.	Lecture interactive	Models of administrative correspondence	Analyzes real models of administrative correspondence	2	15

11. Course Assessment	
Distribution Details	
35 point (for the Exams midterm and daily and reports)	
5 points (for attendance, participation, and activity)	
60 points (for the comprehensive final written exam)	

12.sources education and teaching	
Arabic Language rules for university students.	**Required Textbooks (Prescribed Curriculum, if any)**
Grammatical applications - Dr. Abduh Al-Rajhi. Common linguistic errors in academic settings.	**Main References (Sources)**

12.sources education and teaching	
The Art of Arabic Editing: Its Rules and Styles (for further study of administrative correspondence).	**Recommended Supporting Books and References**
Approved educational websites for Arabic language proofreading and electronic dictionaries (such as Al-Maany Dictionary).	**Electronic References and Websites**

Details	Item
Computer Principles - Computer Fundamental	**1. Course Name**
CP1	**2. Course Code**
Second Semester /First Stage Academic Year 2025-2026	**3. Semester / Year**
2025-2026	**4. Date of Preparation of this Description**
Compulsory attendance registration	**5. Available Attendance Modes**
45 Total hours (15 theoretical + 30 practical) / 2 credits	**6. Number of Study Hours / Credits**
Name: Dr. Ahmed Abdul Latif Mohammed Majid Email:	**7. Course Coordinator**
• Use the computer for basic tasks (Utilize the computer for fundamental tasks). • Identify and discuss the hardware components of the computer system. • Create documents using a word processor and create presentations.	**8. Course Objectives**
• Theoretical explanation supported by direct practical application in computer laboratories. • Assign students small programming and office tasks to apply acquired skills. • Use problem-solving techniques to train students in system maintenance.	**9. Teaching and Learning Strategies**

10. Course Structure					
Assessment Method	**Learning Method**	**Unit or Topic Name (theoretical + practical)**	**Required Learning Outcomes**	**Hours**	**Week**
Discussion and practical assessment	Lecture and Laboratory application	Theoretical and Practical: Introduction to Computer: Concepts of Hardware and Software with their components; Concept of Computing, Data and Information; Applications of Information Electronics and Communication Technology (IECT); Connecting input/output devices, and peripherals to CPU.	Identifies basic computer concepts, its components, and applications	3	1
Daily exam daily	Lecture and Laboratory application	Theoretical and Practical: Computer Components: Computer Portions, Hardware Parts, I/O Units, Memory Types, Basic CPU components, Computer Ports, Personal Computer, Personal Computer (Features and Types)	Distinguishes computer hardware components, memory types, and the central processing unit	3	2
Student performance assessment	Lecture and Laboratory application	Theoretical and Practical: Operating System and Graphical User Interface GUI: Operating System; Basics of Common Operating Systems; The User Interface,	Handles operating systems and manages windows and files through the graphical user interface	3	3

10. Course Structure					
		Using Mouse Techniques; Use of Common Icons, Status Bar, Using Menu and Menu-selection, Concept of Folders and Directories, Opening and closing of different Windows; Crea tin Shortcuts.			
Daily exam theoretical and practical	Lecture and Laboratory application	Theoretical and Practical: Word-processing: Word Processing Basics, Opening and closing of documents; Text creation and Manipulation; Formatting of text; Table handling; Spell check, language setting and thesaurus. Printing of word document.	Creates and formats text documents and tables using Microsoft Word	3	4
Student performance assessment	Lecture and Laboratory application	Theoretical and Practical: Spread Sheet: Basics of Spreadsheet; Manipulation of cells; Formulas and Functions; Editing of Spread Sheet, printing of Spread Sheet.	Handles data using electronic spreadsheets and uses formulas and functions	3	5
Discussion and practical assessment	Lecture and Laboratory application	Theoretical and Practical: Presentation Software: Basics of Presentation software; Creating Presentation; Preparation and	Designs and formats presentations and prepares slides for printing and display	3	6

10. Course Structure					
		Presentation of Slides-Slide Show; Taking printouts of presentation / handouts.			
Daily exam	Lecture and Laboratory application	Theoretical and Practical: Introduction to Internet and Web Browsers: Computer networks Basic; LAN, WAN; Concept of Internet and its Applications; connecting to internet; World Wide Web; Web Browsing software's, Search Engines; Understanding URL; domain name; IP Address	Understands the fundamentals of networks and the Internet and uses web browsers and search engines	3	7
Daily exam Mid-term	Lecture and Laboratory application	Theoretical and Practical: Communications and Emails: Basics of electronic mail; Getting an email account; Sending and receiving emails; Accessing sent emails; Using Emails; Document collaboration.	Uses electronic mail to send and receive messages and collaborate on documents	3	8
Student performance assessment	Lecture and Laboratory application	Theoretical and Practical: Computer Troubleshooting: Identifying and solving common hardware and software problems that computer users encounter.	Diagnoses and handles common problems in computer hardware and software	3	9

10. Course Structure					
		Basic troubleshooting techniques and tools for diagnosing and resolving issues.			

11. Course Assessment	
Distribution Details	
35 point (for the Exams midterm and daily and reports)	
5 points (for attendance, participation, and activity)	
60 points (for the comprehensive final written exam)	

12.sources teaching and teaching	
Cambridge IGCSE information and Communication Technology, 3rd Edition (2020)	**Required Textbooks (Prescribed Curriculum, if any)**
Technology in Action Complete, 16th Edition (2020)	**Main References (Sources)**
Introduction to Artificial Intelligence (AI), 1st Edition (2024)	**Recommended Supporting Books and References**
Approved educational videos for office programs and artificial intelligence applications	**Electronic References and Websites**

Details	Item
Dental Materials (advanced) - Dental Materials (Advanced)	1. Course Name
DM-21	2. Course Code
Second Stage / First Semester / Academic Year 2025-2026	3. stage / Semester / Year
2025-2026	4. Date of Preparation of this Description
attendance Compulsory	5. Available Attendance Modes
105 Total hours (30 theoretical + 75 practical (2 theoretical / 5 practical) / 4 credits	6. Number of Study Hours / Credits
Name: Asst. Lecturer Elaf Jamal Harb Email: elaf.jamal.harb@uoturath.edu.iq	7. Course Coordinator
Introduce students to basic dental materials used in dental fabrication sciences - understand the principles of dental materials science and their chemical, physical, and mechanical properties	8. Course Objectives
Theoretical explanation supported by illustrative aids - direct practical application for handling dental materials in the laboratory - continuous assessment and conducting tests	9. Teaching and Learning Strategies

10.Course Structure

Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours	Week
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Impression materials: definition and requirements Practical: Showing types of trays	Identifies impression materials and their requirements	2 theoretical / 5 practical	1
Daily exam daily	Lecture and Laboratory application	Theoretical: Impression materials:	classifies materials impressions and	2 theoretical	2

10.Course Structure					
Assessment Method	**Learning Method**	**Unit or Topic Name**	**Required Learning Outcomes**	**Hours**	**Week**
		classification, properties Practical: Taking impression	explains their properties	/5 practical	
Student performance assessment	Lecture and Laboratory application	Theoretical: Investment material and investing Practical: Manipulation of investment material	Applies investment materials	2 theoretical /5 practical	3
Daily exam theoretical and practical	Lecture and Laboratory application	Theoretical: Metals and alloys Practical: Types of alloys demonstration	distinguishes between metals and alloys dental	2 theoretical /5 practical	4
Student performance assessment	Lecture and Laboratory application	Theoretical: Noble alloys: uses and classification Practical: Gold alloys Demonstration	Explains the uses of noble alloys and classifies them	2 theoretical /5 practical	5
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Base metal alloys: its composition, uses, manipulation and properties ,advantages ,disadvantages Practical: Demonstration of the available base alloy	Analyzes the structure and properties of basic metal alloys	2 theoretical /5 practical	6
Daily exam daily	Lecture and Laboratory application	Theoretical: Wrought wire, its types and uses	Identifies the types and uses of malleable wires.	2 theoretical /5 practical	7

10.Course Structure					
Assessment Method	**Learning Method**	**Unit or Topic Name**	**Required Learning Outcomes**	**Hours**	**Week**
		Practical: Wrought wire manipulation (Part 1)			
Student performance assessment	Lecture and Laboratory application	Theoretical: Wrought wire, Fabrication & properties. Practical: Wrought wire	makes wires malleability and tests their properties	2 theoretical /5 practical	8
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Porcelain: types, properties and Composition Practical: Demonstration of porcelain kit	Classifies types of porcelain and its properties	2 theoretical /5 practical	9
Daily exam theoretical and practical	Lecture and Laboratory application	Theoretical: Porcelain fused to metal restorations Practical: Demonstration of feldspathic porcelain application	Combines porcelain with metallic restorations	2 theoretical /5 practical	10
Student performance assessment	Lecture and Laboratory application	Theoretical: All ceramic restorations Practical: Demonstration of all ceramic fabrication	makes restorations ceramic complete	2 theoretical /5 practical	11
Student performance assessment	Lecture and Laboratory application	Machined restoration Theoretical Practical Machinable ceramic	Identifies materials fabricated using this method.	2 theoretical /5 practical	12

10.Course Structure

Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours	Week
Daily exam daily	Lecture and Laboratory application	Theoretical: Zirconia as a restorative material Practical: Zirconia milling	Identifies restorations manufactured from zirconia.	2 theoretical / 5 practical	13
Student performance assessment	Lecture and Laboratory application	Theoretical: Materials for a maxillofacial prosthesis Practical: Maxillofacial prosthesis demonstration	Identifies materials used in maxillofacial prosthetics.	2 theoretical / 5 practical	14
Assessment and preparation for the final exam.	Lecture and Laboratory application	Theoretical: 3D printers in dentistry Practical: 3D printers in dentistry practical application	Applies 3D printing in dentistry.	2 theoretical / 5 practical	15

11. Course Assessment

Distribution Details

20 points (for theoretical midterm and daily exams)

15 points (for laboratory assessment and practical exams)

5 points (for attendance, participation, and activity)

60 points (distributed between the theoretical and practical components)

12.sources teaching and teaching

Craige restorative dental material	Required Textbooks (Prescribed Curriculum, if any)

11. Course Assessment	
Phillips science of dental material - Applied dental material	Main References (Sources)
Handbook of Dental Materials - V. Sharma Bhat	Recommended Supporting Books and References
Approved educational videos and research published in scientific journals specialized in dentistry.	Electronic References and Websites

Details	Item
Dental Technology / Complete Denture (basic) - Prosthodontic/Complete Denture (Basic)	1. Course Name
PRO-21	2. Course Code
Second Stage / First Semester / Academic Year 2025-2026	3. Semester / Year/stage
2025-2026	4. Date of Preparation of this Description
Compulsory attendance registration	5. Available Attendance Modes
105 Total hours (30 theoretical + 75 practical (2 theoretical / 5 practical) / 4 credits	6. Number of Study Hours / Credits
Name: Asst. Lecturer Zainab Diaa Fawzi Email: Ecc0059@mtu.edu.iq	7. Course Coordinator
Introduce the student to the basic principles for manufacturing complete dentures - Enable the student to perform the initial laboratory steps for manufacturing a complete denture from impression to tooth arrangement	8. Course Objectives
Theoretical explanation supported by illustrative aids - gradual practical application of the laboratory steps - periodic assessment of each stage of laboratory work	9. Teaching and Learning Strategies

10. Course Structure

Assessment Method	Learning Method	Unit or Topic Name (Theoretical + Practical)	Required Learning Outcomes	Hours	Week
Discussion and practical assessment	Lecture + Laboratory application	Theoretical: Complete denture terminology: definition & objective Practical: Pouring of primary impression and Fabrication of primary cast	Identifies Complete Denture terminology and objectives	2 theoretical / 5 practical	1

10. Course Structure					
		(maxillary and mandibular cast)			
Daily exam daily (Quiz)	Lecture + Laboratory application	Theoretical: Anatomical landmarks of the maxillary edentulous arch Practical: Special tray (maxillary cast)	identifies anatomical landmarks for the jaw maxillary edentulous	2 theoretical /5 practical	2
Student performance assessment	Lecture + Laboratory application	Theoretical: Anatomical landmarks of the mandibular edentulous arch Practical: Special tray (mandibular cast)	identifies anatomical landmarks for the jaw mandibular edentulous	2 theoretical /5 practical	3
Discussion and practical assessment	Lecture + Laboratory application	Theoretical: Materials used for primary, secondary and boxing impression Practical: Fabrication of record base (maxillary cast)	distinguishes materials impressions initial and final	2 theoretical /5 practical	4
Daily exam theoretical and practical	Lecture + Laboratory application	Theoretical: Special trays, Record base and Occlusal rim: definition, properties & materials used for construction Practical: Fabrication of record base (mandibular cast)	Makes the individual tray and record base	2 theoretical /5 practical	5
Student performance assessment	Lecture + Laboratory application	Theoretical: Maxillo-mandibular relationship	Identifies the maxillary relationship and	2 theoretical	6

10. Course Structure					
		Practical: Fabrication of maxillary occlusal bite rim	fabricates the wax rim	/5 practical	
Daily exam daily (Quiz)	Lecture + Laboratory application	Theoretical: Articulator and mounting: definition, uses & types Practical: Fabrication of mandibular occlusal bite rim	Identifies articulator and its types	2 theoretical /5 practical	7
Mid-term exam	Lecture + Laboratory application	Theoretical: Occlusion (balance occlusion) Practical: Bite Registration and mounting of Casts	Explains balanced occlusion and records the bite	2 theoretical /5 practical	8
Student performance assessment	Lecture + Laboratory application	Theoretical: Selection of anterior & posterior teeth Practical: Arrangement of anterior teeth Cl. I	Selects teeth and arranges anterior teeth	2 theoretical /5 practical	9
Discussion and practical assessment	Lecture + Laboratory application	Theoretical: Guidelines for artificial teeth arrangement & Arrangement of anterior teeth Practical: Arrangement of anterior teeth Cl. I (assessment)	Applies rules for arranging anterior teeth and evaluates them	2 theoretical /5 practical	10
Daily exam daily (Quiz)	Lecture + Laboratory application	Theoretical: Arrangement of posterior teeth -	Arranges posterior teeth correctly	2 theoretical	11

10. Course Structure

		Practical: Arrangement of posterior teeth Cl. I		/ 5 practical	
Student performance assessment	Lecture + Laboratory application	Theoretical: Waxing, carving post dam.& Practical: Arrangement of posterior teeth Cl. I (assessment)	Carves wax and assesses the posterior teeth arrangement	2 theoretical / 5 practical	12
Discussion and practical assessment	Lecture + Laboratory application	Theoretical: Flasking and de-flasking Practical: Waxing, Carving and Post-dam.	Applies the extrusion process and removes wax	2 theoretical / 5 practical	13
Daily exam theoretical and practical	Lecture + Laboratory application	Theoretical: Packing and curing Practical: Flasking, Packing, Curing and De-Flasking	Applies the curing process.	2 theoretical / 5 practical	14
Assessment and preparation for the final exam.	Lecture + Laboratory application	Theoretical: Finishing and polishing Practical: Finishing and Polishing	Finishes and polishes the complete denture to a final form	2 theoretical / 5 practical	15

11. Course Assessment

Distribution Details

20 points (for theoretical midterm and daily exams)

15 points (for laboratory assessment and practical exams)

5 points (for attendance, participation, and activity)

60 points (distributed between the theoretical and practical components)

11. Course Assessment	
12.sources teaching and teaching	
Prosthodontic Treatment for Edentulous Patients - Zarb	Required Textbooks (Prescribed Curriculum, if any)
Syllabus of Complete Dentures - Charles M. Heartwell	Main References (Sources)
Essentials of Complete Denture Prosthodontics - Sheldon Winkler	Recommended Supporting Books and References
Educational videos for the laboratory steps of complete denture fabrication available on academic channels	Electronic References and Websites

Details	Item
Dental Technology / Crowns and Bridges (basic) - Crown and Bridge (Basic)	1. Course Name
CB-21	2. Course Code
Second Stage / First Semester / Academic Year 2025-2026	3. Semester / Year/stage
2025-2026	4. Date of Preparation of this Description
Compulsory in-person attendance	5. Available Attendance Modes
105 Total hours (30 theoretical + 75 practical (2 theoretical / 5 practical) / 4 credits	6. Number of Study Hours / Credits
Name: Elaf Jamal Harb Email: elaf.jamal.harb@uoturath.edu.iq	7. Course Coordinator
Introduce the student to the basic principles for manufacturing fixed crowns and bridges - Enable the student to perform the initial laboratory steps for preparing models and designing crowns and bridges	8. Course Objectives
Theoretical explanation supported by illustrative aids - practical application of laboratory steps (carving, casting, and design) - accurate periodic assessment of each stage of work	9. Teaching and Learning Strategies

10.Course Structure

Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours	Week
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Terms used in crown Practical: Taking impression for ideal prepared cast &making a working cast with removable die	Identifies terminology used in Crowns	2 theoretical / 5 practical	1
Daily exam daily	Lecture and Laboratory application	Theoretical: Types of crowns	distinguishes between types Crowns different	2 theoretical	2

10.Course Structure					
Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours	Week
		Practical: Taking impression for ideal prepared cast &making a working cast with removable die		/5 practical	
Student performance assessment	Lecture and Laboratory application	Theoretical: Finishing line, types, and indications Practical: Taking impression for ideal prepared cast &making a working cast with removable die	Identifies types of finishing lines and indications for their use	2 theoretical /5 practical	3
Daily exam theoretical and practical	Lecture and Laboratory application	Theoretical: Esthetic and biological considerations of tooth preparation Practical: Taking impression for ideal prepared cast &making a working cast with removable die	Considers esthetic and biological considerations for tooth preparation	2 theoretical /5 practical	4
Student performance assessment	Lecture and Laboratory application	Theoretical: Mechanical consideration of tooth preparation Practical: Taking impression for ideal prepared cast &making a working cast with removable die	Applies mechanical considerations for tooth preparation.	2 theoretical /5 practical	5

10.Course Structure					
Assessment Method	**Learning Method**	**Unit or Topic Name**	**Required Learning Outcomes**	**Hours**	**Week**
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Disinfection of impression and cast and pouring technique Practical: Taking impression for ideal prepared cast &making a working cast with removable die	Masters impression and model disinfection and the casting technique	2 theoretical /5 practical	6
Daily exam daily	Lecture and Laboratory application	Theoretical: Working cast and die: materials used for making working cast and die Practical: Cutting of the die	Identifies materials used to make working molds	2 theoretical /5 practical	7
Daily exam Mid-term	Lecture and Laboratory application	Theoretical: Working cast and die: types and techniques used for fabricating Practical: Cutting of the die	distinguishes types and technologies fabrication molds work	2 theoretical /5 practical	8
Student performance assessment	Lecture and Laboratory application	Theoretical: Cutting of the die and methods of exposing the finishing line Practical: Ditching	Applies model-cutting methods and exposes the finishing line	2 theoretical /5 practical	9
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Fundamental of occlusion Practical: Ditching	understands fundamentals occlusion dental	2 theoretical /5 practical	10

10.Course Structure					
Assessment Method	**Learning Method**	**Unit or Topic Name**	**Required Learning Outcomes**	**Hours**	**Week**
Daily exam theoretical and practical	Lecture and Laboratory application	Theoretical: Mandibular movements: functional and parafunctional movements Practical: Mounting	Analyzes functional and non-functional mandibular jaw movements	2 theoretical / 5 practical	11
Student performance assessment	Lecture and Laboratory application	Theoretical: Articulators and face bow Practical: Mounting	mounts models on articulator	2 theoretical / 5 practical	12
Daily exam daily	Lecture and Laboratory application	Theoretical: Bite registration and mounting Practical: Waxing of maxillary central incisor	Begins the waxing steps for the central incisor	2 theoretical / 5 practical	13
Student performance assessment	Lecture and Laboratory application	Theoretical: Waxing techniques Practical: Waxing of maxillary central incisor	masters waxing central incisor maxillary	2 theoretical / 5 practical	14
Assessment and preparation for the final exam.	Lecture and Laboratory application	Theoretical: Waxing instruments, die spacer and luting agent Practical: Waxing of maxillary central incisor	Completes final waxing and reviews the steps	2 theoretical / 5 practical	15

11. Course Assessment

Distribution Details

20 points (for theoretical midterm and daily exams)

15 points (for laboratory assessment and practical exams)

5 points (for attendance, participation, and activity)

60 points (distributed between the theoretical and practical components)

12.sources teaching and teaching

Contemporary fixed prosthodontics book	Required Textbooks (Prescribed Curriculum, if any)
Fundamental fixed prosthodontics book	Main References (Sources)
Principles and practice of crown and bridge work	Recommended Supporting Books and References
educational videos academic for steps work Laboratory in Crowns and Bridges	Electronic References and Websites

Details	Item
Oral Tissues - Oral Histology	1. Course Name
OH-21	2. Course Code
First Semester / Second Stage / Academic Year 2025-2026	3. Semester / Year/stage
2025-2026	4. Date of Preparation of this Description
registration attendance Compulsory	5. Available Attendance Modes
2 theoretical / 5 practical5 Total hours (30 theoretical + 45 practical) / 3 credits	6. Number of Study Hours / Credits
Name: Dr. Tariq Mahdi Saleh Email: tarekmsaleh@uoturath.edu.iq	7. Course Coordinator
General Objective: Introduce students to the structural and functional properties of oral tissues and teeth as an introduction to studying and understanding oral tissues and teeth - Specific Objective: Enable students in the Dental Technology Department to understand the embryonic development of oral tissues and teeth	8. Course Objectives
Theoretical explanation supported by illustrative aids (video clips and images)	9. Teaching and Learning Strategies

10.Course Structure

Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours 2 theoretical 3 practical	Week
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Introduction of oral histology and embryology Practical: Slides preparation steps	Identifies the fundamentals of oral tissues and their development	5	1

10.Course Structure					
Assessment Method	**Learning Method**	**Unit or Topic Name**	**Required Learning Outcomes**	**Hours** 2 theoretical 3 practical	**Week**
Daily exam	Lecture and Laboratory application	Theoretical: Embryological development of facial tissue Practical: Slides of Cell types	Studies the embryonic development of facial tissues and cells	5	2
Student performance assessment	Lecture and Laboratory application	Theoretical: Embryological development of oral cavity Practical: Slides of epithelial tissue	Understands the embryonic development of the oral cavity and tissues	5	3
Daily exam theoretical and practical	Lecture and Laboratory application	Theoretical: Embryological development of teeth and oral tissues Practical: Slides of Connective tissue	Analyzes the development of teeth and supporting tissues	5	4
Student performance assessment	Lecture and Laboratory application	Theoretical: Amelogenesis process of enamel formation Practical: Slides of Facial tissue	Explains the process of tooth enamel formation	5	5
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Enamel structure Practical: Slides of Oral tissue during development	Examines and explains the histological structure of enamel	5	6
Daily exam	Lecture and Laboratory application	Theoretical: Dentinogenesis processes of dentine formation	Explains the process of dentin formation	5	7

10.Course Structure					
Assessment Method	**Learning Method**	**Unit or Topic Name**	**Required Learning Outcomes**	**Hours** 2 theoretical 3 practical	**Week**
		Practical: Slides of steps during teeth Development			
Student performance assessment	Lecture and Laboratory application	Theoretical: Dentine structure Practical: Slides of development of Enamel	Examines and explains the histological structure of dentin	5	8
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Pulp structure and function Practical: Slides of development of Dentine	Analyzes the structure and function of the dental pulp	5	9
Daily exam theoretical and practical	Lecture and Laboratory application	Theoretical: Cementogenesis processes of cementum formation Practical: Slides of development of Pulp	Explains the process of dental cementum formation.	5	10
Student performance assessment	Lecture and Laboratory application	Theoretical: Cementum structure Practical: Slides of development of Cementum	Examines and explains the histological structure of cementum	5	11
Daily exam	Lecture and Laboratory application	Theoretical: Bone formation Practical: Slides of development of Alveolar bone	Understands the process of alveolar bone formation	5	12

10.Course Structure					
Assessment Method	**Learning Method**	**Unit or Topic Name**	**Required Learning Outcomes**	**Hours** 2 theoretical 3 practical	**Week**
Student performance assessment	Lecture and Laboratory application	Theoretical: Bone structure and Practical: Slides of development of Periodontal Tissue	Analyzes the structure and supporting ligaments	5	13
Student performance assessment	Lecture and Laboratory application	Periodontal ligament and supporting structure Practical Slides of development of Mucosa	Analyzes the structure of supporting ligaments		14
Assessment and preparation for the final exam.	Lecture and Laboratory application	Theoretical: Oral mucosa tissue Practical: Slides of cleft lip and palate	Examines oral mucosal tissues and abnormalities	5	15

11. Course Assessment	
Distribution Details	
20 points (for theoretical midterm and daily exams)	
15 points (for laboratory assessment and practical exams)	
5 points (for attendance, participation, and activity)	
60 points (distributed between the theoretical and practical components)	

12.sources teaching and teaching	
Essential of oral biology anatomy, histology, physiology, and embryology second edition Maji Jose	Required Textbooks (Prescribed Curriculum, if any)
Atlas of oral histology second edition. Harikrishnan Prasad	Main References (Sources)

12.sources teaching and teaching	
Orban's Oral Histology and Embryology Book by G. S. Kumar	Recommended Supporting Books and References
Specialized academic medical platforms using digital histology slides (Digital Histology Slides)	Electronic References and Websites

Details	Item
chemistry (basic) - Chemistry (Basic)	1. Course Name
CHE-21	2. Course Code
First Semester / Second Stage / Academic Year 2025-2026	3. Semester / Year/stage
2025-2026	4. Date of Preparation of this Description
registration attendance Compulsory	5. Available Attendance Modes
90 Total hours (30 theoretical + 60 practical) / 4 credits	6. Number of Study Hours / Credits
Name: Prof. Balqees Mohammed Diaa Hussein Email: Balqees.mohamed@uoturath.edu.iq	7. Course Coordinator
General Objective: Introduce students to the fundamentals of the chemical structures of most materials and methods of handling them - Specific Objective: Enable Dental Technology Department students to understand the molecular and structural formation of materials	8. Course Objectives
explanation Theoretical supported with illustrative aids - direct practical application for reactions chemical in Laboratory - assessment continuous and conducting tests	9. Teaching and Learning Strategies

10.structure Laboratories

Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours 2 theoretical / 4 practical	Week
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Introduction to General Chemistry (Matter). Classification of matter	Identifies chemistry fundamentals and laboratory first aid	6	1

10.structure Laboratories					
Assessment Method	**Learning Method**	**Unit or Topic Name**	**Required Learning Outcomes**	**Hours** 2 theoretical /4 practical	**Week**
		Practical: General guidance and Laboratory first aid			
Daily exam	Lecture and Laboratory application	Theoretical: Atom, atomic number, mass number, atomic mass and isotopes Practical: Methods of manipulation	understands structure atomic and methods handling Laboratory	6	2
Student performance assessment	Lecture and Laboratory application	Theoretical: Periodic table Practical: The balances weighing	Studies the periodic table and uses laboratory balances	6	3
Daily exam theoretical and practical	Lecture and Laboratory application	Theoretical: Chemical bonds Practical: Determination of Calcium (Ca), Chlorine (Cl)	Explains chemical bonds and measures elements	6	4
Student performance assessment	Lecture and Laboratory application	Theoretical: Method of analysis, solutions, standard solutions Practical: Determination of melting point	Analyzes solutions and identifies the melting point	6	5
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Molarity, molality, normality and dilution	Calculates solution concentrations and identifies the boiling point	6	6

10.structure Laboratories					
Assessment Method	**Learning Method**	**Unit or Topic Name**	**Required Learning Outcomes**	**Hours** 2 theoretical /4 practical	**Week**
		Practical: Determination of boiling point			
Daily exam Mid-term	Lecture and Laboratory application	Theoretical: Chemical reactions, equilibrium constant, reaction rout, catalyst Practical: Test	Tests theoretical and practical skills for the semester	6	7
Student performance assessment	Lecture and Laboratory application	Theoretical: Solubility and ionization Practical: Filtration, recrystallization and distillation	Studies solubility and semester technologies and distillation	6	8
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Neutralization analysis, acid and base theory Practical: Qualitative and quantitative analysis	Analyzes chemical neutralization quantitatively and qualitatively	6	9
Daily exam theoretical and practical	Lecture and Laboratory application	Theoretical: PH, buffers and end point Practical: Acid base titration	Understands acidity and performs titration operations	6	10
Student performance assessment	Lecture and Laboratory application	Theoretical: Spectroscopy (Optical spectroscopy), Beers law	Identifies spectroscopy and performs oxidation titration	6	11

10.structure Laboratories					
Assessment Method	**Learning Method**	**Unit or Topic Name**	**Required Learning Outcomes**	**Hours** 2 theoretical /4 practical	**Week**
		Practical: KMnO4 solution against oxalic acid			
Daily exam	Lecture and Laboratory application	Theoretical: Introduction to biochemistry (carbohydrates) Practical: Solutions, normal, molar etc	Identifies biochemistry and prepares solutions	6	12
assessment test Practical	Lecture and Laboratory application	Theoretical: Lipids Practical: Test	tests skillshis practical and studies lipids	6	13
Student performance assessment	Lecture and Laboratory application	Theoretical: Amino acids and Proteins Practical: Preparation of buffer solution	Studies proteins and prepares organized solutions	6	14
Assessment and preparation for the final exam.	Lecture and Laboratory application	Theoretical: Enzymes and vitamins Practical: PH determination	Studies enzymes and measures acidity	6	15

11. Course Assessment

Distribution Details

20 points (for theoretical midterm and daily exams)

15 points (for laboratory assessment and practical exams)

5 points (for attendance, participation, and activity)

60 points (distributed between the theoretical and practical components)

12.sources education and teaching

General chemistry: the essential concepts / Raymond Chang. –5th ed	Required Textbooks (Prescribed Curriculum, if any)
Laboratory Manual for Principles of General Chemistry Dr. John R. Amend	Main References (Sources)
Chemistry: The Central Science Theodore L. Brown, H. Eugene LeMay Jr., Bruce E. Burst	Recommended Supporting Books and References
websites educational approved and research published in field Chemistry general and analytical	Electronic References and Websites

Item	Details
1. Course Name	Crimes of the Baathist Regime in Iraq - Crimes of the Baath Regime in Iraq
2. Course Code	CBR-21
3. Semester / Year/stage	First Semester / Second Stage / Academic Year 2025-2026
4. Date of Preparation of this Description	2025-2026
5. Available Attendance Modes	registration attendance Compulsory
6. Number of Study Hours / Credits	30 Total hours (theoretical only) / 2 credits
7. Course Coordinator	Name: Elaf Jamal Harb Email: elaf.jamal.harb@uoturath.edu.iq
8. Course Objectives	General Objective: Introduce the student to the crimes committed by the Baath regime in Iraq - Specific Objective: Introduce the student to the crimes committed by the Baathist regime in Iraq and develop awareness to prevent their recurrence
9. Teaching and Learning Strategies	Theoretical lectures supported by historical and legal evidence and documents - open discussion and constructive dialogue to enhance awareness - assigning students to write brief research reports about the events

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or Topic Name (theoretical only)	Learning Method	Assessment Method
first + Second	4	Understands the concept of international crimes and their linguistic and technical definitions and identifies	Theoretical: - Crimes of the Baath regime according to the law of the Iraqi High Criminal Court, 2005 • Concept and categories of crimes • Defines crime linguistically and technically. • Categories of crimes - Crimes of the Baath regime	Lecture and discussion	General questions and participation / Daily exam

10. Course Structure					
		according to the documentation of the law of the Iraqi High Criminal Court, 2005 • Types of international crimes • Decisions issued by the Supreme Criminal Court	decisions of the criminal court		
assessment participation the student / paper work miniature	Lecture and discussion	Theoretical: - Psychological and social crimes and their effects, and the most prominent violations of the Baathist regime in Iraq - Psychological crimes • Mechanisms of psychological crimes • Effects of psychological crimes - Social crimes • Militarization of society • The Baathist regime's position on religion - Violations of Iraqi laws • Forms of human-rights violations and authority crimes • Some decisions on political and military violations of the Baath regime • Prison and detention locations of the Baath regime	Analyzes the psychological and social crimes of the Baath regime and studies violations of laws and human rights and prison locations	8	Third + Fourth + Fifth + Sixth

10. Course Structure					
Daily exam / assessment: brief report	Lecture and discussion	Theoretical: - Environmental crimes of the Baath regime in Iraq • Wartime contamination and radiation and mine explosions • Destruction of cities and villages (scorched-earth policy) • Draining marshes • Bulldozing palm groves, trees, and crops	Analyzes environmental crimes such as radioactive contamination, draining marshes, and bulldozing orchards	8	Seventh + Eighth + Ninth + Tenth
Oral discussion / paper work miniature	Lecture and discussion	Theoretical: -Mass grave crimes • Events of mass-genocide graves committed by the Baathist regime in Iraq • Chronological classification of mass-genocide graves in Iraq for the period 1963-2003.	Identifies crimes graves mass and concept genocide and classifying them chronological	8	Eleventh + Twelfth + Thirteenth + Fourteenth
Daily exam coursework / Mid-term	Written daily exam	**Theoretical:** Daily exam coursework	Tests his comprehensive skills and knowledge in preparation for the final exam	2	fifth ten

11. Course Assessment

Distribution Details

35 point (for the Exams midterm and daily and reports)

5 points (for attendance, participation, and activity)

60 points (for the comprehensive final written exam)

12.sources education and teaching

law court criminal Iraqi Supreme for general 2005	Required Textbooks (Prescribed Curriculum, if any)
Documents of the Iraqi High Criminal Court and session minutes	Main References (Sources)
Approved historical and legal books and research documenting the crimes of the regime in Iraq	Recommended Supporting Books and References
The former official website of the Ministry of Human Rights and official institutions concerned with documenting genocide crimes	Electronic References and Websites

Item	Details
1. Course Name	Removable Partial Denture (basic) - Partial Denture (Basic)
2. Course Code	PD-22
3. Semester / Year/stage	Second Semester / Second Stage / Academic Year 2025-2026
4. Date of Preparation of this Description	2025-2026
5. Available Attendance Modes	registration attendance Compulsory
6. Number of Study Hours / Credits	105 Total hours (30 theoretical + 75 practical (2 theoretical / 5 practical) / 4 credits
7. Course Coordinator	Name: Asst. Lecturer Zainab Diaa Fawzi Email: Ecc0059@mtu.edu.iq
8. Course Objectives	General Objective: Introduce students to steps basic followed in manufacturing Partial Denture acrylic - Specific Objective: enabling student department technologies teeth from knowledge steps basic followed in manufacturing Partial Denture acrylic
9. Teaching and Learning Strategies	explanation Theoretical supported with illustrative aids - direct practical application for the steps Laboratory - assessment periodic accurate for each stage work

10.Course Structure

Week	Hours	Required Learning Outcomes	Unit or Topic Name	Learning Method	Assessment Method
1	2 theoretical / 5 practical	Identifies terms Partial Denture and its components	Theoretical: Removable Partial Denture (Terms and Components) Practical: Trimming of the cast	Lecture and Laboratory application	Discussion and practical assessment

10.Course Structure					
Assessment Method	**Learning Method**	**Unit or Topic Name**	**Required Learning Outcomes**	**Hours**	**Week**
Daily exam	Lecture and Laboratory application	Theoretical: Kennedy classification Practical: Special tray	Understands Kennedy classification and fabricates the individual tray	2 theoretical / 5 practical	2
Student performance assessment	Lecture and Laboratory application	Theoretical: Acrylic Removable Partial Denture Practical: Surveying	Studies acrylic partial dentures and surveys the model	2 theoretical / 5 practical	3
Daily exam theoretical and practical	Lecture and Laboratory application	Theoretical: Special tray, occlusal rim and design the trimming of master cast Practical: Block out of the undercut	Designs the individual tray and blocks out undercuts	2 theoretical / 5 practical	4
Student performance assessment	Lecture and Laboratory application	Theoretical: Surveying procedure Practical: Bite rim (maxillary cast)	applies surveying and manufactures height wax maxillary	2 theoretical / 5 practical	5
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Articulating and Mounting procedure Practical: Bite rim (mandibular cast)	mounts models and manufactures height wax mandibular	2 theoretical / 5 practical	6

10.Course Structure					
Assessment Method	**Learning Method**	**Unit or Topic Name**	**Required Learning Outcomes**	**Hours**	**Week**
Daily exam daily	Lecture and Laboratory application	Theoretical: Clasp assembly Practical: Making the clasp of the upper cast	studies and practices on manufacturing clasps maxillary	2 theoretical /5 practical	7
Daily exam Mid-term	Lecture and Laboratory application	Theoretical: Selection of artificial teeth Practical: Making the clasp of the lower cast	selects teeth and manufactures clasps mandibular	2 theoretical /5 practical	8
Student performance assessment	Lecture and Laboratory application	Theoretical: Setting of artificial teeth Practical: Making the clasp of the upper and lower cast (assessment)	describes teeth artificial and assesses clasps	2 theoretical /5 practical	9
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Waxing of acrylic partial denture Practical: Mounting	Waxes the partial denture and mounts it on the articulator	2 theoretical /5 practical	10
Daily exam theoretical and practical	Lecture and Laboratory application	Theoretical: Flasking procedure Practical: The setting of anterior artificial teeth	Identifies process extrusion and describes anterior teeth	2 theoretical /5 practical	11
Student performance assessment	Lecture and Laboratory application	Theoretical: Curing, Finishing and Polishing Procedure	studies processing and finishing and describes posterior teeth	2 theoretical /5 practical	12

10.Course Structure					
Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours	Week
		Practical: The setting of posterior artificial teeth			
Daily exam daily	Lecture and Laboratory application	Theoretical: Selective grinding Practical: Flasking procedure	Applies selective grinding and the extrusion process	2 theoretical /5 practical	13
Student performance assessment	Lecture and Laboratory application	Theoretical: Repairing of acrylic PD Practical: Packing and curing	Repairs the partial denture and processes it	2 theoretical /5 practical	14
Assessment and preparation for the final exam.	Lecture and Laboratory application	Theoretical: A flexible removable partial denture Practical: Finishing and polishing	Studies the flexible denture and finishes and polishes the acrylic denture	2 theoretical /5 practical	15

11. Course Assessment	
Distribution Details	
20 points (for theoretical midterm and daily exams)	
15 points (for laboratory assessment and practical exams)	
5 points (for attendance, participation, and activity)	
60 points (distributed between the theoretical and practical components)	

12.sources education and teaching	
McCracken Removable partial prosthetic	Required Textbooks (Prescribed Curriculum, if any)
Textbook of prosthodontics	Main References (Sources)
Atlas of removable partial denture	Recommended Supporting Books and References
Dental laboratory procedures removable partial denture	Electronic References and Websites

Item	Details
1. Course Name	Crowns (advanced) - Crowns (Advanced)
2. Course Code	CA-22
3. Semester / Year/stage	Second Semester / Second Stage / Academic Year 2025-2026
4. Date of Preparation of this Description	2025-2026
5. Available Attendance Modes	registration attendance Compulsory
6. Number of Study Hours / Credits	105 Total hours (30 theoretical + 75 practical (2 theoretical / 5 practical) / 4 credits
7. Course Coordinator	Name: Elaf Jamal Harb Email: elaf.jamal.harb@uoturath.edu.iq
8. Course Objectives	General Objective: Familiarize the student with the advanced steps followed in the fabrication of fixed metal and ceramic crowns. Specific Objective: Enable students in the Dental Technology Department to fabricate fixed metal and ceramic crowns.
9. Teaching and Learning Strategies	explanation Theoretical supported with illustrative aids - direct practical application for the steps Laboratory advanced - assessment periodic accurate for each stage work

10.Course Structure

Week	Hours	Required Learning Outcomes	Unit or Topic Name	Learning Method	Assessment Method
1	2 theoretical / 5 practical	masters waxing incisors	Theoretical: Fabrication of the wax pattern of the incisors teeth Practical: Waxing of maxillary central	Lecture and Laboratory application	Discussion and practical assessment
2	2 theoretical / 5 practical	Designs wax for the canine and mandibular incisor	Theoretical: Fabrication of the wax pattern of the canine tooth	Lecture and Laboratory application	Daily exam

10.Course Structure					
Assessment Method	**Learning Method**	**Unit or Topic Name**	**Required Learning Outcomes**	**Hours**	**Week**
		Practical: Waxing of mandibular central			
Student performance assessment	Lecture and Laboratory application	Theoretical: Fabrication of the wax pattern of the premolar teeth Practical: Waxing of maxillary lateral	Designs wax for premolars and the maxillary lateral incisor	2 theoretical / 5 practical	3
Daily exam theoretical and practical	Lecture and Laboratory application	Theoretical: Fabrication of the wax pattern of the molar teeth Practical: Waxing of mandibular lateral	Designs wax for molars and the mandibular lateral incisor	2 theoretical / 5 practical	4
Student performance assessment	Lecture and Laboratory application	Theoretical: Spruing of the anterior wax pattern Practical: Waxing of maxillary canine	applies system casting (Spruing) for teeth anterior	2 theoretical / 5 practical	5
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Spruing of the posterior wax pattern Practical: Waxing of mandibular canine	applies system casting (Spruing) for teeth posterior	2 theoretical / 5 practical	6
Daily exam	Lecture and Laboratory application	Theoretical: Investing the wax pattern, equipment	Identifies tools Subject plaster and waxes premolar	2 theoretical / 5 practical	7

10.Course Structure					
Assessment Method	**Learning Method**	**Unit or Topic Name**	**Required Learning Outcomes**	**Hours**	**Week**
		Practical: Waxing of maxillary premolar			
Daily exam Mid-term	Lecture and Laboratory application	Theoretical: Investing the wax pattern procedure Practical: Waxing of mandibular premolar	applies steps Subject plaster practically	2 theoretical / 5 practical	8
Student performance assessment	Lecture and Laboratory application	Theoretical: Burn out of the wax pattern: procedure Practical: Waxing of maxillary molar	applies procedures burnout wax (Burn out)	2 theoretical / 5 practical	9
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Burn out of the wax pattern: problems Practical: Waxing of maxillary molar	handles problems burnout wax and waxes molar	2 theoretical / 5 practical	10
Daily exam theoretical and practical	Lecture and Laboratory application	Theoretical: Casting procedure, equipment Practical: Waxing of mandibular molar	Identifies metal-casting equipment and procedures	2 theoretical / 5 practical	11
Student performance assessment	Lecture and Laboratory application	Theoretical: The casting machine Practical: Waxing of mandibular molar	operates device casting metal efficiently	2 theoretical / 5 practical	12

10.Course Structure					
Assessment Method	**Learning Method**	**Unit or Topic Name**	**Required Learning Outcomes**	**Hours**	**Week**
Daily exam	Lecture and Laboratory application	Theoretical: The casting technique Practical: Spruing	Applies the casting technique and practically connects the casting sprues	2 theoretical / 5 practical	13
Student performance assessment	Lecture and Laboratory application	Theoretical: Finishing procedure of the casting Practical: Investing	Performs the finishing steps for metal casting	2 theoretical / 5 practical	14
Assessment and preparation for the final exam.	Lecture and Laboratory application	Theoretical: Problems associated with the Finishing procedure of the casting Practical: Investing	solves problems finishing and applies step use Subject plaster	2 theoretical / 5 practical	15

11. Course Assessment	
Distribution Details	
20 points (for theoretical midterm and daily exams)	
15 points (for laboratory assessment and practical exams)	
5 points (for attendance, participation, and activity)	
60 point (distributed between the theoretical and practical components)	

12.sources education and teaching	
Contemporary fixed prosthodontics book	Required Textbooks (Prescribed Curriculum, if any)

12.sources education and teaching	
Fundamental fixed prosthodontics book	Main References (Sources)
Principles and practice of crown and bridge work	Recommended Supporting Books and References
Academic educational videos and updated articles on advanced crown laboratory procedures	Electronic References and Websites

Item	Details
1. Course Name	Oral Physiology - Oral Physiology
2. Course Code	OPH-22
3. Semester / Year/stage	Second Semester / Second Stage / Academic Year 2025-2026
4. Date of Preparation of this Description	2025-2026
5. Available Attendance Modes	registration attendance Compulsory
6. Number of Study Hours / Credits	90 Total hours (30 theoretical + 60 practical) / 4 credits
7. Course Coordinator	Name: Dr. Tariq Mahdi Saleh Email: tarekmsaleh@uoturath.edu.iq
8. Course Objectives	General Objective: Introduce students to the specific structural and functional properties of oral physiology and teeth as an introduction to studying and understanding diseases affecting the mouth and teeth - Specific Objective: Enable Dental Technology Department students to understand general principles of oral physiology within their field of work
9. Teaching and Learning Strategies	Theoretical explanation supported by illustrative aids - direct practical application for examining slides in the laboratory - continuous periodic assessment

10.Course Structure

Week	Hours 2 theoretical 4practical	Required Learning Outcomes	Unit or Topic Name	Learning Method	Assessment Method
1	6	Identifies the introduction to physiology and control of body functions	Theoretical: Introduction and how the body functions control Practical: Slides show the students circulatory system	Lecture and Laboratory application	Discussion and practical assessment

10.Course Structure					
Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours 2 theoretical 4practical	Week
		parts: hearts and blood vessels			
Daily exam	Lecture and Laboratory application	Theoretical: Physiology of circulatory system: the function of each part Practical: Slides show the students the types of blood circulation: systemic and pulmonary circulation	Explains circulatory physiology and the function of each part	6	2
Student performance assessment	Lecture and Laboratory application	Theoretical: Physiology of blood circulation: types of blood circulation Practical: Slides show the students the Blood composition	Distinguishes between types of blood circulation	6	3
Daily exam theoretical and practical	Lecture and Laboratory application	Theoretical: Blood: definition and composition Practical: Slides show the students the formed elements of blood: RBCs and HB	identifies definition blood and its components basic	6	4
Student performance assessment	Lecture and Laboratory application	Theoretical: Blood: functions Practical: Slides show the students of the formed	analyzes functions blood different	6	5

10.Course Structure					
Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours 2 theoretical 4practical	Week
		elements of blood: WBCs			
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Blood: The formed elements of blood and normal values Practical: Slides show the students of the formed elements of blood: platelets	Examines the components of blood and normal values	6	6
Daily exam	Lecture and Laboratory application	Theoretical: Blood groups: ABO system and RH system Practical: Slides show the students the blood groups: ABO system and RH system	Classifies blood groups and the (ABO) and (RH) systems	6	7
Daily exam Mid-term	Lecture and Laboratory application	Theoretical: Physiology of oral cavity and digestive process: Saliva and salivary glands Practical: Slides show the students the saliva and salivary glands	Studies the physiology of the oral cavity and salivary glands	6	8
Student performance assessment	Lecture and Laboratory application	Theoretical: Saliva: composition and functions of saliva in mastication and speech	Analyzes saliva structure and its functions in mastication and speech	6	9

10.Course Structure					
Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours 2 theoretical 4practical	Week
		Practical: Slides show the students the tongue and taste buds			
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Physiology of tongue and taste sensation Practical: Slides show the students the teeth arrangement	Explains tongue physiology and the sense of taste	6	10
Daily exam theoretical and practical	Lecture and Laboratory application	Theoretical: Physiology of the teeth: the role of teeth arrangement in mastication Practical: Slides show the students the muscles of mastication and their role in mandibular movements	Analyzes the role of tooth arrangement in mastication	6	11
Student performance assessment	Lecture and Laboratory application	Theoretical: Physiology of muscles of mastication Practical: Slides show the students the pharynx: parts, pharyngeal opening	Explains the physiology and movements of the masticatory muscles	6	12
Daily exam daily	Lecture and Laboratory application	Theoretical: Physiology of the pharynx and velopharyngeal competence	Studies pharyngeal physiology and velopharyngeal valve efficiency	6	13

10.Course Structure					
Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours 2 theoretical 4practical	Week
		Practical: Slides show the students the pharynx : muscles of the pharynx			
Student performance assessment	Lecture and Laboratory application	Theoretical: Physiology of the soft palate Practical: Slides show the students the muscles soft palate	explains physiology palate soft (Soft palate)	6	14
Assessment and preparation for the final exam.	Lecture and Laboratory application	Theoretical: Defects of soft palates Practical: Slides show the students the soft palates defects	Analyzes abnormalities affecting the soft palate	6	15

11. Course Assessment	
Distribution Details	
20 points (for theoretical midterm and daily exams)	
15 points (for laboratory assessment and practical exams)	
5 points (for attendance, participation, and activity)	
60 point (distributed between the theoretical and practical components)	

12.sources education and teaching	
Essential of oral biology anatomy, histology, physiology, and embryology second edition Maji Jose	Required Textbooks (Prescribed Curriculum, if any)
Essential physiology for dental student, second edition K. sembulingam	Main References (Sources)
Human physiology 12th edition Cc chatterjees	Recommended Supporting Books and References
platforms academic medical specific using slides digital for Oral Physiology and devices body	Electronic References and Websites

Details	Item
Head and Neck Anatomy - Anatomy of head and neck	1. Course Name
AHN-22	2. Course Code
Second Semester / Second Stage / Academic Year 2025-2026	3. Semester / Year/stage
2025-2026	4. Date of Preparation of this Description
registration attendance Compulsory	5. Available Attendance Modes
90 Total hours (30 theoretical + 60 practical) / 4 credits	6. Number of Study Hours / Credits
Name: Dr. Tariq Mahdi Saleh – Email: tarekmsaleh@uoturath.edu.iq	7. Course Coordinator
General Objective: Familiarize the student with the detailed anatomy of the head, face, jaws, and neck relevant to dental manufacturing and Maxillofacial Prosthetics - Specific Objective: Enable Dental Technology Department students to study the most important anatomical landmarks, theoretically and practically, for dental prosthesis and Maxillofacial Prosthetics fabrication	8. Course Objectives
explanation Theoretical supported with illustrative aids - direct practical application on models anatomical (Skulls) and slides - assessment periodic accurate for terminology and anatomical landmarks	9. Teaching and Learning Strategies

10. Course Structure

Assessment Method	Learning Method	Unit or Topic Name (Theoretical + Practical)	Required Learning Outcomes	Hours 2 theoretical /4 practical	Week
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Introduction to the anatomy of head and neck Practical: Show the students the important	Identifies Introduction anatomy and levels anatomical	6	1

10. Course Structure					
		terms of positions and anatomical planes used in anatomy			
Daily exam	Lecture and Laboratory application	Theoretical: Anatomical terminology and anatomical positions Practical: Show the students the natural human skull and its parts	studies terminology anatomical and websites	6	2
Student performance assessment	Lecture and Laboratory application	Theoretical: The Skull: definition and description of the skull from the Anterior, superior, lateral & posterior views Practical: Skull: show the parts and the bones of the skull from anterior, superior, posterior, and lateral views	identifies and describes skull from different directions	6	3
Daily exam theoretical and practical	Lecture and Laboratory application	Theoretical: Cranial bones: Frontal bone: description, parts, and articulation, Parietal bones: description, parts, and articulation, sphenoid bone: description, parts, and articulation Practical: Frontal bone: show the students the frontal bone & its relation on the skull, Parietal bones: show the students the parietal bone & its relation on the skull, Sphenoid bone: show the students	Studies the parietal, frontal, and sphenoid bones in detail	6	4

10. Course Structure					
		the sphenoid bone & its relation on the skull			
Student performance assessment	Lecture and Laboratory application	Theoretical: Cranial bones: Temporal bone: description, parts, and articulation, Ethmoid bone: description, parts, and articulation, Occipital bone: description, parts, and articulation, Zygomatic bone: description, parts and articulation Practical: Temporal bone: show the students the parts of Temporal bone & relation on the skull, Ethmoid bone: show the students the parts of Ethmoid bone & relation on the skull, Occipital bone: show the students the parts of Occipital bone & relation on the skull, Zygomatic bone: show the student parts and articulation on the skull	Studies the temporal, ethmoid, occipital, and zygomatic bones	6	5
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Facial bones: Maxillary bones: description, parts and articulation, Palatine bone: description, parts and articulation Practical: Maxillary bones: show the student the parts, processes, and articulation on the skull, Palatine bone: show the	studies bones jaw maxillary and palate	6	6

10. Course Structure					
		student parts and articulation on the skull			
Daily exam	Lecture and Laboratory application	Theoretical: Facial bones: Mandible: description, parts and articulation Practical: Mandible: show the student parts, surfaces and articulation on the skull	Studies the mandibular jaw bone in detail	6	7
Daily exam Mid-term	Lecture and Laboratory application	Theoretical: Facial bones: Nasal bone, lacrimal bone, inferior nasal concha, vomer Practical: Nasal bone, lacrimal bone, inferior nasal concha, vomer: show the student the position and parts of each bone on the skull	Studies the nasal bones, lacrimal bones, nasal concha, and vomer	6	8
Student performance assessment	Lecture and Laboratory application	Theoretical: Nasal cavity: definition, walls Practical: Nasal cavity: show the student the walls and bone that forming it on the skull	Describes the nasal cavity and its walls	6	9
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Orbit: definition, walls, and margins Practical: Orbit: show the student the walls, margins and bone that forming it on the skull	Describes the orbit of the eye, its walls, and borders	6	10
Daily exam theoretical and practical	Lecture and Laboratory application	Theoretical: Muscles of facial expression: major muscles: origin insertion and action	studies muscles main for expression facial	6	11

10. Course Structure					
		Practical: Muscles of facial expression: slides show the student origin, insertion and action of each major muscles			
Student performance assessment	Lecture and Laboratory application	Theoretical: Muscles of facial expression: minor muscles: origin insertion and action Practical: Muscles of facial expression: slides show the student origin, insertion and action of each minor muscles	Studies the secondary muscles of facial expression	6	12
Daily exam	Lecture and Laboratory application	Theoretical: Muscles of mastication: origin insertion and action Practical: Muscles of mastication: show the student origin, insertion and action of each muscles of mastication	Studies the masticatory muscles, their functions, and origins	6	13
Student performance assessment	Lecture and Laboratory application	Theoretical: Sensory innervations of the face: Facial nerve: course and branches Practical: Sensory innervations of the face: slides show the student the course of the facial nerve and branches	studies innervation sensory of the face (nerve facial)	6	14
Assessment and preparation for the final exam.	Lecture and Laboratory application	Theoretical: Motor innervations of the face: Trigeminal nerve: course and branches Practical: Motor innervations of the face: slides show the student the course of the trigeminal nerve and branches	Studies the motor innervation of the face (trigeminal nerve)	6	15

11. Course Assessment	
Distribution Details	
20 points (for theoretical midterm and daily exams)	
15 points (for laboratory assessment and practical exams)	
5 points (for attendance, participation, and activity)	
60 point (distributed between the theoretical and practical components)	

12.sources education and teaching	
Richard s.Snell , clinical anatomy by regions , 9th edition.2011.	Required Textbooks (Prescribed Curriculum, if any)
Weir & Abrahams' Imaging Atlas of Human Anatomy, 6th Edition. Jonathan D. Spratt. 2020	Main References (Sources)
Gray's anatomy, the anatomical basis of clinical practice, 41st. edition, 2016	Recommended Supporting Books and References
Approved digital anatomical atlases for medical group students and Dental Technology students	Electronic References and Websites

Details	Item
Chemistry (Advanced) - Chemistry (Advanced)	1. Course Name
CHE-22	2. Course Code
Second Semester / Second Stage / Academic Year 2025-2026	3. Semester / Year/stage
2025-2026	4. Date of Preparation of this Description
registration attendance Compulsory	5. Available Attendance Modes
90 Total hours (30 Theoretical + 60 practical) / 4 credits	6. Number of Study Hours / Credits
Name: Prof. Balqees Mohammed Diaa Hussein Email: Balqees.mohamed@uoturath.edu.iq	7. Course Coordinator
General Objective: Introduce the student to the study of the structural and chemical properties of most materials and how to handle them - Specific Objective: Enable students in the Dental Technology Department to understand the molecular composition of materials.	8. Course Objectives
Theoretical explanation supported by illustrative aids - direct practical application for experiments chemical in Laboratory - continuous periodic assessment of laboratory skills	9. Teaching and Learning Strategies

10.Course Structure

Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours 2 Theoretical / 4 practical	Week
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Introduction to organic chemistry(hydrocarbons). Practical: Purification of organic compounds.	Identifies Chemistry organic purifies compounds	6	1

10.Course Structure					
Assessment Method	**Learning Method**	**Unit or Topic Name**	**Required Learning Outcomes**	**Hours** 2 Theoretical/ 4 practical	**Week**
Daily exam daily	Lecture and Laboratory application	Theoretical: Alkanes, alkenes, alkynes. Practical: Separation of organic compounds.	Studies the alkanes and alkenes and separates compounds	6	2
Student performance assessment	Lecture and Laboratory application	Theoretical: Alcohols, classification, properties and their reactions. Practical: Equipment's use in laboratory, IR, UV, etc.	Studies alcohols and uses devices Laboratory	6	3
Daily exam theoretical and practical	Lecture and Laboratory application	Theoretical: Aldehydes and ketones, properties and their reactions. Practical: Hydrolysis of polysaccharides by saliva.	Studies the aldehydes and ketones and analyzes sugars	6	4
Assessment the test Practical	Lecture and Laboratory application	Theoretical: Carboxylic acids, properties and their reactions. Practical: Test.	Studies acids carboxylic and conducts a test	6	5
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Amines, aromatic hydrocarbons and polynuclear aromatic compounds. Practical: Flame photometry.	Studies amines and compounds aromatic and applies device flame	6	6
Daily exam	Lecture and Laboratory	Theoretical: Introduction to polymer chemistry. Practical: Fractional distillation.	Identifies Chemistry polymers and applies	6	7

10.Course Structure					
Assessment Method	**Learning Method**	**Unit or Topic Name**	**Required Learning Outcomes**	**Hours** 2 Theoretical/ 4 practical	**Week**
	application		distillation fractional		
Daily exam Mid-term	Lecture and Laboratory application	Theoretical: Polymers, classification and their properties. Practical: Chromatography.	Studies classification polymers and applies chromatography	6	8
Student performance assessment	Lecture and Laboratory application	Theoretical: Reactions of polymer. Practical: Thin layer chromatography technique.	Studies reactions polymers and applies chromatography layer thin	6	9
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Natural polymers and their uses. Practical: Test.	Studies polymers natural and conducts a test	6	10
Daily exam theoretical and practical	Lecture and Laboratory application	Theoretical: The mechanics of elastic solids. Practical: Estimation of alcohol.	Studies mechanics Materials solid and estimates percentage alcohol	6	11
Student performance assessment	Lecture and Laboratory application	Theoretical: Stress-Strain curve. Practical: Estimation of phenol.	Analyzes curve stress and strain and estimates phenol	6	12
Daily exam	Lecture and Laboratory	Theoretical: Biopolymers and composite polymers	Studies polymers biological and estimates aldehydes	6	13

10.Course Structure					
Assessment Method	**Learning Method**	**Unit or Topic Name**	**Required Learning Outcomes**	**Hours** 2 Theoretical / 4 practical	**Week**
	application	Practical: Estimation of aldehydes and ketones.			
Student performance assessment	Lecture and Laboratory application	Theoretical: Biodegradable polymers Practical: Preparation of nylon.	Studies polymers biodegradable for degradation and prepares nylon	6	14
Assessment preparation for the final exam	Lecture and Laboratory application	Theoretical: Green chemistry. Practical: Test.	Identifies Chemistry green and conducts a test	6	15

11. Course Assessment	
Distribution Details	
20 points (for theoretical midterm and daily exams)	
15 points (for laboratory assessment and practical exams)	
5 points (for attendance, participation, and activity)	
60 points (distributed between the theoretical and practical components)	

12.sources education and teaching	
General chemistry: the essential concepts / Raymond Chang. –5th ed	Required Textbooks (Prescribed Curriculum, if any)
Laboratory Manual for Principles of General Chemistry Dr. John R. Amend	Main References (Sources)
Chemistry: The Central Science Theodore L. Brown, H. Eugene LeMay Jr., Bruce E. Burst	Recommended Supporting Books and References

12.sources education and teaching	
Sources digital approved for experiments Chemistry organic and polymers	Electronic References and Websites

Details	Item
Arabic Language - Arabic Language	1. Course Name
ARB-22	2. Course Code
Second Semester / Second Stage / Academic Year 2025-2026	3. Semester / Year/stage
2025-2026	4. Date of Preparation of this Description
registration attendance Compulsory	5. Available Attendance Modes
30 total hours (30 theoretical + 0 practical) / 2 credits	6. Number of Study Hours / Credits
Name: Prof. Balqees Mohammed Diaa Hussein Email: Balqees.mohamed@uoturath.edu.iq	7. Course Coordinator
General Objective: educating students with rules Arabic Language basic and understanding expression Qur'anic - Specific Objective: Enable the student to rules grammar and parsing and avoiding errors linguistic	8. Course Objectives
Theoretical lectures - discussions open within classroom - examples practical on grammar grammatical	9. Teaching and Learning Strategies

10.Course Structure					
Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours	Week
General questions and participation	Lecture and discussion	Theoretical: expression Qur'anic - grammatically from where/in terms of	Understands expression Qur'anic	2 2	1+2

10.Course Structure					
Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours	Week
andDaily exam		structure sentence and the text - rhetorically from where/in terms of impact artistic - referring to source book expression Qur'anic by Dr. Fadel Al-Samarrai	grammatically and rhetorically completes study expression Qur'anic and its effect		
Student performance assessment	Lecture and discussion	Theoretical: poet Badr Shakir Al-Sayyab	Studies texts poet Badr Shakir Al-Sayyab	2	3
Daily exam	Lecture and discussion	Theoretical: markers parsing original - dammah - fathah - kasrah - markers parsing secondary - waw - alif - ya	Distinguishes between markers parsing original and secondary	2	4
General questions and participation	Lecture and discussion	Theoretical: sentence nominal - subject and predicate 1- types subject 2- types predicate	Analyzes sentence nominal and types subject and predicate	2	5
Daily exam	Lecture and discussion	Theoretical: if and its sisters	Identifies rules if and its sisters and its function	2	6
Daily exam Mid-term	Lecture and discussion	Theoretical: - difference between if and that - difference between anna and inna	distinguishes between uses (if and that) and(that and inna)	2	7
Student performance assessment	Lecture and discussion	Theoretical: was and its sisters	Identifies rules was and its sisters and its function	2	8
Daily exam	Lecture and discussion	Theoretical: verbs five	Masters parsing verbs five and its cases	2	9

10.Course Structure					
Assessment Method	**Learning Method**	**Unit or Topic Name**	**Required Learning Outcomes**	**Hours**	**Week**
General questions and participation	Lecture and application practical	Theoretical: errors linguistic	Distinguishes errors linguistic common and corrects them	2	10
Daily exam	Lecture and discussion	Theoretical: information linguistic - synonyms and antonyms - differences linguistic - equivalences grammatical	acquires information linguistic and synonyms and equivalences	2	11
Student performance assessment	Lecture and discussion	Theoretical: dual and parsing	Masters formulation dual and rules parsing	2	12
General questions and participation andDaily exam	Lecture and discussion	Theoretical: types plurals - plural masculine sound - plural feminine sound - plural broken	Distinguishes between types plurals and its rules and completes study types plurals and its parsing	2 2	13+ 14
Assessment preparation for the final exam	Lecture and application practical	Theoretical: engineering grammar - rules Arabic Language in board instructional - corrections linguistic	Applies rules language and corrections in comprehensive	2	15

11. Course Assessment	
Distribution Details	
35 points (for exams midterm and daily and reports)	
5 points (for attendance, participation, and activity)	
60 points (for the exam written final comprehensive)	

12.sources education and teaching	
book expression Qur'anic by Dr. Fadel Al-Samarrai	Required Textbooks (Prescribed Curriculum, if any)
collections and works poet Badr Shakir Al-Sayyab	Main References (Sources)
books rules grammar and parsing basic	Recommended Supporting Books and References
dictionaries linguistic electronic and websites proofreading linguistic	Electronic References and Websites

Details	Item
Computer Applications - Computer Applications	1. Course Name
CA-22	2. Course Code
Second Semester / Second Stage Academic Year 2025-2026	3. Semester / Year/stage
2025-2026	4. Date of Preparation of this Description
registration attendance Compulsory	5. Available Attendance Modes
45 Total hours (15 Theoretical + 30 practical) / 2 credits	6. Number of Study Hours / Credits
Name: Dr. Ahmed Abdul Latif Mohammed Majid Email:	7. Course Coordinator
1. Utilize the computer for fundamental tasks. 2. Identify and discuss the hardware components of the computer system. 3. Creating documents using a word processor and creating presentations. 4. Conducting research on the Internet. 5. An introduction to Artificial Intelligence	8. Course Objectives
explanation Theoretical – direct practical application on devices Computer – assigning students with tasks programming and research	9. Teaching and Learning Strategies

10. Course Structure

Assessment Method	Learning Method	Unit or Topic Name (Theoretical and practical)	Required Learning Outcomes	Hours 1 Theoretical 2 practical	Week
Discussion and practical assessment	Lecture and Laboratory application	Theoretical and practical: Security and Networking: What is a network? Types of networks. Basic network components. Network Security Basics. Understanding network threats.	Identifies fundamentals networks and its types and its security	3	1

10. Course Structure					
		Network Troubleshooting			
Daily exam daily	Lecture and Laboratory application	Theoretical and practical: E-Commerce: Concepts of Electronic banking services this include online banking: ATM and debit card services, Phone banking, SMS banking, electronic alert, Mobile banking	Understands commerce electronic and services banking	3	2
Student performance assessment	Lecture and Laboratory application	Theoretical and practical: Computer Troubleshooting: identifying and solving common hardware and software problems that computer users encounter. Basic troubleshooting techniques and tools for diagnosing and resolving issues	Identifies and solves problems Computer common (part First)	3	3
Student performance assessment	Lecture and Laboratory application	Theoretical and practical: Introduction to AI: Definition of AI, History of AI, AI Techniques and Approaches, Challenges and Ethical Considerations.	Identifies intelligence artificial and its history (part First)	3	4
Daily exam daily	Lecture and Laboratory application	Theoretical and practical: AI in Our Daily Lives: AI in smartphones and virtual assistants like Siri or Google Assistant.)	Studies use intelligence artificial in our daily lives daily (part First)	3	5
Student performance assessment	Lecture and Laboratory application	Theoretical and practical: Applications of AI: Education, Healthcare, Finance, Transportation,	Studies applications intelligence artificial (part First)	3	6

10. Course Structure					
		Marketing and Advertising.			
Student performance assessment	Lecture and Laboratory application	Theoretical and practical: AI and Society: (How AI affects social, AI and International relations, AI and the future of humanity.)	Understands impact intelligence artificial on community	3	7
Daily exam	Lecture and Laboratory application	Theoretical and practical: Ethical Challenges in AI (AI ethics, privacy and surveillance, the impact of AI on the job market.)	Analyzes challenges ethical for artificial intelligence artificial	3	8
Student performance assessment	Lecture and Laboratory application	Theoretical and practical: The Future of AI (Future trends in AI, recent research and emerging technologies.)	explores future intelligence artificial	3	19

11. Course Assessment	
Distribution Details	
20 points (for theoretical midterm and daily exams)	
15 points (for laboratory assessment and practical exams)	
5 points (for attendance, participation, and activity)	
60 points (distributed between the theoretical and practical components)	

12. sources education and teaching	
Graham Brown, David Watson, "Cambridge IGCSE information and Communication Technology", 3rd Edition (2020)	Required Textbooks (Prescribed Curriculum, if any)
Alan Evans, Kendall Martin, Mary Anne? Oatsy, "Technology in Action Complete", 16th Edition (2020).	Main References (Sources)

12. sources education and teaching	
Ahmed Banafa, "Introduction to Artificial Intelligence (AI)", 1st Edition (2024).	Recommended Supporting Books and References
Sources digital approved for programs Computer and applications intelligence artificial	Electronic References and Websites

	information course basic
Removable Partial Denture (Intermediate) – Removable Partial Denture (Intermediate)	1. Course Name
RPD-31	2. Course Code
First Semester / Third Stage Academic Year 2025-2026	3. Semester / Year/stage
2025-2026	4. Date of Preparation of this Description
registration attendance Compulsory	5. Available Attendance Modes
90 Total hours (30 Theoretical + 60 practical) / 4 credits	6. Number of Study Hours / Credits
Name: Asst. Lecturer Zainab Diaa Fawzi Email: Ecc0059@mtu.edu.iq	7. Course Coordinator
General Objective: Familiarize the student with the materials used in fabricating removable metal partial dentures and how to handle them. Specific Objective: Enable students in the Dental Technology Department to fabricate removable metal partial dentures.	8. Course Objectives
Theoretical explanation supported by illustrative aids – direct practical application of the laboratory steps for fabrication denture metal – assessment periodic accurate for each stage work	9. Teaching and Learning Strategies

10. Course Structure

Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours 2 Theoretical / 4 practical	Week
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Classification and ideal component of the chrome-cobalt removable partial denture Practical: Drawing design of cast and Surveying	Identifies classification and components Partial Denture metal and plans cast	6	1

10. Course Structure					
Daily exam	Lecture and Laboratory application	Theoretical: Maxillary major connector Practical: Block out, relief and ledge in the master cast	Studies connector major maxillary and applies block-out and relief	6	2
Student performance assessment	Lecture and Laboratory application	Theoretical: Mandibular major connector Practical: Duplication and Harding refractory	Studies connector major mandibular and duplicates cast	6	3
Daily exam and practical	Lecture and Laboratory application	Theoretical: Minor connector Practical: Waxing pattern of the maxillary cast	Studies connector minor and begins by waxing cast maxillary	6	4
Student performance assessment	Lecture and Laboratory application	Theoretical: Direct retainer Practical: Waxing pattern of the mandibular cast	Studies retainer direct and waxes cast mandibular	6	5
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Indirect retainer Practical: Finishing line of Waxing pattern procedure	Studies retainer non direct and finishes line waxing	6	6
Daily exam	Lecture and Laboratory application	Theoretical: Rest and rest seat Practical: Spruing	Studies rest and seat rest and applies system casting	6	7
Daily exam Mid-term	Lecture and Laboratory application	Theoretical: Denture base Practical: Investing	Studies base denture and applies steps investing investing	6	8

10. Course Structure					
Student performance assessment	Lecture and Laboratory application	Theoretical: Establishment of occlusal relationship and Support for the distal extension denture base Practical: Burn out and Casting	Studies relationship occlusion and support and applies burnout and casting	6	9
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Duplicating of the master cast (Refractory cast) Practical: Finishing and polishing	duplicates cast basic and finishes and polishes framework metal	6	10
Daily exam and practical	Lecture and Laboratory application	Theoretical: Wax pattern Practical: Mounting	Studies wax specific by modeling and mounts casts	6	11
Student performance assessment	Lecture and Laboratory application	Theoretical: Spruing and investing Practical: Arrangement of artificial teeth	Studies system channels casting and investing and describes teeth	6	12
Daily exam	Lecture and Laboratory application	Theoretical: Burnout and Casting Practical: Flasking	Studies procedure burnout wax and casting and applies extrusion	6	13
Student performance assessment	Lecture and Laboratory application	Theoretical: Finishing and polishing Practical: Packing and curing	Studies steps finishing and polishing and processes denture	6	14
Assessment preparation	Lecture and Laboratory application	Theoretical: Selection and	Studies selection and arrangement teeth and	6	15

10. Course Structure					
for the final exam		arrangement of the artificial teeth Practical: Finishing and polishing	finishes denture final		

11. Course Assessment	
Distribution Details	
20 points (for theoretical midterm and daily exams)	
15 points (for laboratory assessment and practical exams)	
5 points (for attendance, participation, and activity)	
60 points (distributed between the theoretical and practical components)	

12. sources education and teaching	
Details	**type source**
McCracken's Removable Partial Prosthodontics, 13e-Mosby (2016).	Required Textbooks (Prescribed Curriculum, if any)
Stewart's Clinical REMOVABLE PARTIAL PROSTHODONTICS, Fourth Edition (2008).	Main References (Sources)
Removable Orthodontic Appliances (Isaacson, 2002) – Removable Prosthodontic Techniques (Dental Laboratory Technology Manuals), by John B Sowter.	Recommended Supporting Books and References
Review of Removable Partial Dentures – Jaypee Brothers; 1st edition (2005)	Electronic References and Websites

Complete Denture (Intermediate) – Complete Denture (Intermediate)	**1. Course Name**
CD-31	**2. Course Code**
First Semester / Third Stage Academic Year 2025-2026	**3. Semester / Year/stage**
2025-2026	**4. Date of Preparation of this Description**
registration attendance Compulsory	**5. Available Attendance Modes**
90 Total hours (30 Theoretical + 60 practical) / 4 credits	**6. Number of Study Hours / Credits**
Name: Asst. Lecturer Zainab Diaa Fawzi Email: Ecc0059@mtu.edu.iq	**7. Course Coordinator**
General Objective: Familiarize the student with the materials used in fabricating complete dentures and how to handle them. Specific Objective: Enable students in the Dental Technology Department to fabricate complete dentures.	**8. Course Objectives**
Theoretical explanation supported by illustrative aids – direct practical application of the laboratory steps – assessment periodic accurate for each stage work	**9. Teaching and Learning Strategies**

10. Course Structure

Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours 2 Theoretical / 4 practical	Week
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Retention, stability and support Practical: Wax contouring and gingival carving of the complete denture in Cl .I	Identifies components retention and stability and support for the denture	6	1

10. Course Structure					
Daily exam	Lecture and Laboratory application	Theoretical: Orientation of occlusal plane And Mandibular movements Practical: Flasking and Packing procedure for complete denture in Cl .I	Identifies level occlusion and movements jaw mandibular	6	2
Student performance assessment	Lecture and Laboratory application	Theoretical: Eccentric occlusion and Lingulized occlusion Practical: Finishing and Polishing procedure for complete denture in Cl .I	Distinguishes occlusion eccentric and occlusion lingual	6	3
Daily exam and practical	Lecture and Laboratory application	Theoretical: Arrangement of maxillary and mandibular teeth in Cl. II &Cl. III Practical: Molding study casts, special tray, master casts & record base Cl. II of complete denture	Describes arrangement teeth in cases Class Second and third	6	4
Student performance assessment	Lecture and Laboratory application	Theoretical: Neutral zone Practical: Bite rim and mounting Cl. II of complete denture	Identifies zone neutral for the denture complete and applies it	6	5
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Selective grinding Practical: Arrangement of	Applies procedures grinding selective and	6	6

10. Course Structure					
		anterior teeth in Cl. II	arrangement teeth		
Daily exam	Lecture and Laboratory application	Theoretical: Repair of complete denture Practical: Arrangement of anterior teeth in Cl. II(assessment)	Identifies methods repair Complete Denture and assesses teeth	6	7
Daily exam Mid-term	Lecture and Laboratory application	Theoretical: Relining of complete denture Practical: Arrangement of posterior teeth in Cl. II	Applies procedures relining for the denture complete	6	8
Student performance assessment	Lecture and Laboratory application	Theoretical: Rebasing of complete denture Practical: Arrangement of posterior teeth in Cl. II (assessment)	Applies procedures replacement base denture and assesses teeth	6	9
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Types of complete denture Practical: Molding study casts, special tray, master casts & record base Cl. III of complete denture	Distinguishes types dentures complete different	6	10
Daily exam and practical	Lecture and Laboratory application	Theoretical: Immediate complete Denture Practical: Arrangement of anterior teeth in Cl. III	Studies Complete Denture immediate and arranges anterior teeth	6	11

10. Course Structure					
Student performance assessment	Lecture and Laboratory application	Theoretical: Overdenture Practical: Arrangement of anterior teeth in Cl. III(assessment)	Studies denture overdenture and assesses arrangement anterior teeth	6	12
Daily exam	Lecture and Laboratory application	Theoretical: Single complete denture opposing natural or artificial teeth Practical: Arrangement of posterior teeth in Cl. III	designs Complete Denture single opposite teeth natural or artificial	6	13
Student performance assessment	Lecture and Laboratory application	Theoretical: Duplication of complete denture Practical: Arrangement of posterior teeth in Cl. III (assessment)	Applies procedure duplication Complete Denture and assesses posterior teeth	6	14
Assessment preparation for the final exam	Lecture and Laboratory application	Theoretical: Construction of complete denture by new technical method (CAD CAM Technology) Practical: Repair procedure of complete denture (maxillary & mandibular C.D)	Identifies fabrication denture using technologies CAD CAM and applies repair	6	15

11. Course Assessment	
Distribution Details	
20 points (for theoretical midterm and daily exams)	
15 points (for laboratory assessment and practical exams)	

11. Course Assessment	
5 points (for attendance, participation, and activity)	
60 points (distributed between the theoretical and practical components)	

12. sources education and teaching	
Details	**type source**
Textbook of Complete Dentures, 6th Edition 6th updated Edition Arthur O. Rahn, John R. Ivanhoe ,Kevin D. Plummer .2009	Required Textbooks (Prescribed Curriculum, if any)
Textbook of Complete Denture Prosthodontics, Sarandha DL. 2002 theoretical / 5 practical	Main References (Sources)
Complete Denture Prosthodontics: Treatment and Problem Solving 1st ed. 2018 Edition Yasemin K. Ozkan .	Recommended Supporting Books and References
Textbook of Prosthodontics, Deepak Nallaswamy Veeraiyan.2003	Electronic References and Websites

	information course basic
Bridges (Basic) – Bridges (Basics)	**1. Course Name**
BR-21	**2. Course Code**
First Semester / Third Stage Academic Year 2025-2026	**3. Semester / Year/stage**
2025-2026	**4. Date of Preparation of this Description**
registration attendance Compulsory	**5. Available Attendance Modes**
90 Total hours (30 Theoretical + 60 practical) / 4 credits	**6. Number of Study Hours / Credits**
Name: Asst. Lecturer Sarah Kadhim Raouf Sarah.mouala@uoturath.edu.iq Email:	**7. Course Coordinator**
General Objective: Familiarize the student with the materials used in fabricating crowns and bridges and how to handle them. Specific Objective: Enable students in the Dental Technology Department to fabricate fixed crowns and bridges.	**8. Course Objectives**
Theoretical explanation supported by illustrative aids – direct practical application of the laboratory steps – assessment periodic accurate for each stage work	**9. Teaching and Learning Strategies**

10. Course Structure

Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours 2 Theoretical / 4 practical	Week
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Fixed partial dentures design, types & indications Practical: Impression procedures	Identifies design and types Bridges fixed	6	1

10. Course Structure					
Daily exam	Lecture and Laboratory application	Theoretical: Pontic design Practical: Developing working casts	designs pontic (Pontic) for bridges	6	2
Student performance assessment	Lecture and Laboratory application	Theoretical: Connectors for a fixed partial denture Practical: Developing working casts	Identifies connectors in Bridges fixed	6	3
Daily exam and practical	Lecture and Laboratory application	Theoretical: A framework design for metal ceramic restoration Practical: Sawing procedures	designs framework metal for restorations ceramic	6	4
Student performance assessment	Lecture and Laboratory application	Theoretical: Methods and procedure of waxing framework (coping) Practical: Preparation of dies	Applies methods and procedures waxing framework	6	5
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Sprunig Practical: Mounting procedures	Applies system channels casting	6	6
Daily exam	Lecture and Laboratory application	Theoretical: Investing Practical: Wax pattern for the maxillary bridge (copy)	Applies investing investing	6	7

10. Course Structure					
Daily exam Mid-term	Lecture and Laboratory application	Theoretical: Alloys and metal selection for metal ceramic restoration Practical: Wax pattern for the maxillary bridge (copy)	selects alloys metal for restorations	6	8
Student performance assessment	Lecture and Laboratory application	Theoretical: Burn out Practical: Wax pattern for the maxillary bridge (copy)	conducts procedure burnout wax	6	9
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Casting ring and liner, Practical: Wax pattern for the maxillary bridge (copy)	Identifies ring casting and liner	6	10
Daily exam and practical	Lecture and Laboratory application	Theoretical: Types of ceramic, classifications, indications Practical: Spruing procedures: direct sprue	Classifies types ceramic and indications its use	6	11
Student performance assessment	Lecture and Laboratory application	Theoretical: Preparation of metal copy for metal ceramic restoration (anterior) Practical: Indirect sprue	prepares framework metal for teeth anterior	6	12
Daily exam	Lecture and Laboratory application	Theoretical: Preparation of metal copy for	prepares framework	6	13

10. Course Structure					
		metal ceramic restoration (posterior) Practical: Investing procedures	metal for teeth posterior		
Student performance assessment	Lecture and Laboratory application	Theoretical: Provisional restoration: introduction, types Practical: Wax elimination (burnout)	Identifies restorations provisional and its types	6	14
Assessment preparation for the final exam	Lecture and Laboratory application	Theoretical: Provisional restoration: materials and techniques Practical: Casting procedures	Applies materials and techniques restorations provisional	6	15

11. Course Assessment	
Distribution Details	
20 points (for theoretical midterm and daily exams)	
15 points (for laboratory assessment and practical exams)	
5 points (for attendance, participation, and activity)	
60 points (distributed between the theoretical and practical components)	

12. sources education and teaching	
Details	**type source**
Contemporary fixed prosthodontics	Required Textbooks (Prescribed Curriculum, if any)
Fundamentals of fixed prosthodontics	Main References (Sources)

12. sources education and teaching	
Glossary of prosthodontic terms	Recommended Supporting Books and References
educational videos academic and articles updated for steps work laboratory in Bridges fixed	Electronic References and Websites

	information course basic
Orthodontics (Basic) – Orthodontics (Basics)	1. Course Name
ORT-31	2. Course Code
First Semester / Third Stage Academic Year 2025-2026	3. Semester / Year/stage
2025-2026	4. Date of Preparation of this Description
registration attendance Compulsory	5. Available Attendance Modes
90 Total hours (30 Theoretical + 60 practical) / 4 credits	6. Number of Study Hours / Credits
Name: Elaf Jamal Harb Email: elaf.jamal.harb@uoturath.edu.iq	7. Course Coordinator
General Objective: Familiarize the student with the materials used in fabricating orthodontic appliances and how to handle them. Specific Objective: Enable students in the Dental Technology Department to fabricate orthodontic appliances.	8. Course Objectives
Theoretical explanation supported by illustrative aids – direct practical application of the laboratory steps and bending wires – assessment periodic accurate for each stage work	9. Teaching and Learning Strategies

10. Course Structure

Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours 2 Theoretical / 4 practical	Week
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Introduction to orthodontics. Practical: Impression procedures for orthodontic cast	Identifies Introduction in Orthodontics	6	1

10. Course Structure					
Daily exam	Lecture and Laboratory application	Theoretical: Malocclusion classification in orthodontics. Practical: Wire bending of circles, triangles, and rectangles	Studies classifications malocclusion/poor occlusion and trains/practices on bending wires	6	2
Student performance assessment	Lecture and Laboratory application	Theoretical: Six keys to normal occlusion. Practical: Adams clasp construction	Identifies keys occlusion natural and fabricates clasp Adams	6	3
Daily exam and practical	Lecture and Laboratory application	Theoretical: Orthodontic wires & its properties. Practical: Construction	Studies wires orthodontics and its properties and continues in construction	6	4
Student performance assessment	Lecture and Laboratory application	Theoretical: Adams clasp and its modifications. Practical: Evaluation	Studies clasp Adams and its modifications and assesses work	6	5
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Hawley labial arch. Practical: Hawley labial arch construction	Studies arch oral and performs by fabricating it	6	6
Daily exam	Lecture and Laboratory application	Theoretical: Robert retractor.	Studies retractor Robert and continues in construction	6	7

10. Course Structure					
		Practical: Construction			
Daily exam Mid-term	Lecture and Laboratory application	Theoretical: Buccal canine retractor and modification. Practical: Evaluation	Studies retractor canine buccal and assesses work previous	6	8
Student performance assessment	Lecture and Laboratory application	Theoretical: Fitted labial arch. Practical: Robert retractor construction	Studies arch oral retainer and fabricates retractor Robert	6	9
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Finger spring. Practical: Construction	Studies spring finger and continues in construction	6	10
Daily exam and practical	Lecture and Laboratory application	Theoretical: Modified finger spring. Practical: Evaluation	Studies spring finger modified and assesses work	6	11
Student performance assessment	Lecture and Laboratory application	Theoretical: Z-Spring Practical: Buccal canine retractor construction	Studies spring Z and fabricates retractor canine buccal	6	12
Daily exam	Lecture and Laboratory application	Theoretical: Recurved Z-spring. Practical: Construction and Evaluation	Studies spring Z curved and builds and assesses work	6	13

10. Course Structure					
Student performance assessment	Lecture and Laboratory application	Theoretical: Soldering & welding. Practical: Modified Buccal canine retractor construction	Studies soldering of both types and fabricates retractor canine modified	6	14
Assessment preparation for the final exam	Lecture and Laboratory application	Theoretical: Components of removable orthodontic appliance. Practical: Construction and Evaluation	Identifies components device orthodontics removable and assesses work	6	15

11. Course Assessment	
Distribution Details	
20 points (for theoretical midterm and daily exams)	
15 points (for laboratory assessment and practical exams)	
5 points (for attendance, participation, and activity)	
60 points (distributed between the theoretical and practical components)	

	12. sources education and teaching
Details	**type source**
Contemporary orthodontic	Required Textbooks (Prescribed Curriculum, if any)
Introduction to orthodontic.	Main References (Sources)
Textbook of orthodontic.	Recommended Supporting Books and References

	12. sources education and teaching
American association of orthodontists	Electronic References and Websites

information course basic	
diseases oral – Oral Pathology	1. Course Name
OP-31	2. Course Code
First Semester / Third Stage Academic Year 2025-2026	3. Semester / Year/stage
2025-2026	4. Date of Preparation of this Description
registration attendance Compulsory	5. Available Attendance Modes
45 Total hours (15 Theoretical + 30 practical) / 2 credits	6. Number of Study Hours / Credits
Name: Dr. Tariq Mahdi Saleh Email: tarekmsaleh@uoturath.edu.iq	7. Course Coordinator
General Objective: Familiarize the student with oral and dental diseases and how to prepare and examine slides using a microscope. Specific Objective: Enable the student to identify oral and dental diseases and diagnose them in the laboratory using a microscope.	8. Course Objectives
Theoretical explanation supported by illustrative aids – direct practical application for examination slides (Slides) under microscope – assessment periodic accurate	9. Teaching and Learning Strategies

10. Course Structure

Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours (1) Theoretical (2) practical	Week
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Introduction for Oral pathology	Identifies Introduction Oral Diseases	3	1

10. Course Structure					
		Practical: Slide preparation	and prepares slides		
Daily exam	Lecture and Laboratory application	Theoretical: Microscopy and slide preparation Practical: Slides of Biopsy	Studies technologies examination microscopic and examines biopsy	3	2
Student performance assessment	Lecture and Laboratory application	Theoretical: Biopsy, definition, types, technique Practical: Slides Dental caries	Identifies biopsy and its types and its techniques	3	3
Daily exam and practical	Lecture and Laboratory application	Theoretical: Dental caries, definition, classification, clinical feature, radiological Practical: Slides of Acute periapical periodontitis	Studies caries teeth and its features clinical	3	4
Student performance assessment	Lecture and Laboratory application	Theoretical: Pulp disease, pulpitis Practical: Slides of chronic periapical periodontitis	Identifies diseases pulp and its inflammations	3	5
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Periapical pathology & changes (Acute Periapical periodontitis)	Studies diseases what about apex acute	3	6

10. Course Structure					
		Practical: Slides of Periapical pathology & changes(dental granuloma)			
Daily exam	Lecture and Laboratory application	Theoretical: Periapical pathology & changes (chronic Periapical periodontitis) Practical: Slides of Cyst of the Jaw	Studies diseases what about apex chronic	3	7
Daily exam Mid-term	Lecture and Laboratory application	Theoretical: Cyst of the Jaw Practical: Slides of White lesions	Identifies cysts jaw and its types	3	8
Student performance assessment	Lecture and Laboratory application	Theoretical: White lesions. Practical: Slides of Ulceration oral lesions	Studies lesions white in oral	3	9
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Ulceration oral lesions Practical: Slides of developmental disturbance of oral mucosa	Identifies lesions ulcerative oral	3	10
Daily exam and practical	Lecture and Laboratory application	Theoretical: Developmental disturbance of oral mucosa Practical: Slides of developmental	Studies disorders developmental of the membrane mucosal	3	11

10. Course Structure					
		disturbance of tongue			
Student performance assessment	Lecture and Laboratory application	Theoretical: Developmental disturbance of the tongue Practical: Slides of developmental disturbance of teeth	Studies disorders developmental of the tongue	3	12
Daily exam	Lecture and Laboratory application	Theoretical: Developmental disturbance of teeth Practical: Slides of Bone disease	Studies disorders developmental for teeth	3	13
Student performance assessment	Lecture and Laboratory application	Theoretical: Bone disease Practical: Slides of Salivary gland disease	Identifies diseases bones oral	3	14
Assessment preparation for the final exam	Lecture and Laboratory application	Theoretical: Salivary gland disease Practical: Review and examination of oral pathology slides	Studies diseases glands salivary and reviews slides	3	15

11. Course Assessment	
Distribution Details	
20 points (for theoretical midterm and daily exams)	
15 points (for laboratory assessment and practical exams)	

11. Course Assessment	
5 points (for attendance, participation, and activity)	
60 points (distributed between the theoretical and practical components)	

12. sources education and teaching	
Details	**type source**
Oral pathology: Clinical pathologic correlations, 5th ed – 24/04/13 Doi : 10.1016/j.jaad.2018.02.029	Required Textbooks (Prescribed Curriculum, if any)
Oral Pathology: Clinical Pathologic Correlations Joseph A. Regezi ,James Sciubba ,Richard C. K. Jordan. St louis2012 theoretical / 5 practical	Main References (Sources)
Walter H.C. Burgdorf, MD Munich, Germany	Recommended Supporting Books and References
Multiple mucosal lesions. Erythema migrans. Brooks JK, Nikitakis NG.Gen Dent. 2020Mar-Apr;55(2):160, 163.PMID: 12 theoretical / 5 practical333992	Electronic References and Websites

information course basic	
Bridges (Advanced) – Bridges (Advanced)	**1. Course Name**
BA-22	**2. Course Code**
Second Semester / Third Stage Academic Year 2025-2026	**3. Semester / Year/stage**
2025-2026	**4. Date of Preparation of this Description**
registration attendance Compulsory	**5. Available Attendance Modes**
105 Total hours (30 Theoretical + 75 practical (2 theoretical / 5 practical) / 4 credits	**6. Number of Study Hours / Credits**
Name: Lecturer Sarah Kadhim Raouf Sarah.mouala@uoturath.edu.iq Email:	**7. Course Coordinator**
General Objective: Familiarize the student with the materials used in fabricating crowns and bridges and how to handle them. Specific Objective: Enable students in the Dental Technology Department to fabricate fixed crowns and bridges.	**8. Course Objectives**
Theoretical explanation supported by illustrative aids – direct practical application of the laboratory steps advanced – assessment periodic accurate for each stage work	**9. Teaching and Learning Strategies**

10. Course Structure

Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours	Week
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Laboratory failure of the bridge Practical: Impression procedures	Identifies failure laboratory for bridges and procedures impression	2 theoretical / 5 practical	1
Daily exam	Lecture and Laboratory application	Theoretical: Soldering	Studies soldering (Soldering) and develops casts work	2 theoretical / 5 practical	2

10. Course Structure					
		Practical: Developing working casts			
Student performance assessment	Lecture and Laboratory application	Theoretical: Welding Practical: Developing working casts	Studies soldering (Welding) and continues by developing casts	2 theoretical / 5 practical	3
Daily exam and practical	Lecture and Laboratory application	Theoretical: Step-by-step procedure of porcelain build-up (1) Practical: Sawing procedures	Applies steps construction porcelain (1) and procedures sawing	2 theoretical / 5 practical	4
Student performance assessment	Lecture and Laboratory application	Theoretical: Step-by-step procedure of porcelain build-up (2) Practical: Preparation of dies	Applies steps construction porcelain (2) and prepares casts specific	2 theoretical / 5 practical	5
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Step-by-step procedure of porcelain build-up (3) Practical: Mounting procedures	Applies steps construction porcelain (3) and mounts casts	2 theoretical / 5 practical	6
Daily exam	Lecture and Laboratory application	Theoretical: All ceramic restoration: types Practical: Wax pattern for the mandibular bridge (copy)	Identifies restorations ceramic and waxes bridge mandibular	2 theoretical / 5 practical	7

10. Course Structure					
Daily exam Mid-term	Lecture and Laboratory application	Theoretical: All ceramic restoration techniques – Practical: Wax pattern for the mandibular bridge (copy)	Studies technologies restoration ceramic and continues for waxing	2 theoretical / 5 practical	8
Student performance assessment	Lecture and Laboratory application	Theoretical: Retainer for a removable partial denture: types and indications Practical: Wax pattern for the mandibular bridge (copy)	Studies retainers Partial Denture and continues for waxing	2 theoretical / 5 practical	9
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Retainer for a removable partial denture: technique Practical: Wax pattern for the mandibular bridge (copy)	Studies technology retainers Partial Denture and finishes waxing	2 theoretical / 5 practical	10
Daily exam and practical	Lecture and Laboratory application	Theoretical: Resin bonded bridge: types Practical: Spruing procedures: direct sprue	Identifies Bridges resin and applies system casting direct	2 theoretical / 5 practical	11
Student performance assessment	Lecture and Laboratory application	Theoretical: Resin bonded bridge: procedure of fabrication Practical: Indirect sprue	Applies fabrication Bridges resin and system casting non direct	2 theoretical / 5 practical	12

10. Course Structure					
Daily exam	Lecture and Laboratory application	Theoretical: Implant-supported fixed prosthesis: types Practical: Investing procedures	Identifies prostheses supported with implants and applies investing	2 theoretical / 5 practical	13
Student performance assessment	Lecture and Laboratory application	Theoretical: Implant-supported fixed prosthesis: procedure Practical: Wax elimination (burnout)	Studies procedures prostheses supported with implants and burns out wax	2 theoretical / 5 practical	14
Assessment preparation for the final exam	Lecture and Laboratory application	Theoretical: Clinical Failure in bridge Practical: Casting procedures	Analyzes failure clinical for bridges and applies procedures casting	2 theoretical / 5 practical	15

11. Course Assessment	
Distribution Details	
20 points (for theoretical midterm and daily exams)	
15 points (for laboratory assessment and practical exams)	
5 points (for attendance, participation, and activity)	
60 points (distributed between the theoretical and practical components)	

12. sources education and teaching	
Details	**type source**
Contemporary fixed prosthodontics	Required Textbooks (Prescribed Curriculum, if any)

12. sources education and teaching	
Fundamentals of fixed prosthodontics	Main References (Sources)
Glossary of prosthodontic terms	Recommended Supporting Books and References
educational videos academic and articles updated for steps work laboratory for bridges advanced	Electronic References and Websites

information course basic	
Maxillofacial Prosthetics (Basic) – Maxillofacial prosthesis (Basic)	**1. Course Name**
MP-22	**2. Course Code**
Second Semester / Third Stage Academic Year 2025-2026	**3. Semester / Year/stage**
2025-2026	**4. Date of Preparation of this Description**
registration attendance Compulsory	**5. Available Attendance Modes**
105 Total hours (30 Theoretical + 75 practical (2 theoretical / 5 practical) / 4 credits	**6. Number of Study Hours / Credits**
Name: Asst. Lecturer Afyaa Lateef Jasim Email: Afeiaalateef@uoturath.edu.iq	**7. Course Coordinator**
General Objective: Familiarize the student with the contents and laboratory supplies of maxillofacial prosthetics, in addition to the materials used and the fabrication of some prosthetic devices for the face and jaws. Specific Objective: Prepare the student for the next stage by providing theoretical and practical information that enables them to work in maxillofacial prosthetics laboratories, particularly in fabricating cleft lip, uvula, and palate prostheses.	**8. Course Objectives**
Theoretical explanation supported by illustrative aids – direct practical application of the laboratory steps for fabrication devices prosthetic – assessment periodic accurate for each stage work	**9. Teaching and Learning Strategies**

10. Course Structure

Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours	Week
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Terminology and treatment of Maxillofacial prosthesis.	Identifies terms and treatments prostheses face and prepares impression	2 theoretical / 5 practical	1

10. Course Structure					
		Practical: Feeding plate (impression and special tray technique)			
Daily exam	Lecture and Laboratory application	Theoretical: Landmarks of Facial structure. Practical: Feeding plate construction (waxing of feeding plate)	Identifies anatomical landmarks for the face and waxes plate nutrition	2 theoretical /5 practical	2
Student performance assessment	Lecture and Laboratory application	Theoretical: Materials used for maxillofacial prosthesis Practical: Feeding plate construction (auto polymerization)	Identifies Materials used and fabricates plate nutrition	2 theoretical /5 practical	3
Daily exam and practical	Lecture and Laboratory application	Theoretical: Anatomy of Normal palate. Practical: Finishing and polishing of feeding plate	Studies anatomy palate natural and finishes plate nutrition	2 theoretical /5 practical	4
Student performance assessment	Lecture and Laboratory application	Theoretical: Anatomy of Cleft lip and palate Practical: Maxillary obturator construction	Studies anatomy cleft lip and palate and begins in fabrication plug	2 theoretical /5 practical	5
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Treatment of Cleft lip and palate	Studies methods treatment cleft lip and palate and waxes plug	2 theoretical /5 practical	6

10. Course Structure					
		Practical: Maxillary obturator (wax pattern)			
Daily exam	Lecture and Laboratory application	Theoretical: Problem and causes of cleft lip and palate Practical: Maxillary obturator (clasp placement and teeth setting)	Analyzes problems and causes cleft lip and places clasps and teeth	2 theoretical /5 practical	7
Daily exam Mid-term	Lecture and Laboratory application	Theoretical: Maxillary obturator Practical: Palatal lift prosthesis construction	Studies plug jaw maxillary and begins in fabrication device lifting palate	2 theoretical /5 practical	8
Student performance assessment	Lecture and Laboratory application	Theoretical: Anatomy of Eye Practical: Palatal lift prosthesis (wax pattern preparation)	Studies anatomy eye and prepares wax for the device lifting palate	2 theoretical /5 practical	9
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Ocular prosthesis Practical: Palatal lift prosthesis (clasp placement and teeth setting)	Studies prostheses ocular and places clasps and teeth	2 theoretical /5 practical	10
Daily exam and practical	Lecture and Laboratory application	Theoretical: Anatomy of the ear Practical: Palatal lift prosthesis (flasking and wax elimination)	Studies anatomy ear and applies investing and removal wax	2 theoretical /5 practical	11

10. Course Structure					
Student performance assessment	Lecture and Laboratory application	Theoretical: Auricular prosthesis and meatus opening devices Practical: Palatal lift prosthesis (packing and curing)	Studies prostheses ear and processes device lifting palate	2 theoretical /5 practical	12
Daily exam	Lecture and Laboratory application	Theoretical: Anatomy of the nose. Practical: Palatal lift prosthesis (finishing and polishing)	Studies anatomy nose and finishes device lifting palate	2 theoretical /5 practical	13
Student performance assessment	Lecture and Laboratory application	Theoretical: Nasal prosthesis, and meatus opening devices Practical: Auricular prosthesis construction	Studies prostheses nose and fabricates prostheses ear	2 theoretical /5 practical	14
Assessment preparation for the final exam	Lecture and Laboratory application	Theoretical: Retention for maxillofacial prosthesis Practical: Meatus opining device	Identifies means retention and fabricates device opening meatus	2 theoretical /5 practical	15

11. Course Assessment	
Distribution Details	
20 points (for theoretical midterm and daily exams)	
15 points (for laboratory assessment and practical exams)	

11. Course Assessment	
5 points (for attendance, participation, and activity)	
60 points (distributed between the theoretical and practical components)	

12. sources education and teaching	
Details	**type source**
Clinical maxillofacial prosthetics (book) – Maxillofacial rehabilitation (book)	Required Textbooks (Prescribed Curriculum, if any)
Maxillofacial prosthetics (book) – Maxillofacial prosthetics; principles and concepts (book)	Main References (Sources)
Maxillofacial Prosthetics: Principles and Concepts Arthur O. Rahn, Louis J. Boucher Saunders, 192 theoretical / 5 practical0	Recommended Supporting Books and References
Maxillofacial prosthesis Maxillofacial Prosthesis' Author: Grafiati Published:4 June 2021 Last updated:2 theoretical / 5 practical February 2022 - The Early Development of Maxillofacial Prosthetics-November 2023 Acta Scientific Dental Sciences Chandrasekharan Nair Vishwanath Gurumurthy Pradeep Dathan	Electronic References and Websites

information course basic	
Orthodontics (Intermediate) – Orthodontics (Basics)	**1. Course Name**
ORT-32	**2. Course Code**
Second Semester / Third Stage Academic Year 2025-2026	**3. Semester / Year/stage**
2025-2026	**4. Date of Preparation of this Description**
registration attendance Compulsory	**5. Available Attendance Modes**
105 Total hours (30 Theoretical + 75 practical (2 theoretical / 5 practical) / 4 credits	**6. Number of Study Hours / Credits**
Name: Elaf Jamal Harb Email: elaf.jamal.harb@uoturath.edu.iq	**7. Course Coordinator**
General Objective: Familiarize the student with the materials used in fabricating orthodontic appliances and how to handle them. Specific Objective: Enable students in the Dental Technology Department to fabricate orthodontic appliances.	**8. Course Objectives**
Theoretical explanation supported by illustrative aids – direct practical application of the laboratory steps and fabrication devices – assessment periodic accurate for each stage work	**9. Teaching and Learning Strategies**

10. Course Structure

Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours	Week
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Bite plane Practical: Fitted labial arch construction	Identifies level bite and fabricates arch oral	2 theoretical / 5 practical	1
Daily exam	Lecture and Laboratory application	Theoretical: Myofunctional appliance/ Anderson	Studies device Anderson and its modifications and assesses work	2 theoretical / 5 practical	2

10. Course Structure					
		appliance & its modifications Practical: Evaluation			
Student performance assessment	Lecture and Laboratory application	Theoretical: Myofunctional appliance/ Frankel appliance & its types Practical: Finger spring construction	Studies device Frankel and its types and fabricates spring	2 theoretical / 5 practical	3
Daily exam and practical	Lecture and Laboratory application	Theoretical: Clear aligners Practical: Evaluation	Identifies orthodontics clear and assesses work	2 theoretical / 5 practical	4
Student performance assessment	Lecture and Laboratory application	Theoretical: Anchorage Practical: Guarded Finger Spring construction	Studies retention in orthodontics and fabricates spring protected	2 theoretical / 5 practical	5
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Cross bite in orthodontics Practical: Evaluation	Studies bite reverse and assesses work	2 theoretical / 5 practical	6
Daily exam	Lecture and Laboratory application	Theoretical: Deep bite in orthodontics Practical: Z-Spring construction	Studies bite deep and fabricates spring Z	2 theoretical / 5 practical	7
Daily exam Mid-term	Lecture and Laboratory application	Theoretical: Open bite in orthodontics	Studies bite open and assesses work	2 theoretical / 5 practical	8

10. Course Structure					
		Practical: Evaluation			
Student performance assessment	Lecture and Laboratory application	Theoretical: Retainers after orthodontics treatments Practical: Recurved Z-spring construction	Identifies retainers orthodontics and fabricates spring Z curved	2 theoretical / 5 practical	9
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Space maintainers Practical: Evaluation	Studies space maintainers space and assesses work	2 theoretical / 5 practical	10
Daily exam and practical	Lecture and Laboratory application	Theoretical: Bad habits Practical: Base plate construction	Studies habits poor and fabricates plate base	2 theoretical / 5 practical	11
Student performance assessment	Lecture and Laboratory application	Theoretical: Habit breaker Practical: Evaluation	Identifies breaker habits and assesses work	2 theoretical / 5 practical	12
Daily exam	Lecture and Laboratory application	Theoretical: Introduction to fixed orthodontic appliance Practical: Removable retainer construction	Identifies orthodontics fixed and fabricates retainer removable	2 theoretical / 5 practical	13
Student performance assessment	Lecture and Laboratory application	Theoretical: Tooth movement & tissue changes	Studies movement teeth and continues in fabrication retainer	2 theoretical / 5 practical	14

10. Course Structure					
		Practical: Removable retainer construction			
Assessment preparation for the final exam	Lecture and Laboratory application	Theoretical: Repair of removable orthodontic appliances Practical: Evaluation	repairs devices orthodontics removable and assesses work final	2 theoretical / 5 practical	15

11. Course Assessment	
Distribution Details	
20 points (for theoretical midterm and daily exams)	
15 points (for laboratory assessment and practical exams)	
5 points (for attendance, participation, and activity)	
60 points (distributed between the theoretical and practical components)	

12. sources education and teaching	
Details	**type source**
Contemporary orthodontic	Required Textbooks (Prescribed Curriculum, if any)
Introduction to orthodontic.	Main References (Sources)
Textbook of orthodontic.	Recommended Supporting Books and References
American association of orthodontists	Electronic References and Websites

information course basic	
Oral Bacteria – Oral Bacteriology	1. Course Name
OB-22	2. Course Code
Second Semester / Third Stage Academic Year 2025-2026	3. Semester / Year/stage
2025-2026	4. Date of Preparation of this Description
registration attendance Compulsory	5. Available Attendance Modes
2 theoretical / 5 practical5 Total hours (30 Theoretical + 45 practical) / 3 credits	6. Number of Study Hours / Credits
Name: Dr. Tariq Mahdi Saleh Email: tarekmsaleh@uoturath.edu.iq	7. Course Coordinator
General Objective: Familiarize the student with the nature and parts of bacteria that cause oral and dental diseases and how to prepare and examine slides using a microscope. Specific Objective: Enable the student to identify the nature and parts of bacteria that cause oral and dental diseases and diagnose them in the laboratory using a microscope.	8. Course Objectives
Theoretical explanation supported by illustrative aids – direct practical application for examination slides (Slides) and cultivation bacteria in Laboratory – assessment periodic accurate for each stage work	9. Teaching and Learning Strategies

10. Course Structure

Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours 2 Theoretical 3 practical	Week
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Introduction for Oral bacteriology Practical: Sterilization and disinfection	Identifies Introduction Oral Bacteria and methods sterilization	5	1

10. Course Structure					
Daily exam	Lecture and Laboratory application	Theoretical: Bacterial classification Practical: Sterilization of laboratory instruments	Studies classification bacteria and sterilizes instruments	5	2
Student performance assessment	Lecture and Laboratory application	Theoretical: The cellular structure of bacteria Practical: Slides of dental plaque	Studies structure cellular of bacteria and examines plaques	5	3
Daily exam and practical	Lecture and Laboratory application	Theoretical: Bacterial growth phases and curve Practical: Types of cultural media	Studies stages and growth curve growth bacteria and types media	5	4
Student performance assessment	Lecture and Laboratory application	Theoretical: Basic requirements of Bacteria Practical: Salivary sample collection	Identifies requirements basic and collects samples saliva	5	5
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Grams stain steps and procedures Practical: Gram stains procedures	Applies steps and procedures stain Gram	5	6
Daily exam	Lecture and Laboratory application	Theoretical: Oral microbiology and oral environments Practical: Slides of streptococcus bacteria	Studies microbiology oral and environment oral	5	7

10. Course Structure					
Daily exam Mid-term	Lecture and Laboratory application	Theoretical: Dental plaque, definition, clinical feature, developments Practical: Slides of Mutans Streptococcus	Studies the plaque dental and its properties clinical	5	8
Student performance assessment	Lecture and Laboratory application	Theoretical: Oral streptococci, types ,morphology ,characteristics ,selective media Practical: Slides of dental caries and gingivitis	Studies cocci streptococcal oral and its properties	5	9
Discussion and practical assessment	Lecture and Laboratory application	Theoretical: Mutans streptococci, types, morphology, characteristics, selective Practical: Slides of periodontal pocket	Studies cocci streptococcal mutans and examines pockets	5	10
Daily exam and practical	Lecture and Laboratory application	Theoretical: The role of Bacteria in dental caries(cariogenic bacteria) Practical: Slide spirochete	Analyzes role bacteria in caries teeth	5	11
Student performance assessment	Lecture and Laboratory application	Theoretical: Gingivitis Practical: Slides of periodontitis and periapical abscess	Studies the inflammation gingiva and abscess what about apex	5	12
Daily exam	Lecture and Laboratory application	Theoretical: The role of bacteria in	Analyzes role bacteria in diseases	5	13

10. Course Structure					
		periodontal disease (periodontitis) Practical: bacteria on blood agar α-hemolytic, β-hemolytic and gamma-hemolytic	periodontal tooth and cultures them		
Student performance assessment	Lecture and Laboratory application	Theoretical: periodontal abscess Practical: Slide of dental plaque bacteria	Studies abscess periodontal tooth and examines plaques	5	14
Assessment preparation for the final exam	Lecture and Laboratory application	Theoretical: Periodontal pockets Practical: Review and examination of oral bacteriology	Studies pockets periodontal tooth and reviews slides	5	15

11. Course Assessment	
Distribution Details	
20 points (for theoretical midterm and daily exams)	
15 points (for laboratory assessment and practical exams)	
5 points (for attendance, participation, and activity)	
60 points (distributed between the theoretical and practical components)	

12. sources education and teaching	
Details	**type source**
Dental Caries the Disease and Its Clinical Management edited by Drs. Sandra Guzmán-Armstrong. . . The second edition of Dental Caries Dental caries: the	Required Textbooks (Prescribed Curriculum, if any)

12. sources education and teaching	
disease and its clinical management, 2nd edition. May 2009; British dental journal .official journal of the British Dental Association: BDJ	
Oral Microbiology 5th Philip D. Marsh BSc PhD (Author) . Churchill Livingstone; 2019	Main References (Sources)
Clinical Oral Microbiology Book • 2000. Authors: T. Wallace MacFarlane and-3 Lakshman P. Samaranayake. Copyright © Elsevier Ltd. All rights reserved. https://doi.org/10.1016/C2013-0-06485-2 Theoretical / 5 practical	Recommended Supporting Books and References
platforms academic medical specific with slides digital for microbiology microscopic oral	Electronic References and Websites

information course basic	
Research Methods – Research methods	**1. Course Name**
RM-22	**2. Course Code**
Second Semester / Third Stage Academic Year 2025-2026	**3. Semester / Year/stage**
2025-2026	**4. Date of Preparation of this Description**
registration attendance Compulsory	**5. Available Attendance Modes**
15 Total hours (15 Theoretical + 0 practical) / 1 credits	**6. Number of Study Hours / Credits**
Name: Prof. Balqees Mohammed Diaa Hussein - Email: Balqees.mohamed@uoturath.edu.iq	**7. Course Coordinator**
General Objective: teaching the student fundamentals scientific research	**8. Course Objectives**
explanation Theoretical – discussions scientific open within classroom – assigning students by writing proposals research mini	**9. Teaching and Learning Strategies**

10. Course Structure

Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours	Week
participation daily	Lecture and discussion	Theoretical: Principles of research	Identifies principles scientific research	1	1
Daily exam	Lecture and discussion	Theoretical: Scientific research methods and Ethics	Studies methods scientific research and its ethics	1	2
Student performance assessment	Lecture and discussion	Theoretical: Designing the research plan	designs plan research in preliminary	1	3
Daily exam	Lecture and discussion	Theoretical: Types of research	Identifies types research different	1	4

10. Course Structure					
participation daily	Lecture and discussion	Theoretical: Classification of research (Fundamental applied and clinical trials)	Classifies research (basic and applied and clinical)	1	5
Student performance assessment	Lecture and discussion	Theoretical: Research proposal writing	trains/practices on writing proposal research	1	6
Daily exam	Lecture and application	Theoretical: Word document	trains/practices on use document Word	1	7
Daily exam Mid-term	Lecture and application	Theoretical: Power point (slide show)	trains/practices on use presentations PowerPoint	1	8
participation daily	Lecture and discussion	Theoretical: Pilot study	Studies study experimental (exploratory)	1	9
Student performance assessment	Lecture and application	Theoretical: Excel worksheet	trains/practices on use spreadsheets Excel	1	10
Daily exam	Lecture and discussion	Theoretical: Data management	Studies how management data	1	11
Student performance assessment	Lecture and discussion	Theoretical: Research elements (Introduction)	Studies components research (introduction)	1	12
participation daily	Lecture and discussion	Theoretical: Research elements (Literature review)	Studies components research (review literature)	1	13
Daily exam	Lecture and discussion	Theoretical: Research elements (materials and methods)	Studies components research (Materials and methods)	1	14
Assessment preparation for the final exam	Lecture and discussion	Theoretical: Research elements (Results, discussion,	Studies components research (results and discussion and	1	15

10. Course Structure

		conclusion and references)	conclusion and references)		

11. Course Assessment

Distribution Details	
35 points (for exams midterm and daily and reports)	
5 points (for attendance, participation, and activity)	
60 points (for the exam written final comprehensive)	

12. sources education and teaching

Details	type source
1) An Introduction to Research Methods for Undergraduate Health Profession Students Copyright © 2023 by Faith Alele and Burmi Malau-Aduli is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License 2) Computing Ethics by Abdelrahman Karrar ISBN: 1536194018 Publication Date: 2021	Required Textbooks (Prescribed Curriculum, if any)
3) Research Ethics for Students in the Social Sciences by Jaap Bos; Friso Hoeneveld (Contribution by); Naomi van Steenbergen (Contribution by); Ruud Abma (Contribution by); Toon van Meijl (Contribution by); Dorota Lepianka (Contribution by) ISBN: 92 theoretical / 5 practical83030484149 Publication Date: 2020	Main References (Sources)
4) Research Ethics and Integrity for Social Scientists by Mark Call Number: H62 .I82 2015 ISBN: 92 theoretical / 5 practical81446202 theoretical / 5 practical499 Publication Date: 2015 5) Ethics and Integrity in Visual Research Methods by Savannah Dodd (Editor) ISBN: 12 theoretical / 5 practical82 theoretical / 5 practical694194 Publication Date: 2020	Recommended Supporting Books and References

	information course basic
Removable Partial Denture (Advanced 1) - Removable Partial Denture (Advanced 1)	1. Course Name
RPD-41	2. Course Code
First Semester / Fourth Stage / Academic Year 2025-2026	3. Semester / Year/stage
2025-2026	4. Date of Preparation of this Description
registration attendance Compulsory	5. Available Attendance Modes
90 Total hours (30 Theoretical + 60 practical) / 4 credits	6. Number of Study Hours / Credits
Name: Asst. Lecturer Zainab Diaa Fawzi - Email: Ecc0059@mtu.edu.iq	7. Course Coordinator
General Objective: Familiarize the student with the materials used in fabricating removable metal partial dentures and how to handle them. Specific Objective: Enable students in the Dental Technology Department to fabricate removable acrylic and metal partial dentures.	8. Course Objectives
• Theoretical explanation supported by illustrative aids. • direct practical application of the laboratory steps within Laboratory. • assessment periodic for each step work laboratory.	9. Teaching and Learning Strategies

10. Course Structure

Assessment Method	Learning Method	Unit or Topic Name (Theoretical + Practical)	Required Learning Outcomes	Hours 2 Theoretical (4) practical	Week
Discussion and practical assessment	Lecture + Laboratory application	Theoretical: Acrylic and metal RPD and Kennedy Classification Practical: Selection of case study (maxillary cast)	Identifies classification Kennedy and types Partial Denture	6	1

10. Course Structure					
Daily exam (Quiz)	Lecture + Laboratory application	Theoretical: Surveying and Articulator Practical: Special tray, and master cast preparation	trains/practices on planning and use articulator	6	2
Student performance assessment	Lecture + Laboratory application	Theoretical: Types of RPD (Part I) Practical: Surveying, and RPD redrawing design on the master cast	Studies types dentures partial (part First)	6	3
Exam theoretical and practical	Lecture + Laboratory application	Theoretical: Types of RPD (Part II) Practical: Undercut block-out and relief	Studies types dentures partial (part Second)	6	4
Student performance assessment	Lecture + Laboratory application	Theoretical: Maxillary and Mandibula Major Connector Practical: Duplication of the master cast	Identifies connector major for the jaws maxillary and mandibular	6	5
Discussion and practical assessment	Lecture + Laboratory application	Theoretical: Minor Connector, Rest, and Rest Seat Practical: Preparation of refractory cast	Studies connector minor and rest and seat rest	6	6
Daily exam (Quiz)	Lecture + Laboratory application	Theoretical: Extracoronal Direct Retainer Practical: Hand-made wax design	Identifies retainer direct outside crown	6	7

10. Course Structure					
Exam Mid-term (Mid-term)	Lecture + Laboratory application	Theoretical: Intracoronal Direct Retainer Practical: Hand-made wax design	Identifies retainer direct within crown	6	8
Student performance assessment	Lecture + Laboratory application	Theoretical: Indirect Retainer Practical: Hand-made wax design	Identifies retainer non direct	6	9
Discussion and practical assessment	Lecture + Laboratory application	Theoretical: Stress Breaker Practical: Spruing	Studies breaker stress in Partial Denture	6	10
Exam theoretical and practical	Lecture + Laboratory application	Theoretical: Denture base consideration and teeth selection for RPD Practical: Investing	Identifies considerations base denture and selection teeth	6	11
Student performance assessment	Lecture + Laboratory application	Theoretical: Support of distal extension denture base Practical: Burn out and Casting	Studies support base denture for the extension distal	6	12
Daily exam (Quiz)	Lecture + Laboratory application	Theoretical: Establishment of occlusal relationship Practical: Burn out and Casting	establishes relationship occlusion correct	6	13
Student performance assessment	Lecture + Laboratory application	Theoretical: A flexible removable partial denture	Identifies Partial Denture flexible	6	14

10. Course Structure					
		Practical: Finishing of metal alloy framework			
Assessment preparation for the final exam	Lecture + Laboratory application	Theoretical: RPD framework using CAD-CAM system Practical: Polishing of metal alloy framework	Identifies use systems (CAD-CAM)	6	15

11. Course Assessment	
Distribution Details	
20 points (for theoretical midterm and daily exams)	
15 points (for laboratory assessment and practical exams)	
5 points (for attendance, participation, and activity)	
60 points (distributed between the theoretical and practical components)	

12. sources education and teaching	
Details	**type source**
1. Carr, A.B. and D.T. Brown, McCracken's removable partial prosthodontics. 2015: Elsevier Health Sciences. 2. 2) Patel, J., R.Y. Jablonski, and T.M. Hodson, Removable partial dentures: Part 1. British Dental Journal, 2024. 232 theoretical / 5 practical(2 theoretical / 5 practical): p. 532 theoretical / 5 practical-542.	Required Textbooks (Prescribed Curriculum, if any)
1. 3) Yu, H., Digital Removable Partial Denture Technology: From Design Analysis to Practical Skills. 2023: Springer Nature. 2. 4) Friel, T. and S. Waia, Removable partial dentures for older adults. Primary dental journal, 2020. 9(3): p. 34-39.	Main References (Sources)

12. sources education and teaching	
1. 5) Field, J. and C. Storey, Removable prosthodontics at a glance. 2020: John Wiley & Sons. 2. 6) Raja, H.Z., et al., Effect of Interactive Teaching Methods on Removable Partial Denture Designing. Journal of the Pakistan Dental Association, 2020. 29(3).	Recommended Supporting Books and References
1. 2 theoretical / 5 practical) Malara, P., L. Dobrzański, and J. Dobrzańska, Computer-aided designing and manufacturing of partial removable dentures. Journal of Achievements in Materials and Manufacturing Engineering, 2015. 2 theoretical / 5 practical3(2): p. 152 theoretical / 5 practical-164.	Electronic References and Websites

information course basic	
Complete Denture (Advanced 1) - Complete Denture (Advanced 1)	1. Course Name
CD-41	2. Course Code
First Semester / Fourth Stage / Academic Year 2025-2026	3. Semester / Year/stage
2025-2026	4. Date of Preparation of this Description
registration attendance Compulsory	5. Available Attendance Modes
90 Total hours (30 Theoretical + 60 practical) / 4 credits	6. Number of Study Hours / Credits
Name: Lecturer Afyaa Lateef Jasim Email: afyaa.lateef@uoturath.edu.iq	7. Course Coordinator
General Objective: Familiarize the student with the materials used in fabricating complete dentures and how to handle them. Specific Objective: Enable students in the Dental Technology Department to fabricate complete dentures.	8. Course Objectives
• Theoretical explanation supported by illustrative aids. • direct practical application of the laboratory steps within Laboratory. • assessment periodic for each step work laboratory.	9. Teaching and Learning Strategies

10. Course Structure

Assessment Method	Learning Method	Unit or Topic Name (Theoretical + Practical)	Required Learning Outcomes	Hours 2 Theoretical (4)practical	Week
Discussion and practical assessment	Lecture + Laboratory application	Theoretical: Anatomical landmarks of maxillary & mandibular edentulous arch of complete denture Practical: Primary cast Cl. I (Maxillary and mandibular	Identifies anatomical landmarks for the jaws maxillary and mandibular	6	1

10. Course Structure					
		edentulous arches)			
Daily exam (Quiz)	Lecture + Laboratory application	Theoretical: Special tray, record base, and occlusal rim: conventional and readymade Practical: Special tray (maxillary Cl. I)	Identifies custom tray individual and base record	6	2
Student performance assessment	Lecture + Laboratory application	Theoretical: Maxillo-mandibular relationship Practical: Special tray (mandibular Cl. I)	Studies the relationship between jaws maxillary and mandibular	6	3
Exam theoretical and practical	Lecture + Laboratory application	Theoretical: Occlusion Practical: Maxillary bit rim Cl. I master cast	Identifies occlusion and its types	6	4
Student performance assessment	Lecture + Laboratory application	Theoretical: Mandibular movements Practical: Mandibular bit rim Cl. I master cast	Analyzes movements jaw mandibular	6	5
Discussion and practical assessment	Lecture + Laboratory application	Theoretical: Face bow, Articulators and Mounting procedure Practical: Mounting of Cl. I maxillary and mandibular bite rims	Identifies recorded face and articulator and procedures retention	6	6

10. Course Structure					
Daily exam (Quiz)	Lecture + Laboratory application	Theoretical: Selection of artificial teeth: anterior and posterior teeth Practical: Arrangement of artificial anterior teeth Cl. I complete denture	learns selection anterior teeth and posterior artificial	6	7
Exam Mid-term (Mid-term)	Lecture + Laboratory application	Theoretical: Arrangement of artificial teeth Cl. I Practical: Arrangement of artificial posterior teeth Cl. I complete denture	trains/practices on arrangement teeth artificial for Class First	6	8
Student performance assessment	Lecture + Laboratory application	Theoretical: Arrangement of artificial teeth Cl. II and Cl. III Practical: Wax contouring and gingival carving in Cl. I complete denture	trains/practices on arrangement teeth for Classes Second and third	6	9
Discussion and practical assessment	Lecture + Laboratory application	Theoretical: Wax contouring and gingival carving Practical: Post dam: locating and preparation	Applies carving wax and carving gingival	6	10
Exam theoretical and practical	Lecture + Laboratory application	Theoretical: Post dam: Types and location in maxillary edentulous arch	Identifies types and websites seal posterior for the jaw maxillary	6	11

10. Course Structure					
		Practical: Flasking of complete denture			
Student performance assessment	Lecture + Laboratory application	Theoretical: Flasking and packing of complete denture Practical: Resin packing for complete denture	Applies procedures extrusion and processing for the denture complete	6	12
Daily exam (Quiz)	Lecture + Laboratory application	Theoretical: Finishing and polishing of complete denture Practical: Curing cycle and processing for complete denture	Applies steps finishing and polishing for the denture complete	6	13
Student performance assessment	Lecture + Laboratory application	Theoretical: The material used for denture base: materials &techniques Practical: Finishing of complete denture	Identifies Materials and techniques used for the base denture	6	14
Assessment preparation for the final exam	Lecture + Laboratory application	Theoretical: Retention and Stability in complete denture Practical: Polishing of complete denture	Studies factors retention and stability for the denture complete	6	15

11. Course Assessment	
Distribution Details	
20 points (for theoretical midterm and daily exams)	

11. Course Assessment	
15 points (for laboratory assessment and practical exams)	
5 points (for attendance, participation, and activity)	
60 points (distributed between the theoretical and practical components)	

12. sources education and teaching	
Details	**type source**
1) Textbook of complete denture prosthodontics Samantha	Required Textbooks (Prescribed Curriculum, if any)
2) Prosthodontics treatment for edentulous patients	Main References (Sources)
3) Basic guide to dental procedures	Recommended Supporting Books and References
Sources digital approved and research published in field fabrication dentures complete advanced	Electronic References and Websites

information course basic	
Crowns and Bridges (Basic) - Crown and Bridges (Basics)	**1. Course Name**
CAB-41	**2. Course Code**
First Semester / Fourth Stage / Academic Year 2025-2026	**3. Semester / Year/stage**
2025-2026	**4. Date of Preparation of this Description**
registration attendance Compulsory	**5. Available Attendance Modes**
90 Total hours (30 Theoretical + 60 practical) / 4 credits	**6. Number of Study Hours / Credits**
Name: Asst. Lecturer Sarah Kadhim Raouf Email: Sarah.mouala@uoturath.edu.iq	**7. Course Coordinator**
General Objective: Familiarize the student with the materials used in fabricating crowns and bridges and how to handle them. Specific Objective: Enable students in the Dental Technology Department to fabricate fixed crowns and bridges.	**8. Course Objectives**
• Theoretical explanation supported by illustrative aids. • direct practical application of the laboratory steps within Laboratory. • assessment periodic for each step work laboratory.	**9. Teaching and Learning Strategies**

10. Course Structure

Assessment Method	Learning Method	Unit or Topic Name (Theoretical + Practical)	Required Learning Outcomes	Hours 2 Theoretical (4)practical	Week
Discussion and practical assessment	Lecture + Laboratory application	Theoretical: Types of fixed restorations and their waxing techniques	Identifies types prostheses fixed and techniques waxing it	6	1

10. Course Structure					
		Practical: Impression procedures.			
Daily exam (Quiz)	Lecture + Laboratory application	Theoretical: Types of Connectors, Types of pontics Practical: Developing working casts.	Identifies types connectors and pontics in Bridges	6	2
Student performance assessment	Lecture + Laboratory application	Theoretical: Principles of tooth preparation: biological, mechanical Practical: Sawing procedures.	Studies considerations biological and mechanical for preparation tooth	6	3
Exam theoretical and practical	Lecture + Laboratory application	Theoretical: Principles of tooth preparation: esthetic consideration Practical: Preparation of dies.	Studies considerations esthetic for preparation tooth	6	4
Student performance assessment	Lecture + Laboratory application	Theoretical: Digital smile design Practical: Mounting procedures.	Identifies design smile digital	6	5
Discussion and practical assessment	Lecture + Laboratory application	Theoretical: Scanners and 3D	Identifies scanners optical and technique printing	6	6

10. Course Structure					
		printing technique Practical: Wax pattern for full contour 4 units bridge (1)	three-dimensional dimensions		
Daily exam (Quiz)	Lecture + Laboratory application	Theoretical: All ceramic restoration: classification Practical: Wax pattern for full contour 4 units bridge (2)	Studies classification prostheses ceramic complete	6	7
Exam Mid-term (Mid-term)	Lecture + Laboratory application	Theoretical: All ceramic restoration: aluminous core/slip cast Practical: Wax pattern for full contour 4 units bridge (3)	Identifies ceramic complete type (aluminous core/slip cast)	6	8
Student performance assessment	Lecture + Laboratory application	Theoretical: Pressed ceramic restoration Practical: Spruing procedure	Identifies prostheses ceramic compressed	6	9
Discussion and practical assessment	Lecture + Laboratory application	Theoretical: Porcelain labial margin Practical: Investing procedure	Identifies edge porcelain labial	6	10

10. Course Structure					
Exam theoretical and practical	Lecture + Laboratory application	Theoretical: Machined ceramic restoration: types Practical: Burnout procedure	Identifies types prostheses ceramic manufactured automatically	6	11
Student performance assessment	Lecture + Laboratory application	Theoretical: Machined ceramic restoration: techniques Practical: Casting procedure	Identifies technologies prostheses ceramic manufactured automatically	6	12
Daily exam (Quiz)	Lecture + Laboratory application	Theoretical: Visual perception Practical: Casting procedure	Studies the perception visual in Dental Technology	6	13
Student performance assessment	Lecture + Laboratory application	Theoretical: Retainer for a removable partial denture Practical: Finishing	Studies retainers Removable Partial Denture	6	14
Assessment preparation for the final exam	Lecture + Laboratory application	Theoretical: Precision attachment Practical: Polishing	Identifies attachments precise (Precision attachment)	6	15

11. Course Assessment	
Distribution Details	

11. Course Assessment	
20 points (for theoretical midterm and daily exams)	
15 points (for laboratory assessment and practical exams)	
5 points (for attendance, participation, and activity)	
60 points (distributed between the theoretical and practical components)	

12. sources education and teaching	
Details	**type source**
1) Contemporary fixed prosthodontics	Required Textbooks (Prescribed Curriculum, if any)
2) Fundamentals of fixed prosthodontics	Main References (Sources)
3) Glossary of prosthodontic terms	Recommended Supporting Books and References
educational videos academic and articles updated for steps work laboratory in Crowns and Bridges	Electronic References and Websites

information course basic	
Orthodontics (Advanced 1) - Orthodontics (Advanced 1)	**1. Course Name**
ORT-41	**2. Course Code**
First Semester / Fourth Stage / Academic Year 2025-2026	**3. Semester / Year/stage**
2025-2026	**4. Date of Preparation of this Description**
registration attendance Compulsory	**5. Available Attendance Modes**
90 Total hours (30 Theoretical + 60 practical) / 4 credits	**6. Number of Study Hours / Credits**
Name: Elaf Jamal Harb Email: elaf.jamal.harb@uoturath.edu.iq	**7. Course Coordinator**
General Objective: Familiarize the student with the materials used in fabricating orthodontic appliances and how to handle them. Specific Objective: Enable students in the Dental Technology Department to fabricate orthodontic appliances.	**8. Course Objectives**
• Theoretical explanation supported by illustrative aids. • direct practical application of the laboratory steps within Laboratory. • assessment periodic for each step work laboratory.	**9. Teaching and Learning Strategies**

10. Course Structure

Assessment Method	Learning Method	Unit or Topic Name (Theoretical + Practical)	Required Learning Outcomes	Hours 2 Theoretical (4) practical	Week
Discussion and practical assessment	Lecture + Laboratory application	Theoretical: Development of normal occlusion Practical: Mono-block construction	Identifies development occlusion natural	6	1

10. Course Structure					
		and wire bending			
Daily exam (Quiz)	Lecture + Laboratory application	Theoretical: Andrews's keys to normal occlusion Practical: Mono-block waxing and blocking	Identifies keys Andrews for occlusion natural	6	2
Student performance assessment	Lecture + Laboratory application	Theoretical: Orthodontic wires & its properties Practical: Mono-block wax elimination	Studies wires Orthodontics and its properties	6	3
Exam theoretical and practical	Lecture + Laboratory application	Theoretical: Development of the primary teeth Practical: Mono-block packing and curing	Identifies development teeth primary	6	4
Student performance assessment	Lecture + Laboratory application	Theoretical: Development of the permanent teeth Practical: Mono-block finishing and polishing	Identifies development teeth permanent	6	5
Discussion and practical assessment	Lecture + Laboratory application	Theoretical: Mixed dentition Practical: Removable habit breaker	Studies stage occlusion mixed	6	6

10. Course Structure					
Daily exam (Quiz)	Lecture + Laboratory application	Theoretical: Etiology of mal occlusion Practical: Removable habit breaker	Identifies etiology malocclusion/poor occlusion	6	7
Exam Mid-term (Mid-term)	Lecture + Laboratory application	Theoretical: Open bite Practical: Removable habit breaker	Studies bite open (Open bite)	6	8
Student performance assessment	Lecture + Laboratory application	Theoretical: Crossbite Practical: Fixed habit breaker constructing	Studies bite reverse (Crossbite)	6	9
Discussion and practical assessment	Lecture + Laboratory application	Theoretical: Deep bite Practical: Fixed habit breaker constructing	Studies bite deep (Deep bite)	6	10
Exam theoretical and practical	Lecture + Laboratory application	Theoretical: Removable orthodontic appliance construction Practical: Fixed habit breaker constructing	Identifies fabrication devices orthodontics removable	6	11
Student performance assessment	Lecture + Laboratory application	Theoretical: Bite plane and its modifications Practical: Fixed habit breaker constructing	Identifies plate bite and its modifications	6	12

10. Course Structure					
Daily exam (Quiz)	Lecture + Laboratory application	Theoretical: Expansion springs Practical: Removable screw	Studies springs expansion (Expansion springs)	6	13
Student performance assessment	Lecture + Laboratory application	Theoretical: Orthodontics screw and its types Practical: Removable screw	Identifies screws orthodontics and its types	6	14
Assessment preparation for the final exam	Lecture + Laboratory application	Theoretical: Tissue changes and tooth movement Practical: Removable screw	Studies the changes histological and movement teeth	6	15

11. Course Assessment	
Distribution Details	
20 points (for theoretical midterm and daily exams)	
15 points (for laboratory assessment and practical exams)	
5 points (for attendance, participation, and activity)	
60 points (distributed between the theoretical and practical components)	

12. sources education and teaching	
Details	**type source**
1) Contemporary orthodontic	Required Textbooks (Prescribed Curriculum, if any)

12. sources education and teaching	
2) Introduction to orthodontic.	Main References (Sources)
3) Textbook of orthodontic.	Recommended Supporting Books and References
4) American association of orthodontists	Electronic References and Websites

information course basic	
Maxillofacial Prosthetics (Intermediate) - Maxillofacial prosthesis (intermediate)	**1. Course Name**
MFP-41	**2. Course Code**
First Semester / Fourth Stage / Academic Year 2025-2026	**3. Semester / Year/stage**
2025-2026	**4. Date of Preparation of this Description**
registration attendance Compulsory	**5. Available Attendance Modes**
90 Total hours (30 Theoretical + 60 practical) / 4 credits	**6. Number of Study Hours / Credits**
Name: Afyaa Lateef Jasim - Email: afyaa.lateef@uoturath.edu.iq	**7. Course Coordinator**
General Objective: Familiarize the student with the contents and laboratory supplies of maxillofacial prosthetics, in addition to the materials used and the fabrication of some prosthetic devices for the face and jaws. Specific Objective: Prepare the student for the next stage by providing theoretical and practical information that enables them to work in maxillofacial prosthetics laboratories.	**8. Course Objectives**
• Theoretical explanation supported by illustrative aids. • direct practical application of the laboratory steps within Laboratory. • assessment periodic for each step work laboratory.	**9. Teaching and Learning Strategies**

10. Course Structure

Assessment Method	Learning Method	Unit or Topic Name (Theoretical + Practical)	Required Learning Outcomes	Hours 2 Theoretical (4)practical	Week
Discussion and practical assessment	Lecture + Laboratory application	Theoretical: Ocular prosthesis: (Anatomy, impression and cast preparation	Identifies anatomy eye and prepares impression	6	1

10. Course Structure					
		Practical: Ocular prosthesis: Special tray construction			
Daily exam (Quiz)	Lecture + Laboratory application	Theoretical: Ocular prosthesis: (Sculpture and iris construction) Practical: Ocular prosthesis: Impression and casting	Applies carving and fabricates iris eye	6	2
Student performance assessment	Lecture + Laboratory application	Theoretical: Ocular prosthesis: (Flasking and processing technique, finishing and polishing, and placement) Practical: Ocular prosthesis: Wax sculpture	Applies technologies extrusion and processing and polishing for the eye	6	3
Exam theoretical and practical	Lecture + Laboratory application	Theoretical: Ocular prosthesis: (Problems) Practical: Ocular prosthesis: Iris construction	Analyzes problems prostheses ocular	6	4
Student performance assessment	Lecture + Laboratory application	Theoretical: Orbital prosthesis: (Definition and construction procedures) Practical: Ocular prosthesis: Flasking and wax elimination	Studies prostheses orbit and procedures its construction	6	5
Discussion and practical assessment	Lecture + Laboratory application	Theoretical: Orbital prosthesis: (Computer prototyping)	Identifies modeling computer-based for the orbit	6	6

10. Course Structure					
		Practical: Ocular prosthesis: Packing and curing			
Daily exam (Quiz)	Lecture + Laboratory application	Theoretical: Orbital prosthesis: (Retention methods) Practical: Ocular prosthesis: Finishing and polishing, and placement.	Studies methods fixation prostheses orbit	6	7
Exam Mid-term (Mid-term)	Lecture + Laboratory application	Theoretical: Nasal prosthesis: (Anatomy) Practical: Nasal prosthesis: Impression and casting	Studies anatomy nose in prostheses	6	8
Student performance assessment	Lecture + Laboratory application	Theoretical: Nasal prosthesis: (Impression and cast preparation) Practical: Nasal prosthesis: Wax sculpture	prepares impression nose and casts cast	6	9
Discussion and practical assessment	Lecture + Laboratory application	Theoretical: Nasal prosthesis: (Sculpturing and processing methods) Practical: Nasal prosthesis: Flasking and wax elimination	Applies carving and techniques processing for the nose	6	10
Exam theoretical and practical	Lecture + Laboratory application	Theoretical: Nasal prosthesis: (Computer prototyping)	Identifies modeling computer-based for the nose	6	11

10. Course Structure					
		Practical: Nasal prosthesis: Packing and curing			
Student performance assessment	Lecture + Laboratory application	Theoretical: Nasal opening device: (Definition, impression techniques, sculpture, packing, curing, finishing and polishing, and placement) Practical: Nasal prosthesis: Finishing and polishing, and placement.	fabricates device opening meatus nasal and processes it	6	12
Daily exam (Quiz)	Lecture + Laboratory application	Theoretical: Maxillary obturator: (dentition, impression techniques, sculpture, packing, curing, finishing and placement) Practical: Palatal lift prosthesis: Impression and casting	fabricates plug jaw maxillary and finishes it	6	13
Student performance assessment	Lecture + Laboratory application	Theoretical: Palatal lift prosthesis: (Definition and construction procedures) Practical: Palatal lift prosthesis: Wax sculpture	Studies device lifting palate and its procedures	6	14
Assessment preparation	Lecture + Laboratory application	Theoretical: CAD/CAM and 3D printing for	Identifies technology (CAD/CAM)	6	15

10. Course Structure					
for the final exam		designing maxillofacial prosthesis Practical: Palatal lift prosthesis: Flasking and wax elimination, packing and cnring finishing and polishing, and placement.	and printing three-dimensional dimensions		

11. Course Assessment	
Distribution Details	
20 points (for theoretical midterm and daily exams)	
15 points (for laboratory assessment and practical exams)	
5 points (for attendance, participation, and activity)	
60 points (distributed between the theoretical and practical components)	

12. sources education and teaching	
Details	**type source**
1. Maxillofacial rehabilitation (book) 2011	Required Textbooks (Prescribed Curriculum, if any)
2. Maxillofacial prosthetics (book) 2012	Main References (Sources)
3. Maxillofacial prosthetics; principles and concepts (book)2013	Recommended Supporting Books and References
Sources digital and research approved in technologies Maxillofacial Prosthetics advanced	Electronic References and Websites

information course basic	
Dental Implants - Dental Implant	**1. Course Name**
DI-41	**2. Course Code**
First Semester / Fourth Stage / Academic Year 2025-2026	**3. Semester / Year/stage**
2025-2026	**4. Date of Preparation of this Description**
registration attendance Compulsory	**5. Available Attendance Modes**
90 Total hours (30 Theoretical + 60 practical) / 4 credits	**6. Number of Study Hours / Credits**
Name: Afyaa Lateef Jasim Email: afyaa.lateef@uoturath.edu.iq	**7. Course Coordinator**
General Objective: Familiarize the student with the requirements of dental implants and the types of dental prostheses integrated with dental implants. Specific Objective: Familiarize the student with the requirements of dental implants and the types of dental prostheses integrated with dental implants.	**8. Course Objectives**
• Theoretical explanation supported by illustrative aids. • direct practical application of the laboratory steps within Laboratory. • assessment periodic for each step work laboratory.	**9. Teaching and Learning Strategies**

10. Course Structure

Assessment Method	Learning Method	Unit or Topic Name (Theoretical + Practical)	Required Learning Outcomes	Hours 2 Theoretical (4)practical	Week
Discussion and practical assessment	Lecture + Laboratory application	Theoretical: Dental implant [terminologies and historical background] Practical: Components of dental implants	Identifies terms and history Dental Implants	6	1

10. Course Structure					
Daily exam (Quiz)	Lecture + Laboratory application	Theoretical: Components and types of dental implants Practical: Types of dental implants	Distinguishes components and types implants teeth	6	2
Student performance assessment	Lecture + Laboratory application	Theoretical: Biomaterials for dental implants Practical: Dental implants versus conventional dental prosthesis	Studies Materials biological for Dental Implants	6	3
Exam theoretical and practical	Lecture + Laboratory application	Theoretical: Dental implants: Osseointegration and surgical procedure Practical: Clinical and laboratory steps in dental implant	Identifies integration osseous and procedures surgical	6	4
Student performance assessment	Lecture + Laboratory application	Theoretical: Treatment options for dental implants Practical: Types of abutments	Analyzes options treatment available in Dental Implants	6	5
Discussion and practical assessment	Lecture + Laboratory application	Theoretical: Types of abutments Practical: Cast fabrication: Direct impression technique	Distinguishes between types abutments (Abutments)	6	6
Daily exam (Quiz)	Lecture + Laboratory application	Theoretical: Cast fabrication of dental implant (Direct Method)	fabricates cast direct for the implant	6	7

10. Course Structure					
		Practical: Cast fabrication: Direct impression technique			
Exam Mid-term (Mid-term)	Lecture + Laboratory application	Theoretical: Cast fabrication of dental implant (Indirect Method) Practical: Cast fabrication: Indirect impression technique	fabricates cast non direct for the implant	6	8
Student performance assessment	Lecture + Laboratory application	Theoretical: Attachment system in dental implant Practical: Cast fabrication: Indirect impression technique	Identifies systems bonding in implantation	6	9
Discussion and practical assessment	Lecture + Laboratory application	Theoretical: Implant-supported complete overdenture Practical: Implants-supported complete overdenture	Studies dentures complete overdenture supported with implants	6	10
Exam theoretical and practical	Lecture + Laboratory application	Theoretical: CAD-CAM technology in dental implant, and Surgical template Practical: Implants-supported complete overdenture	Identifies technology (CAD-CAM) and cast surgical	6	11
Student performance assessment	Lecture + Laboratory application	Theoretical: Implant-supported metal /ceramic FPDs (Direct Method)	Studies prostheses ceramic supported with implants (direct)	6	12

10. Course Structure					
		Practical: Implants-supported metal/ceramic crowns			
Daily exam (Quiz)	Lecture + Laboratory application	Theoretical: Implant-supported metal /ceramic FPDs (Indirect Method) Practical: Implants-supported metal/ceramic crowns	Studies prostheses ceramic supported with implants (non direct)	6	13
Student performance assessment	Lecture + Laboratory application	Theoretical: Implant-supported restorations: Failure and complications Practical: Implants-supported metal/ceramic bridge	Analyzes failure and complications prostheses supported with implants	6	14
Assessment preparation for the final exam	Lecture + Laboratory application	Theoretical: Implant-supported restorations: Maintenance and follow-up phase Practical: Implants-supported metal/ceramic bridge	Studies maintenance and follow-up prostheses supported with implants	6	15

11. Course Assessment	
Distribution Details	
20 points (for theoretical midterm and daily exams)	
15 points (for laboratory assessment and practical exams)	
5 points (for attendance, participation, and activity)	
60 points (distributed between the theoretical and practical components)	

12. sources education and teaching	
Details	**type source**
1) Misch, C.E., Dental implant prosthetics. 2015. Mosby 3ed, P, 12 theoretical / 5 practical. 2) Saghiri, M.A., Freag, P., Fakhrzadeh, A., Saghiri, A.M. and Eid, J., 2021. Current technology for identifying dental implants: a narrative review. Bulletin of the National Research Centre, 45(1), pp.1-11.	Required Textbooks (Prescribed Curriculum, if any)
3) Elbelacy, H., Khalil, M.F. and Elboraey, A.N., 2024. Different Implant Supported Modalities of Completely Edentulous Mandible. Egyptian Dental Journal, 2 theoretical / 5 practical0(1), pp.502 theoretical / 5 practical-512 theoretical / 5 practical. 4) Proaño, Lenin, et al. "A Simple Technique to Repair Feldspathic Porcelain Chipping in Screw-retained Implant-supported Prosthesis: A Clinical Technique." The Journal of Contemporary Dental Practice 22.1 (2021): 101-104.	Main References (Sources)
5) Hristov, I.G., 2022. IMPLANT DESIGN FACTORS THAT AFFECT PRIMARY STABILITY AND OSSEOINTEGRATION., (1-3 (2 theoretical / 5 practical2 theoretical / 5 practical)), pp.60-65. 6) Narayan, R. ed., 2009. Biomedical materials (Vol. 1). New York, NY, USA: Springer.	Recommended Supporting Books and References
2 theoretical / 5 practical) Resnik, R., 2020. Misch's Contemporary Implant Dentistry E-Book: Misch's Contemporary Implant Dentistry E-Book. Elsevier Health Sciences.	Electronic References and Websites

information course basic	
Removable Partial Denture (Advanced 2) - Removable Partial Denture (Advanced 2)	1. Course Name
RPD-42	2. Course Code
Second Semester / Fourth Stage / Academic Year 2025-2026	3. Semester / Year/stage
2025-2026	4. Date of Preparation of this Description
registration attendance Compulsory	5. Available Attendance Modes
90 Total hours (30 Theoretical + 60 practical) / 4 credits	6. Number of Study Hours / Credits
Name: Asst. Lecturer Zainab Diaa Fawzi Email: Ecc0059@mtu.edu.iq	7. Course Coordinator
General Objective: Familiarize the student with the materials used in fabricating removable metal partial dentures and how to handle them. Specific Objective: Enable students in the Dental Technology Department to fabricate removable metal partial dentures.	8. Course Objectives
• Theoretical explanation supported by illustrative aids. • direct practical application of the laboratory steps within Laboratory. • assessment periodic for each step work laboratory.	9. Teaching and Learning Strategies

10. Course Structure

Assessment Method	Learning Method	Unit or Topic Name (Theoretical + Practical)	Required Learning Outcomes	Hours 2 Theoretical (4)practical	Week
Discussion and practical assessment	Lecture + Laboratory application	Theoretical: RPD production methods Practical: Selection of case study (mandibular cast) and RPD drawing design on	Identifies methods production Removable Partial Denture	6	1
Daily exam (Quiz)	Lecture + Laboratory application	Theoretical: Step by step fabrication of	Studies manufacturing step step by step	6	2

10. Course Structure					
		RPD using conventional lost-wax method Practical: Special tray, and master cast preparation	in a way removal wax		
Student performance assessment	Lecture + Laboratory application	Theoretical: Step by step fabrication of RPD using subtractive milling method Practical: Surveying, and RPD redrawing design on the master cast	Studies manufacturing in a way milling	6	3
Exam theoretical and practical	Lecture + Laboratory application	Theoretical: Step by step fabrication of RPD using additive (3D printing) method Practical: Undercut block-out and relief	Studies manufacturing in a way printing three-dimensional dimensions	6	4
Student performance assessment	Lecture + Laboratory application	Theoretical: Combination metal/resin RPD Practical: Duplication of master cast and preparation of refractory cast	Identifies dentures partial integrated (metal/resin)	6	5
Discussion and practical assessment	Lecture + Laboratory application	Theoretical: Esthetic considerations with removable partial dentures Practical: Ready-made wax design	Analyzes considerations esthetic in dentures partial	6	6

10. Course Structure					
Daily exam (Quiz)	Lecture + Laboratory application	Theoretical: Principles in arrangements of artificial teeth for RPD opposing complete Practical: Ready-made wax design	Studies principles arrangement teeth opposite denture complete	6	7
Exam Mid-term (Mid-term)	Lecture + Laboratory application	Theoretical: Principles in arrangements of artificial teeth for RPD Opposing natural teeth Practical: Spruing and Investing	Studies principles arrangement teeth opposite teeth natural	6	8
Student performance assessment	Lecture + Laboratory application	Theoretical: Principles in arrangements of artificial teeth for RPD opposing RPDs Practical: Burn out and Casting	Studies principles arrangement teeth opposite denture partial	6	9
Discussion and practical assessment	Lecture + Laboratory application	Theoretical: Alter cast technique in RPD Practical: Burn out and Casting	Applies technology (Alter cast) in Partial Denture	6	10
Exam theoretical and practical	Lecture + Laboratory application	Theoretical: Impression principles and considerations for RPD Practical: Finishing and polishing of metal alloy framework	Identifies principles and considerations impressions for the denture partial	6	11

10. Course Structure					
Student performance assessment	Lecture + Laboratory application	Theoretical: Immediate RPD Practical: Bite rim registration with metal alloy framework	Identifies Partial Denture immediate	6	12
Daily exam (Quiz)	Lecture + Laboratory application	Theoretical: Post insertion complications and failure in RPD Practical: Setting of artificial teeth on metal alloy framework	Analyzes complications and failure after insertion in mouth patient	6	13
Student performance assessment	Lecture + Laboratory application	Theoretical: RPD framework: soldering and welding Practical: Packing and curing of PMMA acrylic resin	learns soldering framework metal for the denture partial	6	14
Assessment preparation for the final exam	Lecture + Laboratory application	Theoretical: RPD: Maintenance and follow up Practical: Finishing and Polishing of PMMA acrylic resin	Studies maintenance and follow-up Removable Partial Denture	6	15

11. Course Assessment	
Distribution Details	
20 points (for theoretical midterm and daily exams)	
15 points (for laboratory assessment and practical exams)	
5 points (for attendance, participation, and activity)	

11. Course Assessment	
60 points (distributed between the theoretical and practical components)	

12. sources education and teaching	
Details	**type source**
1) Carr, A.B. and D.T. Brown, McCracken's removable partial prosthodontics. 2015: Elsevier Health Sciences. 2) Patel, J., R.Y. Jablonski, and T.M. Hodson, Removable partial dentures: Part 1. British Dental Journal, 2024. 232 theoretical / 5 practical(2 theoretical / 5 practical): p. 532 theoretical / 5 practical-542.	Required Textbooks (Prescribed Curriculum, if any)
3) Yu, H., Digital Removable Partial Denture Technology: From Design Analysis to Practical Skills. 2023: Springer Nature. 4) Friel, T. and S. Waia, Removable partial dentures for older adults. Primary dental journal, 2020. 9(3): p. 34-39.	Main References (Sources)
5) Field, J. and C. Storey, Removable prosthodontics at a glance. 2020: John Wiley & Sons. 6) Raja, H.Z., et al., Effect of Interactive Teaching Methods on Removable Partial Denture Designing. Journal of the Pakistan Dental Association, 2020. 29(3).	Recommended Supporting Books and References
2 theoretical / 5 practical) Malara, P., L. Dobrzański, and J. Dobrzańska, Computer-aided designing and manufacturing of partial removable dentures. Journal of Achievements in Materials and Manufacturing Engineering, 2015. 2 theoretical / 5 practical3(2): p. 152 theoretical / 5 practical-164.	Electronic References and Websites

information course basic	
Complete Denture (Advanced 2) - Complete Denture (Advanced 2)	1. Course Name
CD-42	2. Course Code
Second Semester / Fourth Stage / Academic Year 2025-2026	3. Semester / Year/stage
2025-2026	4. Date of Preparation of this Description
registration attendance Compulsory	5. Available Attendance Modes
90 Total hours (30 Theoretical + 60 practical) / 4 credits	6. Number of Study Hours / Credits
Name: Lecturer Afyaa Lateef Jasim Email: afyaa.lateef@uoturath.edu.iq	7. Course Coordinator
General Objective: Familiarize the student with the materials used in fabricating complete dentures and how to handle them. Specific Objective: Enable students in the Dental Technology Department to fabricate complete dentures.	8. Course Objectives
• Theoretical explanation supported by illustrative aids. • direct practical application of the laboratory steps within Laboratory. • assessment periodic for each step work laboratory.	9. Teaching and Learning Strategies

10. Course Structure

Assessment Method	Learning Method	Unit or Topic Name (Theoretical + Practical)	Required Learning Outcomes	Hours 2 Theoretical (4)practical	Week
Discussion and practical assessment	Lecture + Laboratory application	Theoretical: Selective grinding of complete denture Practical: Maxillary bit rim Cl. II master cast	Applies taking selective for the denture complete	6	1

10. Course Structure					
Daily exam (Quiz)	Lecture + Laboratory application	Theoretical: Repairing of complete denture: base and teeth Practical: Mandibular bit rim Cl. II master cast	learns repair base and teeth denture	6	2
Student performance assessment	Lecture + Laboratory application	Theoretical: Rebasing of complete denture: materials & techniques Practical: Mounting Cl. II	Identifies replacement base denture	6	3
Exam theoretical and practical	Lecture + Laboratory application	Theoretical: Relining of complete denture:materials & techniques (part I) Practical: Arrangement of artificial anterior teeth Cl. II	Studies re-relining (part First)	6	4
Student performance assessment	Lecture + Laboratory application	Theoretical: Materials & techniques (part II): Relining of complete denture Practical: Arrangement of artificial posterior teeth Cl. II	Studies re-relining (part Second)	6	5
Discussion and practical assessment	Lecture + Laboratory application	Theoretical: Single complete denture opposing natural teeth and restored teeth	Studies Complete Denture single	6	6

10. Course Structure					
		Practical: Maximum intercuspation for maxillary and mandibular artificial teeth in Cl. II complete denture	opposite teeth natural		
Daily exam (Quiz)	Lecture + Laboratory application	Theoretical: Duplication of complete denture: materials &techniques Practical: Wax contouring and gingival carving	Studies duplication Complete Denture	6	2 theoretical / 5 practical
Exam Mid-term (Mid-term)	Lecture + Laboratory application	Theoretical: Immediate complete denture: materials &techniques Practical: Maxillary bit rim Cl. III master cast	Studies Complete Denture immediate	6	8
Student performance assessment	Lecture + Laboratory application	Theoretical: Over denture Practical: Mandibular bit rim Cl. III master cast	Identifies denture overdenture	6	9
Discussion and practical assessment	Lecture + Laboratory application	Theoretical: Digital system for C.D. (3D printed) Practical: Arrangement of artificial anterior teeth Cl. III	Identifies systems digital (printing three-dimensional dimensions)	6	10

10. Course Structure					
Exam theoretical and practical	Lecture + Laboratory application	Theoretical: Digital system for C.D. (milling) Practical: Arrangement of artificial posterior teeth Cl. III	Identifies systems digital (milling)	6	11
Student performance assessment	Lecture + Laboratory application	Theoretical: Implant supported removable denture Practical: Wax contouring and gingival carving	Studies denture removable supported with implants	6	12
Daily exam (Quiz)	Lecture + Laboratory application	Theoretical: Disinfection of complete denture: cast, impression, final complete Practical: Relining of complete denture: maxillary and mandibular denture	Applies sterilization Complete Denture and impressions	6	13
Student performance assessment	Lecture + Laboratory application	Theoretical: Problems: post insertion complete denture Practical: Rebasing of complete denture: maxillary and mandibular denture	Analyzes problems what after insertion denture	6	14
Assessment preparation for the final exam	Lecture + Laboratory application	Theoretical: General overview relating to complete dentures	reviews concepts general for dentures complete	6	15

10. Course Structure

		Practical: Repair of complete denture: maxillary and mandibular denture			

11. Course Assessment

Distribution Details	
20 points (for theoretical midterm and daily exams)	
15 points (for laboratory assessment and practical exams)	
5 points (for attendance, participation, and activity)	
60 points (distributed between the theoretical and practical components)	

12. sources education and teaching

Details	type source
1) Textbook of complete denture prosthodontics Samantha	Required Textbooks (Prescribed Curriculum, if any)
2) Prosthodontics treatment for edentulous patients	Main References (Sources)
3) Basic guide to dental procedures	Recommended Supporting Books and References
Sources digital approved and research published in field fabrication dentures complete advanced	Electronic References and Websites

	information course basic
Crowns and Bridges (Advanced) - Crown and Bridges (Advanced)	1. Course Name
CAB-42	2. Course Code
Second Semester / Fourth Stage / Academic Year 2025-2026	3. Semester / Year/stage
2025-2026	4. Date of Preparation of this Description
registration attendance Compulsory	5. Available Attendance Modes
90 Total hours (30 Theoretical + 60 practical) / 4 credits	6. Number of Study Hours / Credits
Name: Lecturer Sara - Email: Sarah.mouala@uoturath.edu.iq	7. Course Coordinator
General Objective: Familiarize the student with the materials used in fabricating crowns and bridges and how to handle them. Specific Objective: Enable students in the Dental Technology Department to fabricate fixed crowns and bridges.	8. Course Objectives
• Theoretical explanation supported by illustrative aids. • direct practical application of the laboratory steps within Laboratory. • assessment periodic for each step work laboratory.	9. Teaching and Learning Strategies

10. Course Structure

Assessment Method	Learning Method	Unit or Topic Name (Theoretical + Practical)	Required Learning Outcomes	Hours 2 Theoretical (4)practical	Week
Discussion and practical assessment	Lecture + Laboratory application	Theoretical: Partial fixed implant supported prosthesis (prosthetic phase) Practical: Wax pattern for coping substructure of	Identifies prostheses partial fixed supported with implants	6	1

10. Course Structure					
		abutment teeth for 4 units bridge			
Daily exam (Quiz)	Lecture + Laboratory application	Theoretical: Complete fixed implant supported prosthesis (prosthetic phase) (1) Practical: Wax pattern for coping substructure of abutment teeth for 4 units bridge	Studies prostheses complete fixed supported with implants (part First)	6	2
Student performance assessment	Lecture + Laboratory application	Theoretical: Complete fixed implant supported prosthesis (prosthetic phase) (2) Practical: Wax pattern for coping substructure of abutment teeth for 4 units bridge	Studies prostheses complete fixed supported with implants (part Second)	6	3
Exam theoretical and practical	Lecture + Laboratory application	Theoretical: Alloys and metal selection for metal ceramic restoration Practical: Wax pattern for coping substructure of abutment teeth for 4 units bridge	selects alloys and metals for prostheses ceramic metal	6	4
Student performance assessment	Lecture + Laboratory application	Theoretical: Framework design for metal ceramic restoration Practical: Wax pattern for single coping substructure for investing procedure	designs framework metal for prostheses ceramic	6	5

10. Course Structure					
Discussion and practical assessment	Lecture + Laboratory application	Theoretical: Finishing and preparation of metal ceramic interface surface Practical: Preparation and management of investing procedure	finishes and prepares surface interproximal for metal and ceramic	6	6
Daily exam (Quiz)	Lecture + Laboratory application	Theoretical: Build-up of ceramic: materials Practical: Preparation and management of investing procedure	Identifies materials construction ceramic	6	7
Exam Mid-term (Mid-term)	Lecture + Laboratory application	Theoretical: Build-up of ceramic: techniques Practical: Burn out and wax elimination	Applies technologies construction ceramic	6	8
Student performance assessment	Lecture + Laboratory application	Theoretical: Provisional crown & bridge: materials Practical: Finishing and preparation of metal interface for ceramic build up	Identifies materials Crowns and Bridges provisional	6	9
Discussion and practical assessment	Lecture + Laboratory application	Theoretical: Provisional crown & bridge: technique Practical: Oxidation	Applies technologies Crowns and Bridges provisional	6	10
Exam theoretical and practical	Lecture + Laboratory application	Theoretical: Resin bonded bridge: types, indications and contraindications	Studies types and indications use Bridges associated with resin	6	11

10. Course Structure					
		Practical: Ceramic build up			
Student performance assessment	Lecture + Laboratory application	Theoretical: Resin bonded bridge: technique Practical: Ceramic build up	Applies technologies Bridges associated with resin	6	12
Daily exam (Quiz)	Lecture + Laboratory application	Theoretical: Fiber reinforced bridge Practical: Glazing	Identifies Bridges reinforced with fibers	6	13
Student performance assessment	Lecture + Laboratory application	Theoretical: Failure of crown & bridge / clinical Practical: Finishing metal ceramic crown fitting on die and articulator related occlusion and proximal contact	Analyzes failure clinical for crowns and bridges	6	14
Assessment preparation for the final exam	Lecture + Laboratory application	Theoretical: Failure of crown & bridge / laboratory failure. Practical: Finishing metal ceramic crown fitting on die and articulator related occlusion and proximal contact	Analyzes failure laboratory for crowns and bridges	6	15

11. Course Assessment	
Distribution Details	
20 points (for theoretical midterm and daily exams)	
15 points (for laboratory assessment and practical exams)	
5 points (for attendance, participation, and activity)	

11. Course Assessment	
60 points (distributed between the theoretical and practical components)	

12. sources education and teaching	
Details	**type source**
1) Contemporary fixed prosthodontics	Required Textbooks (Prescribed Curriculum, if any)
2) Fundamentals of fixed prosthodontics	Main References (Sources)
3) Glossary of prosthodontic terms	Recommended Supporting Books and References
Sources digital approved and research published in field fabrication Crowns and Bridges advanced	Electronic References and Websites

information course basic	
Orthodontics (Advanced 2) - Orthodontics (Advanced 2)	**1. Course Name**
ORT-42	**2. Course Code**
Second Semester / Fourth Stage / Academic Year 2025-2026	**3. Semester / Year/stage**
2025-2026	**4. Date of Preparation of this Description**
registration attendance Compulsory	**5. Available Attendance Modes**
90 Total hours (30 Theoretical + 60 practical) / 4 credits	**6. Number of Study Hours / Credits**
Name: Asst. Lecturer Elaf Jamal Harb Email: elaf.jamal.harb@uoturath.edu.iq	**7. Course Coordinator**
General Objective: Familiarize the student with the materials used in fabricating orthodontic appliances and how to handle them. Specific Objective: Enable students in the Dental Technology Department to fabricate orthodontic appliances.	**8. Course Objectives**
• Theoretical explanation supported by illustrative aids. • direct practical application of the laboratory steps within Laboratory. • assessment periodic for each step work laboratory.	**9. Teaching and Learning Strategies**

10. Course Structure					
Assessment Method	**Learning Method**	**Unit or Topic Name (Theoretical + Practical)**	**Required Learning Outcomes**	**Hours 2 Theoretical (4)practical**	**Week**
Discussion and practical assessment	Lecture + Laboratory application	Theoretical: Management of cleft lip and palate with removable orthodontics appliances Practical: Construction of Space maintainers	Identifies how management lip cleft and cleft palate palate	6	1
Daily exam (Quiz)	Lecture + Laboratory application	Theoretical: Spacing and crowding in the permanent teeth Practical: Construction of Space maintainers	Identifies spaces and crowding in teeth permanent	6	2
Student performance assessment	Lecture + Laboratory application	Theoretical: Intra and extra-oral Anchorage Practical: Construction of Space maintainers	Studies retention within and outside oral	6	3
Exam theoretical and practical	Lecture + Laboratory application	Theoretical: Mono-block appliance Practical: Construction of Space maintainers	Identifies device mass single (Mono-block)	6	4
Student performance assessment	Lecture + Laboratory application	Theoretical: Franckle appliance	Identifies device Frankel	6	5

10. Course Structure					
		Practical: Construction of Space maintainers			
Discussion and practical assessment	Lecture + Laboratory application	Theoretical: Soldering Practical: Quad helix construction and wire bending	Studies technologies soldering (Soldering)	6	6
Daily exam (Quiz)	Lecture + Laboratory application	Theoretical: Space maintainer Practical: Quad helix adaption	Identifies maintainer space	6	7
Exam Mid-term (Mid-term)	Lecture + Laboratory application	Theoretical: Bad habits and Habit breaker Practical: Quad helix adjustment	Studies habits poor and appliance that Uses to eliminate from them	6	8
Student performance assessment	Lecture + Laboratory application	Theoretical: Welding Practical: Quad helix soldering	Studies technology soldering pointed (Welding)	6	9
Discussion and practical assessment	Lecture + Laboratory application	Theoretical: Repair of orthodontic appliance Practical: Quad helix finishing and polishing	learns how repair devices orthodontics	6	10
Exam theoretical and practical	Lecture + Laboratory application	Theoretical: Retainers Practical: Clear aligner cast	Identifies retainers orthodontics	6	11
Student performance assessment	Lecture + Laboratory application	Theoretical: Fixed orthodontic appliance	Identifies devices orthodontics fixed	6	12

10. Course Structure					
		Practical: Clear aligner construction			
Daily exam (Quiz)	Lecture + Laboratory application	Theoretical: Clear retainer Practical: Clear aligner construction	Identifies retainer clear	6	13
Student performance assessment	Lecture + Laboratory application	Theoretical: Clear aligner Practical: Clear aligner packing of sheet	Studies orthodontics clear (Clear aligner)	6	14
Assessment preparation for the final exam	Lecture + Laboratory application	Theoretical: CAD-CAM application in removable orthodontics appliances Practical: Clear aligner finishing and polishing	Identifies applications (CAD-CAM) in orthodontics removable	6	15

11. Course Assessment	
Distribution Details	
20 points (for theoretical midterm and daily exams)	
15 points (for laboratory assessment and practical exams)	
5 points (for attendance, participation, and activity)	
60 points (distributed between the theoretical and practical components)	

12. sources education and teaching	
Details	**type source**

12. sources education and teaching	
1) Contemporary orthodontic	Required Textbooks (Prescribed Curriculum, if any)
2) Introduction to orthodontic.	Main References (Sources)
3) Textbook of orthodontic.	Recommended Supporting Books and References
4) American association of orthodontists	Electronic References and Websites

information course basic	
Maxillofacial Prosthetics (Advanced) - Maxillofacial prosthesis (Advanced)	**1. Course Name**
MFP-42	**2. Course Code**
Second Semester / Fourth Stage / Academic Year 2025-2026	**3. Semester / Year/stage**
2025-2026	**4. Date of Preparation of this Description**
registration attendance Compulsory	**5. Available Attendance Modes**
90 Total hours (30 Theoretical + 60 practical) / 4 credits	**6. Number of Study Hours / Credits**
Name: Lecturer Afyaa Lateef Jasim Email: afyaa.lateef@uoturath.edu.iq	**7. Course Coordinator**
General Objective: Familiarize the student with the contents and laboratory supplies of maxillofacial prosthetics, in addition to the materials used and the fabrication of some prosthetic devices for the face and jaws. Specific Objective: Prepare the student for the next stage by providing theoretical and practical information that enables them to work in maxillofacial prosthetics laboratories.	**8. Course Objectives**
• Theoretical explanation supported by illustrative aids. • direct practical application of the laboratory steps within Laboratory. • assessment periodic for each step work laboratory.	**9. Teaching and Learning Strategies**

10. Course Structure

Assessment Method	Learning Method	Unit or Topic Name (Theoretical + Practical)	Required Learning Outcomes	Hours 2 Theoretical (4)practical	Week
Discussion and practical assessment	Lecture + Laboratory application	Theoretical: Ear prosthesis: (Anatomy, impression and cast preparation)	Identifies anatomy ear and prepares impression	6	1

10. Course Structure					
		Practical: Ear prosthesis: Impression and casting			
Daily exam (Quiz)	Lecture + Laboratory application	Theoretical: Ear prosthesis: (Partial and complete prosthetic ear sculpturing and flasking) Practical: Ear prosthesis: Waxing sculpture	Applies carving for prostheses ear partial and complete	6	2
Student performance assessment	Lecture + Laboratory application	Theoretical: Ear prosthesis: (Packing, curing, finishing and placement) Practical: Ear prosthesis: Flasking and packing	Applies technologies extrusion and processing and polishing for the ear	6	3
Exam theoretical and practical	Lecture + Laboratory application	Theoretical: Ear prosthesis: (Retention methods) Practical: Ear prosthesis: Finishing and polishing	Studies methods fixation prostheses ear	6	4
Student performance assessment	Lecture + Laboratory application	Theoretical: Ear prosthesis: (Computer prototyping) Practical: Meatus opening device prosthesis: Impression and casting	Identifies modeling computer-based for the ear	6	5

10. Course Structure					
Discussion and practical assessment	Lecture + Laboratory application	Theoretical: Meatus opening device prosthesis: (Definition, impression techniques, and sculpture) Practical: Meatus opening device prosthesis: Waxing sculpture	designs device opening meatus and prepares impression	6	6
Daily exam (Quiz)	Lecture + Laboratory application	Theoretical: Meatus opening device prosthesis: (Packing, curing, finishing and placement) Practical: Meatus opening device prosthesis: Flasking and packing	Applies steps processing and polishing for the device meatus	6	7
Exam Mid-term (Mid-term)	Lecture + Laboratory application	Theoretical: Orbital prosthesis: (Anatomy, impression and cast preparation) Practical: Meatus opening device prosthesis: Finishing and polishing	Identifies anatomy orbit and prepares impression	6	8
Student performance assessment	Lecture + Laboratory application	Theoretical: Orbital prosthesis: (Packing, curing, finishing and placement) Practical: Orbital prosthesis: Impression and casting	Applies technologies extrusion and processing for orbit eye	6	9

10. Course Structure					
Discussion and practical assessment	Lecture + Laboratory application	Theoretical: Orbital prosthesis: (Computer prototyping) Practical: Orbital prosthesis: Waxing sculpture	Identifies modeling computer-based for the orbit	6	10
Exam theoretical and practical	Lecture + Laboratory application	Theoretical: Classification of maxillofacial obturators Practical: Orbital prosthesis: Flasking and packing	Classifies plugs jaw maxillary prosthetic	6	11
Student performance assessment	Lecture + Laboratory application	Theoretical: Maxillary obturator: (Definition, impression techniques, and sculpture) Practical: Orbital prosthesis: Finishing and polishing	designs plug jaw maxillary and prepares impression	6	12
Daily exam (Quiz)	Lecture + Laboratory application	Theoretical: Problems of maxillofacial prosthesis Practical: Maxillary obturator: Impression and casting	Analyzes problems Maxillofacial Prosthetics	6	13
Student performance assessment	Lecture + Laboratory application	Theoretical: Implants in maxillofacial prosthesis Practical: Maxillary	Studies use implants in Maxillofacial Prosthetics	6	14

10. Course Structure					
		obturator: Waxing sculpture, flasking, and packing			
Assessment preparation for the final exam	Lecture + Laboratory application	Theoretical: CAD/CAM and 3D printing for designing maxillofacial prosthesis Practical: Maxillary obturator: Finishing and polishing	Identifies technology (CAD/CAM) and printing three-dimensional dimensions	6	15

11. Course Assessment	
Distribution Details	
20 points (for theoretical midterm and daily exams)	
15 points (for laboratory assessment and practical exams)	
5 points (for attendance, participation, and activity)	
60 points (distributed between the theoretical and practical components)	

12. sources education and teaching	
Details	**type source**
1. Maxillofacial rehabilitation (book) 2011	Required Textbooks (Prescribed Curriculum, if any)
2. Maxillofacial prosthetics (book) 2012	Main References (Sources)
3. Maxillofacial prosthetics; principles and concepts (book)2013	Recommended Supporting Books and References
Sources digital and research approved in technologies Maxillofacial Prosthetics advanced	Electronic References and Websites

information course basic	
Professional Ethics - Professional ethics	1. Course Name
PE-42	2. Course Code
Second Semester / Fourth Stage / Academic Year 2025-2026	3. Semester / Year/stage
2025-2026	4. Date of Preparation of this Description
registration attendance Compulsory	5. Available Attendance Modes
30 total hours (30 theoretical + 0 practical) / 2 credits	6. Number of Study Hours / Credits
Name: Dr. Tariq Mahdi Saleh Email: tarekmsaleh@uoturath.edu.iq	7. Course Coordinator
General Objective: Introduce the student to the principles of ethical professional behavior. Specific Objective: Introduce the student to the principles of professional conduct and professional ethics in the medical field.	8. Course Objectives
• Theoretical lectures supported with examples realistic. • discussion open and analysis studies case for errors medical and ethical. • assigning students with reports about rights patient and Professional Ethics.	9. Teaching and Learning Strategies

10. Course Structure

Assessment Method	Learning Method	Unit or Topic Name (theoretical only)	Required Learning Outcomes	Hours	Week
General questions and participation	Lecture and discussion	**unit first: ethics** - concept ethics and its origin - grammar general for ethics - sources ethics - values ethics - importance ethics for the individual and society	Understands concept ethics and its sources and its value	4	First and second

10. Course Structure					
Daily exam	Lecture and discussion	**unit Second: work and profession** - work and its importance - behaviors work - concept profession - definition profession - difference between concept work and profession and craft - standards that/which must that are based on them profession	Distinguishes between concept work, the profession, and craft	2	third
Student performance assessment	Lecture and discussion	**unit Third: ethics profession** - nature ethics profession - outcomes positive for commitment with Professional Ethics - properties ethics work - characteristics ethics profession - steps level acceptable from ethics profession	Analyzes nature Professional Ethics and its properties	2	fourth
General questions and participation / Exam Mid-term	Lecture and discussion	**unit Fourth: values and ethics profession** - honesty - truthfulness - advice - justice - good handling - mastery work	Studies values ethical basic in profession	6	fifth and sixth and seventh
Daily exam	Lecture and discussion	**unit fifth: patterns behavior non- ethical in profession** - corruption administrative (behavior administrative non-ethical, definition corruption administrative, types corruption administrative)	Distinguishes patterns behavior non ethical (corruption, bribery, cheating)	2	eighth

10. Course Structure					
		- bribery (concept bribery, types bribery, difference between gift and bribery, causes and motives that/which stand behind bribery) - cheating (concept cheating, nature cheating in work, manifestations cheating in performance function)			
Assessment report mini	Lecture and discussion	**unit sixth: means and methods establishing values ethics profession** - style establishing ethics profession - levels construction and establishing ethics profession - means and methods establishing ethics profession - matters that/which must observing them in formulation code ethical for the profession - how that/which is with them enhancement behavior ethical in work according to for(Creter and Kineniki)	Identifies means establishing Professional Ethics	4	ninth and tenth
paper work / participation	Lecture and discussion	**unit ninth: ethics practice profession medical** - properties and characteristics technical medical - duties technical medical toward his profession , the patient, community **rights patient** - justice and equality - maintaining on confidentiality information patients confidentiality	Analyzes properties and rights practices medical and technical	6	eleventh ten and second ten and third ten

10. Course Structure					
		- maintaining on privacy patient - consent prior informed consent - care comprehensive - placing interest patient before every consideration - communication with patients effective communication - right access on records medical rights to health records			
Daily exam	Lecture and discussion	- relationship technical medical with community and his responsibility toward environment and safety general through commitment with rules basic for the profession to prevent prevalence epidemics and diseases as well as importance his role in spreading awareness health and methods prevention prevalence diseases **relationships professional** - relationship technical medical with his colleagues in institution health - respect – cooperation – avoid criticism in front of patients- accuracy and honesty in evaluation performance	Studies relationship technical medical with society and colleagues	2	fourth ten
Assessment preparation for the final exam	Lecture and discussion	**ethics and research medical** - ethics conducting experiments medical in institutions health Iraqi	Identifies ethics research medical and education	2	fifth ten

10. Course Structure					
		- convention Helsinki for ethics experiments medical - ethics writing research medical **ethics Teaching and Learning on patients**			

11. Course Assessment	
Distribution Details	
30 points (for exams midterm and daily and reports)	
10 points (for attendance, participation, and activity)	
60 points (for the exam written final comprehensive)	

12. sources education and teaching	
Details	**type source**
1- Abd Al-Aziz Turkistani, ethics profession and behavior professional, university King Saud, 2008, Saudi Arabia. 2-Mohammed Al-Samii, ethics professions health, College Al-Jazeera of Sciences health, Sudan, 2012 theoretical / 5 practical.	Required Textbooks (Prescribed Curriculum, if any)
charters and guidelines ethics professions medical and health issued about entities official.	Main References (Sources)
books management and behavior organizational in institutions health.	Recommended Supporting Books and References
platforms scientific that/which publishes articles and research about errors medical and Professional Ethics.	Electronic References and Websites