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

Academic Program and Course Description Guide

Prosthodontic Dental Techniques

2026

Academic Program Description Form

University Name: AL-Furat Al-Awsat Technical University

Faculty/Institute: Najaf Technical Institute

Scientific Department: Prosthodontic Dental Techniques

Academic or Professional Program Name: Prosthodontic Dental Techniques

Final Certificate Name: Diploma in Prosthodontic Dental Techniques

Academic System: Courses

Description Preparation Date: 23/2/2026

File Completion Date: 3 /3/2026

Signature

Head of Department name

Assist Prof Dr. Dr.Amjed Raad Jasim

Signature

Scientific Associate Name:

Assist Prof Dr. Dr. Salah Mahdi Saleh

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Signature

Assist Dr.Zaid Abdulkareem Naji

Approval of the Dean

Prof. Haider Hassan Abd Hussein

Introduction:

The educational program is a well-planned set of courses that include procedures and experiences arranged in the form of an academic syllabus. Its main goal is to improve and build graduates' skills so they are ready for the job market. The program is reviewed and evaluated every year through internal or external audit procedures and programs like the External Examiner Program.

The academic program description is a summary of the main features of the program and its courses. It shows what skills students are working to develop based on the program's goals. This description is very important because it is the main part of getting the program accredited, and it is written by the teaching staff together under the supervision of scientific committees in the scientific departments.

This guide, in its second version, includes a description of the academic program after updating the subjects and paragraphs of the previous guide in light of the updates and developments of the educational system in Iraq, which included the description of the academic program in its traditional form (annual, quarterly), as well as the adoption of the academic program description circulated according to the letter of the Department of Studies T 3/2906 on 3/5/2023 regarding the programs that adopt the Bologna Process as the basis for their work.

In this regard, we can only emphasize the importance of writing an academic program and course descriptions to ensure the proper functioning of the educational process.

Concepts and terminology:

Academic Program Description: The academic program description provides a brief summary of its vision, mission and objectives, including an accurate descriptionof the targeted learning outcomes according to specific learning strategies.

Course Description: Provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the students to achieve, proving whether they have made the most of the available learning opportunities. Itis derived from the program description.

Program Vision: An ambitious picture for the future of the academic program to be sophisticated, inspiring, stimulating, realistic and applicable.

Program Mission: Briefly outlines the objectives and activities necessary to achievethem and defines the program's development paths and directions.

Program Objectives: They are statements that describe what the academic program intends to achieve within a specific period of time and are measurable and observable.

Curriculum Structure: All courses / subjects included in the academic program according to the approved learning system (quarterly, annual, Bologna Process) whether it is a requirement (ministry, university, college and scientific department)with the number of credit hours.

Learning Outcomes: A compatible set of knowledge, skills and values acquired bystudents after the successful completion of the academic program and must determine the learning outcomes of each course in a way that achieves the objectives of the program.

Teaching and learning strategies: They are the strategies used by the faculty members to develop students' teaching and learning, and they are plans that are followed to reach the learning goals. They describe all classroom and extra- curricular activities to achieve the learning outcomes of the program.

1. **Program Vision**

The vision of the Department of Prosthetic Dental Technology can be inspiring and ambitious, and includes improving the lives of people in need of prosthetics and support through technology and innovation. Here are some elements of the vision that can be part of this department:

***Improving quality and accuracy**: One of the most important goals of the department is to use modern methods in advanced technologies that allow the replacement of high-quality, precisely manufactured fixed and mobile prostheses to improve the lives of beneficiaries and enable them to perform daily tasks more effectively.

*__Advanced technology__: The vision aims to employ the latest technology in the field of artificial intelligence, using 3D manufacturing technology, and high-performance CAD-CAM technology.

* **Providing customized solutions**: The department seeks to provide solutions that suit the needs of patients in the learning clinic, whether by determining the type of appropriate dental prosthesis that suits the different needs and lifestyles of dental patients.

*__Communication and collaboration__: The department includes a strong vision to cooperate with medical and research institutions, government agencies, and non-profit organizations to exchange knowledge and achieve progress in the field of dental technology.

***Education and Training**: The department aims to provide a distinguished educational and training environment for students, researchers and professionals to develop their skills and enhance their scientific understanding in the field of dental technology..

***Leadership and Innovation**: The department seeks to be a leading center in the field of dental technology, and to play an active role in the development and innovation in this field of dental technology at the national and international levels.

*Sustainability and Social Responsibility: The department aims to achieve a balance between economic, environmental and social needs, and to work on developing dental technology products and contributing to preserving the environment and improving the social life of patients.

2. **Program Mission**

Our department aims to provide a stimulating educational and training environment for students and researchers interested in the field of dental technology. And to support academic and research excellence and the skills necessary to develop this vital field. We look forward to achieving the vision of our department and working hard and diligently to improve the lives of low-income patients.

3. **Program Objectives**

The department aims to graduate technical cadres who are qualified in knowledge and skills to manufacture fixed and removable dental prostheses, orthodontic appliances, and various facial and jaw prostheses.

4. **Program Accreditation**

Does the program have program accreditation? And from which agency?

5. **Other external influences**

- Ministry of Higher Education and Scientific Research
- • Ministry of Health
- • Ministry of Defense

6. Program Structure				
Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements	6	12	20.68	
College Requirements	13	71	10.34	
Department Requirements	12	111	68.96	
Summer Training		Satisfied		
Other				

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

7. Program Description				
Year/Level	Course Code	Course Name	Credit Hours	
First/ first semester			theoretical	practical
		Complete Denture (Basic)	2	8
		Partial Denture (Basic)	2	8
		Dental Anatomy (Basic)	2	8
		Dental laboratory materials and equipment)assistant	3	6
		English)assistant	2	–
		Computer Application (1)) assistant	–	2
		Human Rights Principles)assistant	2	–
First/ second semester		Complete Denture (Advanced)	2	8
		Partial Denture (Advanced)	2	8
		Dental Anatomy (Advanced)	2	8
		Dental laboratory materials and equipment (Advanced)	3	6
		Professional Safety)assistant	2	–
		Arabic Language)assistant	2	–
Second/ first semester		Complete Denture ((Basic)	2	8
		Chromium- Cobalt (Basic)	2	8
		Crown &Bridge (Basic	2	8
		Orthodontic Appliances(Basic	2	6

		Maxillofacial Prosthesis-)Basic	**1**	**3**
		Acrylic Partial Denture - (Basic	**–**	**4**
		Baath crimes in Iraq)assistant	**2**	**–**
Second/ second semester		**Complete Denture-) Advanced**	**2**	**8**
		Chromium- Cobalt–)Advanced	**2**	**8**
		Crown &Bridge (Advanced	**2**	**8**
		Orthodontic Appliances -)Advanced	**2**	**6**
		Maxillofacial Prosthesis-)Advanced	**1**	**3**
		Acrylic Partial Denture – (Advanced	**–**	**4**
		Professional Ethics) assistant	**2**	**–**
		Computer Application(2))assistant	**–**	**2**
		Arabic Language)assistant	**2**	**–**
		Research project)assistant	**–**	**2**

8. Expected learning outcomes of the program

Knowledge

•Identify all types of removable prostheses. •Identify all types of fixed prostheses. •Identify all types of facial and jaw prostheses. •Identify all types of orthodontic appliances appropriate for each case of orthodontics, whether fixed or removable.	Learning Outcomes Statement 1

Skills	
Acquire the skill in manufacturing removable prostheses •Acquire the skill in manufacturing fixed prostheses •Acquire the skill in manufacturing all types of orthodontic devices. • Acquire the skill in manufacturing facial and jaw prostheses	Learning Outcomes Statement 2
Learning Outcomes 3	Learning Outcomes Statement 3
Ethics	
Good dealing with the patient	Learning Outcomes Statement 4
Learning Outcomes 5	Learning Outcomes Statement 5

9. **Teaching and Learning Strategies**
• Theoretical lectures •Practical applications in the department's laboratories and the work of the educational clinic in the department •Graduation research • Computer laboratories

10. Evaluation methods
1. Theoretical and practical tests during lectures 2. Daily evaluation of students' work in the laboratory 3. 3. Graduation research

11.Faculty

Faculty Members

Academic Rank	Specialization		Special Requirements/Skills (if applicable)		Number of the teaching staff	
	General	Special			Staff	Lecturer
Teacher	3				Staff	
Assistant teacher		1			staff	
Assistant teacher	1					Lecturer
Assistant teacher	7				staff	
Bachelors	6					Lecturer
Technical	4					Lecturer

Professional Development

Mentoring new faculty members
Encouraging commitment and perseverance and involving them in courses on modern teaching methods
Professional development of faculty members
Continuous evaluation and encouragement of publishing scientific research

12. Acceptance Criterion

- Centralized acceptance

13. **The most important sources of information about the program**
• International educational curricula • The Internet

14. Program Development Plan
• Continuous updating of the curriculum • Developing the teaching staff • Institutional dependency

Program Skills Outline															
				Required program Learning outcomes											
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
First stage First semester		Complete Denture (Basic)	Basic	*				*	*			*	*		
		Partial Denture (Basic)	Basic	*	*			*				*			
		Dental Anatomy (Basic)	Basic	*				*	*			*	*		
		Dental laboratory equipment and devices	Basic	*	*			*				*			
		English	assistant	*			*	*				*			
		Computer Application (1)	assistant	*	*			*				*			
		Human Rights Principles	assistant	*			*	*			*	*	*		
First stage / second semester		Complete Denture (Advanced)	Basic	*				*	*			*			
		Partial Denture (Advanced)	Basic	*	*			*	*			*	*		
		Dental Anatomy (Advanced)	Basic	*				*				*	*		

		Dental laboratory equipment and devices	**Basic**	*	*			*	*			*			
		Professional Safety	**assistant**			*					*	*		*	
		Arabic Language	**assistant**		*				*			*	*		
Second stage / First semester		**Complete Denture (Advanced)**	**Basic**	*	*			*		*		*	*		
		Chromium- Cobalt (Basic)	**Basic**	*		*		*	*			*		*	
		Crown &Bridge (Basic	**Basic**	*				*				*			
		Orthodontic Appliances(Basic	**Basic**	*	*			*			*	*			
		Maxillofacial Prosthesis-)Basic	**Basic**	*	*			*	*			*	*		
		Acrylic Partial Denture - (Basic	**Basic**	*				*		*		*			
		Baath crimes in Iraq	**assistant**	*				*				*			
		Research project	**assistant**	*				*	*			*		*	
Second stage / Second semester		**Complete Denture-) Advanced**	**Basic**	*				*	*			*		*	
		Chromium- Cobalt–)Advanced	**Basic**	*				*			*	*	*	*	
		Crown &Bridge (Advanced	**Basic**												
		Orthodontic Appliances -)Advanced	**Basic**	*				*		*		*		*	

		Maxillofacial Prosthesis-)Advanced	**Basic**										*		
		Acrylic Partial Denture – (Advanced	**Basic**	*				*		*		*			
		Professional Ethics	**assistant**	*				*			*	*		*	
		Computer Application	**assistant**	*				*			*	*		*	
		Arabic Language	**assistant**	*				*				*			
		Research project	**assistant**	*				*				*		*	

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

Course Description Form

1. Course Name:

Complete Denture

2. Course Code:

1

3. Semester / Year:

1ST Semester - first stage

4. Description Preparation Date:

2025-2026

5. Available Attendance Forms:

Practical & Theory

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

10 Units Total - 285

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

Name: Noor Razaq

8. Course Objectives

Course Objectives After finishing the study, the graduate will be able to produce different types of prostheses.	-Casting the study mold -Making the special page -Casting the final impression -Making the set base taking into account the relationship of the upper and lower jaws -Cleaning the upper and lower teeth -Waxing the set and carving the teeth -Cooking the set of teeth and finishing it in the correct way - Polishing the set of teeth and sending it to the dental clinic

9. Teaching and Learning Strategies

Strategy	Theoretical foundation through various educational means such as computer display screen, live examples, etc. and its practical applicationin the laboratory under the supervision of specialized technicians and instructors.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name
1	2+8	The concept of the complete set, Knowing the stages of work scientifically, Knowing the meaning of the removable dental prosthesis	Instructions during laboratory work
2	2+8	Casting the first impression + making the special page	The mold in the laboratory
3	2+8	Final impression + denture base work and jaw relationship	Casting in the laboratory
4	2+8	Arrangement of anterior the teeth	Arrangementof teeth training
5	2+8	Arrangement of posterior the teeth	Arrangementof teeth training
6	2+8	Waxing the denture and carving the teeth	Waxing and Carving Training
7	2+8	Making a denture duplication with gps materials	Training on duplication with gps materials
8	2+8	Cooking in the conventional way	Training on cooking in the traditional way
9	2+8	Finishing the denture and removing excess	Training on polishing the denture
10	2+8	Polishing the denture	Training polishing the denture
11	2+8	Casting the initial impression + making the special page + making the final impression + making the denture base and taking the relationship of the jaws.	The mold in the laboratory
12	2+8	Arrangement of anterior and posterior the teeth	Arrangement of teeth training
13	2+8	Waxing the denture and carving the teeth	Waxing and Carving Training
14	2+8	Making a denture duplication with gps materials, Cooking in the conventional way.	Training on cooking in the traditional way
15	2+8	Finishing the denture and removing excess Polishing the denture	Training on Finishing and polishing the denture

11. Course Evaluation

Daily preparation, daily oral, monthly, written exams and reports

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Dental Prosthetic
Main references (sources)	Internet of Dental Prosthetic books
Recommended books and references (scientific journals, reports...)	Dental Prosthetic Magazines Dental Prosthetic Books Atlas on the Practical Side of Dental Prosthetic

Electronic References, Websites	https://www.facebook.com/p/%D8%B9%D8%A7%D9%84%D9%85-%D8%B7%D8%A8-%D8%A7%D9%84%D8%A3%D8%B3%D9%86%D8%A7%D9%86-%D9%88-%D9%83%D8%AA%D8%A8-%D9%85%D8%AC%D8%A7%D9%86%D9%8A%D8%A9-World-of-dentistry-free-books-100067564188568/

Course Description Form

1. Course Name:
Partial Denture (Basic)
2. Course Code:2
Technical diploma of Dantal Prosthodontics Technologies
3. Semester / Year:
First stage. First semester 2025-2026
4. Description Preparation Date:
15/2/2026
5. Available Attendance Forms:
Practical & Theory
6. Number of Credit Hours (Total) / Number of Units (Total)
10 /250
7. Course administrator's name (mention all, if more than one name)
Name: Saeef Ali
8. Course Objectives

Course Objectives	This program aims to graduate a qualified technical staff who have good knowledge and skills able to work in the field of Dental Prosthodontics Technologies in various moveable and fixed prosthesis
9. Teaching and Learning Strategies	
Strategy	1- Learn how to make special metal clasps for each tooth 2- Learn how to arrange the front teeth and wax the experimental partial denture 3- Learn how to arrange the back teeth and wax the experimental partial denture 4- Learn how to convert the wax experimental denture into acrylic 5- Learn how to polish and polish it and make it acceptable to the patient 6- Repair the partial denture in two ways (using hot acrylic and cold acrylic) 7- Learn how to receive the patient and how to deal with him

10. Course Structure					
Week	**Hours**	**Unit or subject name theory**	**Unit or subject name practical**	**Learning method**	**Evaluation method**
1	**2+8**	Taking impression primary by stock tray–materials used in constructing its [impression compound and alginate] upper & lower jaw.	Introduction the history of construction of partial denture and material used	1.Method of lecture 2. Discussion . 3.Questioning. 4. Presentation and learning skills 5. The use of educational audio-visual as a show movie in addition to systematic training in practical health Facilities	1.Assessment Majadharh directing questions directly. 2.editorial tests 3. step re-learn the skill by the student. 4. feedback And reporting. 5-chapter exam after thefirst 15 weeks
2	**2+8**	Pouring of primary casts with plaster material to produce the primary cast. (Upper &Lower). Special tray. Constructing special tray from the self-polymerized Acrylic with using spacer and method of its constructing, special tray using air-vacuumed pressure machines	Identify partial denture – Types – The effect of not replacing the missing teeth, when use it. Replacement the missing teeth of patient. Method used. examination,		
3	**2+8**	Making final impression utilizing digital intraoral scanner. Recently computer-aided design and computer-aided manufacturing (CAD/CAM) technology have been applied to complete dentures.	Material used in partial denture construction-types-requirement – which the dentist and technician uses it to fabricate the acrylic partial denture.		
4	**2+8**	Final impression must be poured with stone material to produce the master cast.	The material used in primary impression. The anatomical land mark. who to have The perfect cast. Short examination.		
5	**2+8**	Procedures for surveying, Surveying for final cast, How to trim master cast.	Study cast. Definition – making it – purpose of making it – detail part – anatomical land mark. Benefit of it and the material used in pouring study cast		
6	**2+8**	Requirement of blocking for final (upper & lower) cast. Assessment and giving marks for each work.	Impression material, Rigid impression material. Thermo plastic impression material, Elastic impression material, Elastomers material. The procedure is recommended for fabricating custom final impression trays		

7	**2+8**	Constructing Base plate for (lower &upper) casts. Assessment and giving marks for each work.	Master cast, definition-pouring the final cast – material used-terming the final cast.		
8	**2+8**	Occlusal bit fabricated on record bases for the purpose of making maxillomandibular relationship records. Assessment and giving marks for each work.	Kennedy classification for partial denture and modification-free end-bonding-drawing the design of partial denture		
9	**2+8**	Mounting final casts on the simple articulator (upper & lower) in centric Jaw relation class 1.	Component part of partial denture-function of each part-definition of direct retains-indirect retainer-of partial denture.		
10	**2+8**	Wires used in clasp- [bending the wire and fixation it in abutment teeth. For upper cast. Assessment and giving marks for each work.	Types of the reciprocal force for retainer and the effect of it in success of the partial denture-clasp-major connector minor connector- stress breaker-definition types-function.		
11	**2+8**	Wires used in clasp- [bending the wire and fixation it in abutment teeth. For lower cast. Assessment and giving marks for each work.	Surveyor-definition-component part of Surveyor benefit-insertion and removing the partial denture from the mouth of the patient. Types of tilting of the cast-zero tilt-other tilt. Short examination		
12	**2+8**	Mounting final cast. Assessment and giving marks for each work.	Lower major connector- types-uses-requirement		
13	**2+8**	Demonstration about arrangement of anterior & posterior teeth in centric & vertical jaw relation.	Upper major connector- types-requirement benefit of it short examination.		
14	**2+8**	Waxing the RPD Framework: Wax pattern on the master cast according to the established design	Wires used in clasp-requirement-bending the wire and fixation it in abutment teeth.		

15	**2+8**	Arranging of anterior and posterior teeth in cl II centric & vertical jaw relation. Assessment and giving marks for each work.	types of clasp – definition-types-uses-bending it at abutment teeth to make clasps		

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily, monthly, or written... etc

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**Required textbooks for partial denture**
Main references (sources)	
Recommended books and references (scientific journals, reports...)	**Thirteenth Edition McCracken's REMOVABLE PARTIAL PROSTHODONTICS** **Copyright © 2016 by Elsevier, Inc. All rights reserved.** **Department of Comprehensive Care and General Dentistry Removable Partial Denture Manual** **Robert W. Loney, DMD, MS 2011**
Electronic References, Websites	Net

Course Description Form

1. Course Name:
Dental Anatomy
2. Course Code: 3
Technical diploma Dental Prosthodontics Technologies
3. Semester / Year:
First 1 2025-2026
4. Description Preparation Date:
15/2/2026
5. Available Attendance Forms: Practical + theoretical
6. Number of Credit Hours (Total) / Number of Units (Total)
30/10
7. Course administrator's name (mention all, if more than one name)
Name: Dr. Yassir hamid

8. Course Objectives

Course Objectives	**Graduating technical cadres qualified cognitively and professionally to manufacture fixed dental prostheticsof all kinds**

9. Teaching and Learning Strategies

Strategy	**1.**Introducing the student to the scientific terms related to teeth and providing him with information related to the anatomical aspects of teeth. **2.** Through the scientific aspect, The student studies the drawing and carving of teeth for the purpose of benefiting from them in the field of his technical work. **3.**Knowing the anatomical signs specific to all upper and lower teeth **4.**The student is able to carve all front and back teeth. **5.**Learning about the methods of receiving the patient and how to deal with him

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	**2+8**	Demonstrate how to use dental carving instruments during work.	Definition of dental anatomy and definition of tooth anatomy (crown, root, neck). Definition of tooth layers (enamel, dentine, pulp, and cementum).	1-Method of lecture 2. Discussion. 3Questioning. 4Presentation and learn skills 5. The use of educational audio-visual as a show movies in addition to systematic training in practical health Facilities	1. Assessment Majadharh directing questions directly 2. editorial tests 3-step re-learn the skill by the student 4. feedback And reporting 5-chapter exam after the first 15 weeks
2	**2+8**	Preparation of block soap with certain measurements.	Dental formula definition and its uses in dentistry.		
3	**2+8**	Demonstrate how to Preparation of a triangle form with certain measurements on the soap and wax block.	Midline definition, importance. Explain parts of the tooth by drawing and used of the overhead projector.		
4	**2+8**	The student made a triangle shape on the soap block according to certain measurements.	Parts of the tooth (morphology of the tooth) and division into thirds.		
5	**2+8**	Demonstration of how to carve the labial surface for the maxillary central incisor.	Tooth division (both anterior and posterior tooth) &importance of anatomical landmarks.		
6	**2+8**	Demonstration of how to carve the mesial surfaces for the maxillary central incisor.	definition of anatomical landmarks of the tooth with diagrams and includes (cusp cingulum ,buccal ridge ,marginal ridge)		
7	**2+8**	Demonstration of how to carve the finishing of the maxillary central incisor& assessment of the work.	Materials & instruments used in tooth carving.		
8	**2+8**	Demonstration of how to carve the labial surface for the lateral incisor.	Deciduous teeth number & formation and names.		
9	**2+8**	Demonstration of how to carve the mesial surfaces for the lateral incisor.	definition all the landmarks of maxillary permanent central incisor (labial surface, lingual, mesial, distal and incisal surface)		
10	**2+8**	Demonstration of how to carve the finishing of the lateral incisor& assessment of the work.	Lateral incisor definition and its landmarks.		
11	**2+8**	The student made carved and finishing of the maxillary central incisor at the soap block	Lateral &mandibular canine (landmarks and comparison).		

		according to certain measurements.			
12	**2+8**	Demonstration of how to carve the labial surface for the canine.	Comparison between mandibular canine & maxillary canine by drawing and using data show.		
13	**2+8**	Demonstration of how to carve the mesial surfaces for the canine.	landmarks of the Maxillary first premolar		
14	**2+8**	Demonstration of how to carve the finishing of the canine & assessment of the work.	Landmarks of the Maxillary second premolar and comparison between Maxillary first and second premolars.		
15	**2+8**	**The student made carve & finishing of the maxillary canine on at the soap block according to certain measurements**	landmarks of the Mandibular first and second premolars		

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports.....etc

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	1. **Wheeler's Dental Anatomy, Physiology and Occlusion: 11th Edition - November 9, 2019** **Dental Laboratory Technology Books/Books for Dental Laboratory Technicians: Publisher: Martin Dunitz, Jan. 1999.**
Recommended books and references (scientific journals, reports...)	Posters and health education brochures issued by the departments of the Ministry of Health
Electronic References, Websites	Internet

Course Description Form

1. Course Name:
Dental Materials
2. Course Code:1 /4
Technical diploma in Prosthesis &Orthoesis
3. Semester / Year:
First 1 2025-2026
4. Description Preparation Date:
15/2/2026
5. Available Attendance Forms:
Practical + theoretical
6. Number of Credit Hours (Total) / Number of Units (Total)
45/9
7. Course administrator's name (mention all, if more than one name)
Name: Salah Mahdy

8. Course Objectives	
Course Objectives	Graduation of technical cadres qualified cognitively and professionally on how to use dental materials used in the dental industry.

9. Teaching and Learning Strategies	
Strategy	1. Knowledge of the principles of dental materials science and the terminology used in this field. 2.Knowledge of the chemical and physical properties of dental materials. 3.Knowledge of the compositions and methods of use of each of] gypsum materials, dental impression materials, metals, ceramics, types of waxes, acrylic resins and grinding and polishing materials used [in dentistry. 4. In addition to his ability to identify the good specifications of dental materials in the field of dental manufacturing techniques. 5. Choosing the appropriate dental materials for dental prosthetics in the field of dental manufacturing techniques.

10. Course Structure

Week	Hours	Unit or subject name theory	Unit or subject name practical	Learning method	Evaluation method
1	3+6	**Types of Dental Laboratories, General Dental Laboratories, Specialized Dental Laboratories, Private Dental Laboratories: (small laboratories). One step specialization, One line specialization, General work, Advantages & Disadvantages of the Work in Dental Laboratories. The principle of ideal laboratories. Points which are considered in the planning of penetration of the market.**	**Types of Dental Laboratories, General Dental Laboratories, Specialized Dental Laboratories, Private Dental Laboratories: (small laboratories). One step specialization, One line specialization, General work, Advantages & Disadvantages of the Work in Dental Laboratories. The principle of ideal laboratories. Points which are considered in the planning of penetration of the market.**	1-Method of lecture 2. Discussion. 3Questioning. 4Presentation and learn skills 5. The use of educational audio-visual as a show movies in addition to systematic training in practical health Facilities	1. Assessment Majadharh directing questionsdirectly 2. editorial tests 3-step re-learn the skill by the student 4. feedback And reporting 5-chapter exam after the first 15 weeks
2	3+6	**Hand Instruments, Types of Hand Instruments, A. Cutting Hand Instrument, Types of the Cutting Hand Instruments. Filings Hand Instruments, Carving Hand Instruments, Types of carving instrument. Mixing Hand Instruments, Classified.**	**Hand Instruments, Types of Hand Instruments, A. Cutting Hand Instrument, Types of the Cutting Hand Instruments. Filings Hand Instruments, Carving Hand Instruments, Types of carving instrument. Mixing Hand Instruments, Classified.**		
3	3+6	**Dental Equipment's Technology, Laboratory Engines, A. Macro engines, B. Micro engines. Hopper Duplicator.**	**Dental Equipment's Technology, Laboratory Engines, A. Macro engines, B. Micro engines. Hopper Duplicator.**		
4	3+6	**Impression Tray, Types of Impression, Materials used for constructed of special tray. Dental Equipment's Technology, Packing& Duplicating Tools. Metal flask for acrylic (Complete denture flask), Parts of Flask, Bridge Flask, Crown Flask, Giant Flask, Duplicating Flask, and Fiber Reinforced Plastic Flask.**	**Impression Tray, Types of Impression, Materials used for constructed of special tray. Dental Equipment's Technology, Packing& Duplicating Tools. Metal flask for acrylic (Complete denture flask), Parts of Flask, Bridge Flask, Crown Flask, Giant Flask, Duplicating Flask, and Fiber Reinforced Plastic Flask.**		
5	3+6	**Soldering, Depending on the designated use, solders are classified, Requirements of the ideal solder joint, Solder joint, components of soldered joint, parent metal, anti-flux, flux, steps in**	**Soldering, Depending on the designated use, solders are classified, Requirements of the ideal solder joint, Solder joint, components of soldered joint, parent metal, anti-flux, flux, steps in**		

		soldering.	**soldering.**		
6	**3+6**	**Welding, types of welding, Requirements of the ideal welding joint, steps in welding.**	**Welding, types of welding, Requirements of the ideal welding joint, steps in welding.**		
7	**3+6**	**Dental Lathe, They divided into two types of dental lathe, Components. Of dental lathe. Trimmer, Used, types, Vibrator, Components. Articulator, Articulators can be divided into three types.**	**Dental Lathe, They divided into two types of dental lathe, Components. Of dental lathe. Trimmer, Used, types, Vibrator, Components. Articulator, Articulators can be divided into three types.**		
8	**3+6**	**Dental Press, They are two types, [Simple Press, Hydraulic Press], Parts of the Hydraulic Press. Dental Surveyor, parts of a surveyor, uses of a dental surveyor, types of surveyor. Dental laboratory polymerize Ivomat, Properties of Ivomat**	**Dental Press, They are two types, [Simple Press, Hydraulic Press], Parts of the Hydraulic Press. Dental Surveyor, parts of a surveyor, uses of a dental surveyor, types of surveyor. Dental laboratory polymerize Ivomat, Properties of Ivomat**		
9	**3+6**	**Dental Laboratory Sandblast, used, Sandblasters Components. Dental laboratory water bath, used. Electronic wax spatula. It is so-called dental waxers, Components of Dental waxers. Wax Eliminators, Parts of wax Eliminators.**	**Dental Laboratory Sandblast, used, Sandblasters Components. Dental laboratory water bath, used. Electronic wax spatula. It is so-called dental waxers, Components of Dental waxers. Wax Eliminators, Parts of wax Eliminators.**		
10	**3+6**	**Ceramic Furnace (called dental ovens), used, Types of dental Ceramic Furnace. Wax Dipping Pot (called wax reservoir), Components of Dental wax dippers.**	**Ceramic Furnace (called dental ovens), used, Types of dental Ceramic Furnace. Wax Dipping Pot (called wax reservoir), Components of Dental wax dippers.**		
11	**3+6**	**Mechanical mixer device, consist from. Burnout Furnace, Components of Dental wax dippers. Dental Casting Rings. Sprue base (Crucible former), Brush bur and disc brush. Dental ceramic firing tray. General measurement instruments. Dental hammer device. Dental Laboratory Measuring Cups.**	**Mechanical mixer device, consist from. Burnout Furnace, Components of Dental wax dippers. Dental Casting Rings. Sprue base (Crucible former), Brush bur and disc brush. Dental ceramic firing tray. General measurement instruments. Dental hammer device. Dental Laboratory Measuring Cups.**		
12	**3+6**	**Dental Laboratory Casting machine, used, Components, Centrifugal Casting**	**Dental Laboratory Casting machine, used, Components, Centrifugal**		

		machine, Dental Laboratory Alloy grinder, used. Dental vacuum mixers, used, Components.	**Casting machine, Dental Laboratory Alloy grinder, used. Dental vacuum mixers, used, Components. Dental Laboratory Acrylic Injection Systems, Advantages, Components. Denture Curing Units, used, Components.**		
13	**3+6**	**Dental Laboratory Acrylic Injection Systems, Advantages, Components. Denture Curing Units, used, Components.**	**Dental Laboratory Acrylic Injection Systems, Advantages, Components. Denture Curing Units, used, Components**		
14	**3+6**	**Dental Air Pressure Curing Units, used, Components. Dental Agar Gel Mixer, used, Components. Finishing And polishing materials, A. Cutting, B. Abrasion, C. Finishing, Objectives of finishing. Applications of Abrasives in Dentistry**	**Dental Air Pressure Curing Units, used, Components. Dental Agar Gel Mixer, used, Components. Finishing And polishing materials, A. Cutting, B. Abrasion, C. Finishing, Objectives of finishing. Applications of Abrasives in Dentistry**		
15	**3+6**	**Machined Restoration, Use a system CAD/CAM, Dental CAD/CAM systems consist of three components. Microwave oven, Parts of microwave oven. Biostar, The device composed from, Applications of Biostar. Electric scale (balance), Ultrasonic cleaner device, Operation of Drilling, Unit Components.**	**Machined Restoration, Use a system CAD/CAM, Dental CAD/CAM systems consist of three components. Microwave oven, Parts of microwave oven. Biostar, The device composed from, Applications of Biostar. Electric scale (balance), Ultrasonic cleaner device, Operation of Drilling, Unit Components.**		

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, dailyoral, monthly, or written exams, reports ..... etc

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**DENTAL LABORATORY EQUIPMENT TECHNICIAN (Duration: Two Years) Revised in July 2022**
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	**Internet**

Course
Description Form

1. Course Name:

English language

2. Course Code:

3. Semester / Year:

First semester / First year

4. Description Preparation Date:

15/2/2026

5. Available Attendance Forms:

Attendance

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

30 hours / 2 units

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

Name: Aya Adal

7. Course Objectives

Course Objectives	Students can be able to know and use the medical terminology

8. Teaching and Learning Strategies

Strategy	- Lectures - Discussion

9. Course Structure/ Theoretical

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2		**Chapter One : Medical terminology** Language of medicine Medical terms Spelling of medical terms Pronunciation of medical terms	lecture	examination
2	2		**Chapter One :** Focus on reading Vocabulary development Focus on grammar Oral skills		
3	2		**Chapter One :** Focus on writing Pronunciation exercise Review exercises Self-assessment		
4	2		**Chapter Two : Suffixes** Medical terms Suffixes Focus on reading		
5	2		**Chapter Two :** Vocabulary development Focus on grammar Case report Oral communication skills		
6	2		**Chapter Two :** Focus on writing Pronunciation of medical terms Review exercises Self-assessment		
7	2		**Chapter Three : Prefixes** Medical terms Prefixes Focus on reading		
8	2		**Chapter Three :** Vocabulary development Focus on grammar Oral communication skills Focus on writing		
9	2		**Chapter Three :** Pronunciation of medical terms Review exercises Self-assessment		
10	2		**Chapter Four : Body structure** Body structure Principal body systems Planes of the body Orientation and directional terms		
11	2		**Chapter Four :** Body positions Body cavities Focus on reading Vocabulary development Focus on grammar		

12	2		**Chapter Four :** Oral communication skills Focus on writing Review exercises Self-assessment		
13	2		**Chapter Five : Body systems** Body systems Focus on reading Vocabulary development		
14	2		**Chapter Five :** Focus on grammar Oral communication skills Focus on writing		
15	2		**Chapter Five :** Pronunciation of medical terms Review exercises Self-assessment		

10. Course Evaluation

- Mid Examination: Theoretical 30 Marks

- Final examination: Theoretical 70 Marks

11. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	English for Medicine & Health Sciences Shehdeh Fareh & Inaam Hamadi, Elsevier, 2017.
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

1. Course Name:

Complete Denture (Advanced)

2. Course Code:

1

3. Semester / Year:

2ND semester / first stage

4. Description Preparation Date:

15/2/2026

5. Available Attendance Forms:

Practical & Theory

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

250 / 10

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

Name: Huda Ayad

8. Course Objectives

Course Objectives After finishing the study, the graduate will be able to produce different types of prostheses.	-Casting the study mold -Making the special page -Casting the final impression -Making the set base taking into account the relationship of the upper and lower jaws -Cleaning the upper and lower teeth -Waxing the set and carving the teeth -Cooking the set of teeth and finishing it in the correct way - Polishing the set of teeth and sending it to the dental clinic

13. Teaching and Learning Strategies

Strategy	Theoretical foundation through various educational means such as computer display screen, live examples, etc. and its practical applicationin the laboratory under the supervision of specialized technicians and instructors.

9. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	8+2	**Mounting of casts on the Semi adjustable articulator –definition – parts – types – Artificial teeth –definition – constructed materials –types of artificial teeth according to occlusal surface shape.**	**Demonstration about arrangement of anterior teeth in centric Jaw relation& vertical jaw relation, cl I jaw relation.**	1.method of lecture 2. Discussio n . 3.Questionin g. 4. Presentati onand learning skills 5. The use of educational audio-visual asa show movie in addition to systematic training in practical health Facilities	1. Assessment Majadharh directing questions directly. 2. editorial tests 3. step re-learn the skill by the student. 4. feedback And reporting. 5-chapter exam after the first 15 weeks
2	8+2	**Anterior teeth – an idea on how to choose anterior teeth – selection of anterior teeth on cast – functions of anterior teeth –their role in different functions of jaw – arranging anterior teeth – explaining method of arranging each tooth.**	**Assessment and giving marks for each work**		
3	8+2	**Posterior teeth –functions – methods of selecting posterior teeth –location of posterior teeth – functions of posterior teeth, advantages of monoplane teeth.**	**Demonstration about arranging posterior teeth by centric jaw relation with balancing lateral, protrusion and anterior occlusion.**		
4	8+2	**Arrangement of teeth, Sequence of artificial teeth arrangement, Arrangement of the up. Ant. Teeth [Upper Central incisor, Upper lateral incisor, Upper Canine].**	**Assessment and giving marks for each work.**		
5	8+2	**Arrangement of the lower anterior. Teeth [Lower Central incisor, Lower lateral incisor, Lower Canine].**	**Making posterior palatal seal with waxing denture and carving wax. Assessment and giving marks for each work.**		
6	8+2	**Arrangement of posterior teeth, Orientation of the occlusal plane [mandibular 1st. premolar, Mandibular 2nd. Premolar, Mandibular 1st. molar, Mandibular. 2nd. Molar].**	**Flasking, wax eliminating and packing and curing of Heat-cure Acrylic.**		
7	8+2	**Define compensating curve, Curve of Spee, Arrangement of Maxillary teeth [Upper 1st. molar, maxillary 2nd. Premolar, maxillary 1st. Premolar, maxillary 2nd. Molar]**	**Demonstration about arrangement of anterior teeth in centric Jaw relation& vertical jaw relation, cl II jaw relation. Assessment and giving marks for each work. Assessment and giving marks for each work.**		
8	8+2	**Vibrating line, location of posterior palatal seal with its different types – benefits Waxing dentures– definition – Procedure of waxing and carving– different methods Followed in waxing – stippling. Most common errors in festooning.**	**Assessment and giving marks for each work.**		
9	8+2	**Flasking – flask –definition –parts– Procedure method — how to keep it elimination Of wax –definition Procedure method.**	**Demonstration about arrangement of anterior teeth in centric Jaw relation& vertical jaw**		

			relation, cl III jaw relation. Assessment and giving marks for each work. Assessment and giving marks for each work.		
10	8+2	Packing hot cured acrylic, chemical operation of hot cured acrylic – methods used in curing acrylic [Slow curing cycle method, Rapid curing cycle method, long curing cycle method	Flasking, wax eliminating and packing hot cured acrylic, chemical operation of hot cured acrylic – methods used in Curing acrylic.		
11	8+2	Deflasking- removal of the mold from the flask and separate the mold from the denture and the cast. The cured dentures and their casts have been removed from the mold.	Finishing and polishing with correcting occlusion.		
12	8+2	Main Steps on Finishing and Polishing, procedure of Finishing, Procedure of polishing [Polish labial, buccal, lingual, and palatal external surfaces of the denture with wet pumice on rag wheel attached to dental lathe running at slow speed].	Demonstration about arrangement of posterior teeth in centric Jaw relation& vertical jaw relation, cl II jaw relation. Assessment and giving marks for each work.		
13	8+2	Remounting of cast and denture on articulator – benefits – methods followed and reasons.	Demonstration about arrangement of posterior teeth in centric Jaw relation& vertical jaw relation, cl III jaw relation. Assessment and giving marks for each work. Assessment and giving marks for each work.		
14	8+2	Correction of occlusion errors in lateral occlusion and protrusion occlusion.	Demonstration about arrangement of anterior teeth in centric Jaw relation& vertical jaw relation, cl I jaw relation.		
15	8+2	Abnormal jaw relations –types – arranging teeth in cl II, cl III.	Assessment and giving marks for each work		

10. Course Evaluation

Daily preparation, daily oral, monthly, written exams and reports

11. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**-Dental Laboratory technology**
Main references (sources)	**TEXT Book of complete Dentures .Arthur D.Rehan 2010**
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

1. Course Name:
Removable acrylic partial denture(Advanced)
2. Course Code:
2
3. Semester / Year:
First year- Course 2/ 2025-2026
4. Description Preparation Date:
15/2/2026
5. Available Attendance Forms:
Practical & Theory
6. Number of Credit Hours (Total) / Number of Units (Total)
250/ 10
7. Course administrator's name (mention all, if more than one name)
Name: **Baeda Alqasiy**
8. Course Objectives

Course Objectives	Lecture, Seminars, computer data show and showing films for construction partial denture.
9. Teaching and Learning Strategies	
Strategy	A- Knowledge and Understanding A1.How to use dental instruments and devices in construction removable partial denture A2.Identify the health and safety before and after graduation A3.Application the theoretical part in practical terms A4.well communication with patient A5.Understanding the manipulation of the material B. Subject-specific skills B1.Develop student skill for using instruments B2.Create hand skill for clasp construction B3.Create skill to design partial denture

10. Course Structure

Week	Hours	Unit or subject name theory	Unit or subject name practical	Learning method	Evaluation method
1	8+2	**Record base, Occlusal relations using occlusion rims on record base, Mounting of dental cast, Jaw Relation in R.P.D. Vertical Dimension, Centric Jaw relation.**	**Arranging of anterior and posterior teeth in cl III centric & vertical jaw relation. Assessment and giving marks for each work.**	1-Method of lecture 2. Discussion. 3Questioning. 4Presentation and learn skills 5. The use of educational audio-visual as a show movies in addition to systematic training in practical health Facilities	1.Assessment Majadharh directing questions directly 2. editorial tests 3-step re-learn the skill by the student 4. feedback And reporting 5-chapter exam after the first 15 weeks
2	8+2	**Mounting of dental cast, Interocclusal records with posterior teeth remaining, Articulator, Advantages of articulator, Classification of articulator.**	**Arranging of anterior and posterior teeth in cl IV centric & vertical jaw relation. Assessment and giving marks for each work.**		
3	8+2	**Types of replacement teeth (materials), Porcelain teeth, Advantages, Disadvantages, Acrylic teeth, Advantages, Disadvantages.**	**Waxing &carving of trial denture. Flasking wax eliminating and packing by hot cured acrylic.**		
4	8+2	**The selection of the anterior teeth & selection of the posterior teeth.**	**Packing hot cured acrylic, chemical operation of hot cured acrylic – methods used in Curing acrylic.**		
5	8+2	**The sequence of teeth in partial denture, Ethics, In neutral zone, Zero zones.**	**Finishing and polishing with correcting occlusion.**		
6	8+2	**Grinding of artificial teeth during setting: when grinding is needed. How grinding should be done.**	**Demonstration about how constriction [Repair of broken partial denture by cold & hot cured acrylic.**		
7	8+2	**Anterior teeth –functions – methods of selecting anterior teeth –location of anterior teeth – functions of anterior teeth.**	**Repair replacing tooth by cold resin repairing.**		
8	8+2	**Posterior teeth –functions – methods of selecting posterior teeth –location of posterior teeth – functions of posterior teeth.**	**Making the [Repair of broken partial dentures] by cold resin repairing.**		
9	8+2	**Balancing occlusion with different jaw movements; protrusion occlusion – another method for arranging posterior teeth with posterior relations.**	**Demonstration about how constriction [Repair of broken partial dentures] by hot cured acrylic.**		
10	8+2	**Waxing dentures – methods of waxing – definition – different methods followed**			

		in waxing – stippling.			
11	**8+2**	**Flasking – flask –definition – parts – how to keep it elimination of wax – definition –working method –packing hot cured acrylic.**	**Making the Repair of broken partial dentures by hot cured acrylic.**		
12	**8+2**	**Remounting of cast and denture on articulator – benefits – methods followed and reasons. Correction of occlusion errors in lateral occlusion and protrusion occlusion**	**Demonstration about how constriction (anterior and posterior) Immediate Denture partial denture.**		
13	**8+2**	**Cleaning finished denture – elimination of specula – finishing and polishing.**	**Making the (anterior and posterior) Immediate Denture partial denture. Assessment and giving marks for each work.**		
14	**8+2**	**Immediate denture, Advantages, Disadvantages, How to fabricate it.**	**Demonstration about how constriction (anterior and posterior) Flexible Denture partial denture.**		
15	**8+2**	**Stress breaker, Advantages, Disadvantages, Repair of broken partial denture, types. Advantages of cold resin repairing, Replacing tooth.**	**Making the (anterior and posterior) Flexible Denture partial denture. Assessment and giving marks for each work.**		

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, dailyoral, monthly, or written exams, reports.....etc

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**Thirteenth Edition McCracken's REMOVABLE PARTIAL PROSTHODONTICS Copyright © 2016 by Elsevier, Inc. All rights reserved. Department of Comprehensive Care and General Dentistry Removable Partial Denture Manual Robert W. Loney, DMD, MS 2011**
Main references (sources)	**Cal Guide to Removable Partial Denture Design Pdf Uploaded: 2023 Jul 27, 02:46**
Recommended books and references (scientific journals, reports...)	**Thirteenth Edition McCracken's REMOVABLE PARTIAL PROSTHODONTICS Copyright © 2016 by Elsevier, Inc. All rights reserved. Department of Comprehensive Care and General Dentistry Removable Partial Denture Manual Robert W. Loney, DMD, MS 2011**
Electronic References, Websites	**موقع كوكل العلمي**

Course Description Form

1. Course Name:

Dental Anatomy (Advanced)

2. Course Code: 3

3. Semester / Year:

First year- Course 2/ 2025-2026

4. Description Preparation Date:

15/2/2026

5. Available Attendance Forms:

Practical + theoretical

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

250/10

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

Name: Yassir Hamid

8. Course Objectives

Course Objectives	Introducing the student to the scientific terms related to teeth and providing him with information related to the anatomical aspects of teeth and through the practical aspect. * Sculpting all teeth with wax and soap for the purpose of benefiting from them in the field of his technical work

9. Teaching and Learning Strategies

Strategy	* Introducing the student to the scientific terms related to teeth and providing him with information related to the anatomical aspects of teeth . • Through the scientific and practical aspect, the student studies drawing and sculpting teeth for the purpose of benefiting from them in the field of his technical work. • Knowing the anatomical signs specific to all upper and lower teeth and benefiting from them during the laboratory practical when manufacturing fixed prostheses inside the patient's mouth. *The student is able to sculpt all front and back teeth

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	**2+8**	**The student made carve & finishing of the maxillary canine on at the wax block according to certain measurements.**	**Definition, landmarks of the first maxillary premolar.**	1-Method of lecture 2. Discussion. 3Questioning. 4Presentation and learn skills 5. The use of educational audio-visual as a show movies in addition to systematic training in practical health Facilities	1. Assessment Majadharh directing questions directly 2. editorial tests 3-step re-learn the skill by the student 4. feedback And reporting 5-chapter exam after the first 15 weeks
2	**2+8**	**The student made carve & finishing of the mandibular canine on at the wax block according to certain measurements.**	**Comparison between maxillary canines differentiates between tooth & another by the landmark at the surfaces.**		
3	**2+8**	**Demonstration of how to carve the Buccal surface for the first maxillary premolar.**	**Definition, landmarks of the first and second maxillary premolar.**		
4	**2+8**	**Demonstration of how to carve the mesial surfaces for the maxillary premolar.**	**Principal identifying features for the Maxillary First Premolar, Maxillary Second Premolar, and Different Aspects of Maxillary Right Second Premolar,[Buccal Aspect, Lingual Aspect, Mesial Aspect, Distal Aspect, Occlusal Aspect].**		
5	**2+8**	**Demonstration of how to carve the finishing of the maxillary premolar & assessment of the work.**	**Definition, landmarks of the mandibular first premolar. Characteristics that resemble those of the mandibular canine, Characteristics that resemble those of the mandibular second premolar, [Buccal Aspect, Lingual Aspect, Mesial Aspect, Distal Aspect, Occlusal Aspect].**		
6	**2+8**	**The student made carved and finishing of the maxillary premolar at the wax block according to certain measurements.**	**Permanent Mandibular Second Premolar, Principal identifying features, [Buccal Aspect, Lingual Aspect, Mesial Aspect, Distal Aspect, and Occlusal Aspect]. In the three cusps type and In the two cusps type**		
7	**2+8**	**Demonstration of how to carve the Buccal surface for the first maxillary molar.**	**Comparison between mandibular first &second premolar by the landmarks.**		
8	**2+8**	**Demonstration of how to carve the mesial surfaces for the maxillary molar.**	**Maxillary First Molar, , Principal identifying features, [Buccal Aspect, Lingual Aspect, Mesial Aspect, Distal Aspect, and Occlusal Aspect].**		
9	**2+8**	**Demonstration of how to carve the finishing of the maxillary molar & assessment of the work.**	**Permanent Maxillary Second Molar, Principal identifying features, [Buccal Aspect, Lingual Aspect, Mesial Aspect, Distal Aspect, and Occlusal Aspect].**		
10	**2+8**	**The student made carved and finishing of**	**Maxillary Third Molar, Principal identifying features**		

		the maxillary premolar at the wax block according to certain measurements.			
11	**2+8**	**Demonstration of how to carve the Buccal surface for the first maxillary molar.**	**Comparison between first& second Maxillary molars.**		
12	**2+8**	**Demonstration of how to carve the mesial surfaces for the first mandibular molar.**	**Mandibular First Molar, Principal identifying features, [Buccal Aspect, Lingual Aspect, Mesial Aspect, Distal Aspect, and Occlusal Aspect].**		
13	**2+8**	**Demonstration of how to carve the finishing of the first mandibular molar & assessment of the work.**	**Mandibular Second Molar, Principal identifying features, [Buccal Aspect, Lingual Aspect, Mesial Aspect, Distal Aspect, and Occlusal Aspect]. Mandibular Third Molar, Principal identifying features, [Buccal Aspect, Lingual Aspect, Mesial Aspect, Distal Aspect, and Occlusal Aspect.**		
14	**2+8**	**The student made carved and finishing of the first mandibular premolar at the wax block according to certain measurements.**	**Drawings of the upper & lower landmarks….quiz**		
15	**2+8**	**Demonstration of how to carve the Buccal surface for the second Maxillary molars.**	**Review.**		

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .....etc

12.Learning and Teaching Resources

Required textbooks (curricular books, if any)	1. **Wheeler's Dental Anatomy, Physiology and Occlusion: 11th Edition - November 9, 2019**
Main references (sources)	**Dental Laboratory Technology Books/Books for Dental Laboratory Technicians: Publisher: Martin Dunitz, Jan. 1999**
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

13.Course Name:

laboratory equipment and devices (Advanced)

14.Course Code: 4

15.Semester / Year:

First year- Course 2/ 2025-2026

16.Description Preparation Date:

15/2/2026

17.Available Attendance Forms:

Practical + theoretical

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

250/10

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

Name: Salah Mahdi

20.Course Objectives

Course Objectives	: The student should be able at the end of the year to identify the devices used in all dental laboratories and how to maintain and use them correctly and how to develop future plans to design and furnish these laboratories.

21.Teaching and Learning Strategies

Strategy	**First:** The student should become familiar with dental laboratories and the correct use of devices, machines and tools used in them. **Second**: The student should learn and practice the principles and theories of laboratory management and design. **Third**: The student should learn how to maintain and maintain the devices in them. **Fourth**: The student should learn the methods and techniques of storing materials and devices in the laboratories. **Fifth**: The student should learn the necessary plans to design and furnish these laboratories and the connections attached to them.

22. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	**2+8**	**Types of Dental Laboratories, General Dental Laboratories, Specialized Dental Laboratories, Private Dental Laboratories: (small laboratories). One step specialization, One line specialization, General work, Advantages & Disadvantages of the Work in Dental Laboratories. The principle of ideal laboratories. Points which are considered in the planning of penetration of the market.**	**Types of Dental Laboratories, General Dental Laboratories, Specialized Dental Laboratories, Private Dental Laboratories: (small laboratories). One step specialization, One line specialization, General work, Advantages & Disadvantages of the Work in Dental Laboratories. The principle of ideal laboratories. Points which are considered in the planning of penetration of the market.**	1-Method of lecture 2. Discussion. 3Questioning. 4Presentation and learn skills 5. The use of educational audio-visual as a show movies in addition to systematic training in practical health Facilities	1. Assessment Majadharh directing questions directly 2. editorial tests 3-step re-learn the skill by the student 4. feedback And reporting 5-chapter exam after the first 15 weeks
2	**2+8**	**Hand Instruments, Types of Hand Instruments, A. Cutting Hand Instrument, Types of the Cutting Hand Instruments. Filings Hand Instruments, Carving Hand Instruments, Types of carving instrument. Mixing Hand Instruments, Classified.**	**Hand Instruments, Types of Hand Instruments, A. Cutting Hand Instrument, Types of the Cutting Hand Instruments. Filings Hand Instruments, Carving Hand Instruments, Types of carving instrument. Mixing Hand Instruments, Classified.**		
3	**2+8**	**Dental Equipment's Technology, Laboratory Engines, A. Macro engines, B. Micro engines. Hopper Duplicator.**	**Dental Equipment's Technology, Laboratory Engines, A. Macro engines, B. Micro engines. Hopper Duplicator.**		
4	**2+8**	**Impression Tray, Types of Impression, Materials used for constructed of special tray. Dental Equipment's Technology, Packing& Duplicating Tools. Metal flask for acrylic (Complete denture flask), Parts of Flask, Bridge Flask, Crown Flask, Giant Flask, Duplicating Flask, and Fiber Reinforced Plastic Flask.**	**Impression Tray, Types of Impression, Materials used for constructed of special tray. Dental Equipment's Technology, Packing& Duplicating Tools. Metal flask for acrylic (Complete denture flask), Parts of Flask, Bridge Flask, Crown Flask, Giant Flask, Duplicating Flask, and Fiber Reinforced Plastic Flask.**		
5	**2+8**	**Soldering, Depending on the designated use,**	**Soldering, Depending on the designated use, solders are**		

		solders are classified, Requirements of the ideal solder joint, Solder joint, components of soldered joint, parent metal, anti-flux, flux, steps in soldering.	**classified, Requirements of the ideal solder joint, Solder joint, components of soldered joint, parent metal, anti-flux, flux, steps in soldering.**		
6	**2+8**	**Welding, types of welding, Requirements of the ideal welding joint, steps in welding.**	**Welding, types of welding, Requirements of the ideal welding joint, steps in welding.**		
7	**2+8**	**Dental Lathe, They divided into two types of dental lathe, Components. Of dental lathe. Trimmer, Used, types, Vibrator, Components. Articulator, Articulators can be divided into three types.**	**Dental Lathe, They divided into two types of dental lathe, Components. Of dental lathe. Trimmer, Used, types, Vibrator, Components. Articulator, Articulators can be divided into three types.**		
8	**2+8**	**Dental Press, They are two types, [Simple Press, Hydraulic Press], Parts of the Hydraulic Press. Dental Surveyor, parts of a surveyor, uses of a dental surveyor, types of surveyor. Dental laboratory polymerize Ivomat, Properties of Ivomat**	**Dental Press, They are two types, [Simple Press, Hydraulic Press], Parts of the Hydraulic Press. Dental Surveyor, parts of a surveyor, uses of a dental surveyor, types of surveyor. Dental laboratory polymerize Ivomat, Properties of Ivomat**		
9	**2+8**	**Dental Laboratory Sandblast, used, Sandblasters Components. Dental laboratory water bath, used. Electronic wax spatula. It is so-called dental waxers, Components of Dental waxers. Wax Eliminators, Parts of wax Eliminators.**	**Dental Laboratory Sandblast, used, Sandblasters Components. Dental laboratory water bath, used. Electronic wax spatula. It is so-called dental waxers, Components of Dental waxers. Wax Eliminators, Parts of wax Eliminators.**		
10	**2+8**	**Ceramic Furnace (called dental ovens), used, Types of dental Ceramic Furnace. Wax Dipping Pot (called wax reservoir), Components of Dental wax dippers.**	**Ceramic Furnace (called dental ovens), used, Types of dental Ceramic Furnace. Wax Dipping Pot (called wax reservoir), Components of Dental wax dippers.**		
11	**2+8**	**Mechanical mixer device, consist from. Burnout Furnace, Components of Dental wax dippers. Dental Casting Rings. Sprue base (Crucible former), Brush bur and disc brush.**	**Mechanical mixer device, consist from. Burnout Furnace, Components of Dental wax dippers. Dental Casting Rings. Sprue base (Crucible former), Brush bur and disc brush. Dental ceramic firing tray. General measurement**		

		Dental ceramic firing tray. General measurement instruments. Dental hammer device. Dental Laboratory Measuring Cups.	**instruments. Dental hammer device. Dental Laboratory Measuring Cups.**		
12	**2+8**	**Dental Laboratory Casting machine, used, Components, Centrifugal Casting machine, Dental Laboratory Alloy grinder, used. Dental vacuum mixers, used, Components.**	**Dental Laboratory Casting machine, used, Components, Centrifugal Casting machine, Dental Laboratory Alloy grinder, used. Dental vacuum mixers, used, Components. Dental Laboratory Acrylic Injection Systems, Advantages, Components. Denture Curing Units, used, Components.**		
13	**2+8**	**Dental Laboratory Acrylic Injection Systems, Advantages, Components. Denture Curing Units, used, Components.**			
14	**2+8**	**Dental Air Pressure Curing Units, used, Components. Dental Agar Gel Mixer, used, Components. Finishing And polishing materials, A. Cutting, B. Abrasion, C. Finishing, Objectives of finishing. Applications of Abrasives in Dentistry**	**Dental Laboratory Acrylic Injection Systems, Advantages, Components. Denture Curing Units, used, Components.**		
15	**2+8**	**Machined Restoration, Use a system CAD/CAM, Dental CAD/CAM systems consist of three components. Microwave oven, Partsof microwave oven. Biostar, The device composed from, Applications of Biostar. Electric scale (balance), Ultrasonic cleaner**	**Dental Air Pressure Curing Units, used, Components. Dental Agar Gel Mixer, used, Components. Finishing And polishing materials, A. Cutting, B. Abrasion, C. Finishing, Objectives of finishing. Applications of Abrasives in Dentistry**		

23. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports..... etc

24.Learning and Teaching Resources

Required textbooks (curricular books, if any)	**DENTAL LABORATORY EQUIPMENT TECHNICIAN (Duration: Two Years) Revised in July 2022**
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

1. Course Name:
Complete Denture (Basic)
2. Course Code:
2
3. Semester / Year:
Second Stage/ First course/2026
4. Description Preparation Date:
15/2/2026
5. Available Attendance Forms:
Practical + theoretical
6. Number of Credit Hours (Total) / Number of Units (Total)
(250) hour (10 unit)
7. Course administrator's name (mention all, if more than one name)
Name : Huda Ayad
8. Course Objectives

Course Objectives	**After finishing the study, the graduate will be able to produce different types Of complete denture.**
9. Teaching and Learning Strategies	
Strategy	**1-** Gaining sufficient skill to manufacture complete dentures of all types and how to deal with materials and laboratory equipment used to make dentures. **2-** In addition to his ability to recognize the impression and deal with the types of impressions according to the molds. **3-** Manufacturing special newspapers and their types and the registration base and how to arrange them. **4-** Knowing the jaw relationships and transferring them to the dental articulator. **5-** Arranging artificial teeth with jaw relationships of degrees 1, 2, 3. **6-** Waxing the denture and carving the wax. **7-** Converting the wax denture to acrylic and trimming and polishing the denture

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	**2+8**	**Repair of complete denture, definition, objectives, materials used, description of the procedure of repairing(*Types of repair*) I. Repairing the complete denture fractures when all broken parts are available. Clinical and laboratory procedure: II. Replacement of a broken or missing tooth or teeth.**	**[Stock tray ----primary impression ---pouring with plaster -----Study cast]+ [special tray --- Final impression---- pouring with stone------- master cast]**	1.Method of lecture 2. Discussion . 3.Questioning. 4. Presentation and learning skills 5. The use of educational audio-visual as a show movie in addition to systematic training in practical health Facilities	1.Assessment Majadharh directing questions directly. 2.editorial tests 3. step re-learn the skill by the student. 4. feedback And reporting. 5-chapter exam after the first 15 weeks
2	**2+8**	**III. Repairing complete denture with missing labial or lingual border. I. Repairing the complete denture fractures when all broken parts are available. III. Repairing complete denture with missing labial or lingual border.**	**Construction of base plates and the making of bite rims, Mounting casts in a jaw relation casts in a class.1**		
3					
4	**2+8**	**Reline and rebase. Definition objectives, instruments & materials use of relining and rebasing. Procedure, advantages and disadvantages, using Hooper duplicator. Repair of complete denture, laboratory procedure.**	**Waxing &carving of trial denture.**		
5	**2+8**	**Denture Reline, laboratory procedure [Hard Denture Reline, Soft Denture Reline. The indications for relining or Rebasing, Contraindication of relining and rebasing.**			
6	**2+8**	**Relining can be achieved into two ways, 1. Direct (chair side in the clinic).**	**Flasking, packing, curing, Deflasking, finishing, polishing.**		
7		**The disadvantage of cold cure acrylic as relining material.**			

		Procedure of indirect relining laboratory procedure. Procedure of rebasing laboratory procedure			
8	**2+8**	**Immediate Denture: Introduction, definition, Indications & Contraindications. Immediate Denture, advantages, disadvantages Objectives.**	**Remounting of casts and selective grinding, Semi adjustable articulator, adjustment and uses. Balancing the occlusion**		
9	**2+8**	**Immediate denture can be classified according to type of restoration into: 1. Immediate complete denture. 2. Immediate partial denture. 3. Immediate over denture**	**Arrangement of anterior and posterior teeth in a CII J.R. with errors. Waxing &carving of trial denture.**		
10	**2+8**	**Surgical templates Definition, uses, material are used for surgical guide implants. Flexible dentures: Introduction, definition, Indications & Contraindications Advantages & Disadvantages of flexible Denture.**			
11	**2+8**	**Over denture, important goals of over denture, Indications & Contraindications. Over-Dentures Advantages and Disadvantage, 2-implant supported, Indications for Over dentures, Used In tooth/root/Implant.**	**Flasking, packing, curing, Deflasking, finishing, polishing.**		
12			**Remounting of casts and selective grinding, Semi adjustable articulator, adjustment and uses. Balancing the occlusion**		
13	**2+8**	**Classification of tooth supported over denture Based on the method of abutment preparation: 1. Non coping abutment. 2. Abutment with coping preparation.**	**Arrangement of anterior and posterior teeth in a C III J.R. with errors Waxing &carving of trial denture.**		
14					
15	**2+8**	**There are two types of copings: A. Short copings. B. Long copings.**	**Remounting of casts and selective grinding, Semi adjustable articulator, adjustment and uses. Balancing the occlusion**		

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .....etc

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**Boucher's Prosthodontic Treatment for Edentulous Patients (11th Edition) 11th Edition**
Main references (sources)	**Dental Laboratory Procedures (Complete Denture)**
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

1. Course Name:

Chromium- Cobalt (Basic)

2. Course Code:

2

3. Semester / Year:

second year- Course 1 2025-2026

4. Description Preparation Date:

15/2/2026

5. Available Attendance Forms:

Theory Practical

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

250/ 10

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

Name: Ali Kamal

8. Course Objectives

Course Objectives	**The student will be able at the end of the year to identify the materials and devices used in the manufacture of chrome cobalt removable partial dentures through training and honing technical skills in performing laboratory steps in the manufacture of chrome cobalt removable partial dentures.**

9. Teaching and Learning Strategies

Strategy	1- Acquire the skill to know the materials used in the metal partial denture laboratories. 2- Training on how to design the metal partial denture with all its parts. 3- Methods of manufacturing the metal partial denture.

10. Course Structure

Week	Hours	Unit or subject name theory	Unit or subject name practical	Learning method	Evaluation method
1	2+8	**Introduction, short history for construction metals removable partial denture (chromium- cobalt alloy).**	**Primary impression, Designing the prosthesis, and Final impression & Master Cast, Method of pouring and preparation.**	1-Method of lecture 2. Discussion. 3Questioning. 4Presentation and learn skills 5. The use of educational audio-visual as a show movies in addition to systematic training in practical health Facilities	Assessment Majadharh directing questions directly 2. editorial tests 3-step re-learn the skill by the student 4. feedback And reporting 5-chapter exam after the first 15 weeks
2	2+8	**Type of removable partial denture, introduction definitions, different between removable partial and fixed partial dentures.**	**Tertiary surveying to the master cast, Surveying of master cast, types of surveyor device, Types of tilting for master cast.**		
3	2+8	**Chromium- cobalt alloy, types of alloys, definitions physical properties, melting-points, uses, in dentistry.**	**Path of insertion and removed of partial dentures, Types of under cuts, desirable and undesirable under- cut.**		
4	2+8	**Terminology and definitions for metals partial denture (chromium- cobalt alloy),**	**Wax-up (relief and block out, How to block- out undesirable under- cuts. Relief in the edentulous areas. • Beneath lingual bar connectors. • Areas in contact with thin tissues.**		
5	2+8	**Introduction and outline for metals removable partial denture and component parts.**	**Types of Block Out: 1. Paralleled Blackout. 2. Shaped Blackout. 3. Arbitrary Blackout**		
6	2+8	**Direct retainer, intra-coronal direct retainer, extra- coronal direct retainer, cast clasp, Flexibility of clasp**	**Component parts of metal removable partial denture, Types of direct retainer, Types of saddles area.**		
7	2+8	**Types of claps, terminology of uses the different types clasp.**	**Duplicating Master Cast by (agar) ,and preparation of refractory casts**		
8	2+8	**Roach clasp, types, uses, advantages, indication and location.**	**Design Transfer: Before the actual waxing can begin, the design must be transferred on the refractory cast**		
9	2+8	**Surveying, introduction, Path of insertion and removal of partial denture, direction of clasps on the teeth affected on the retention.**	**Waxing the RPD Framework: Wax pattern on the duplicate cast according to the established design.**		
10	2+8	**Kennedy classification for partial denture and modification-free end-**	**Properties of direct retainer (clasp), Types of retainer.**		

		bonding-drawing the design of partial denture.			
11	**2+8**	**Component part of partial denture- function of each part-definition of direct retains-indirect retainer-of partial denture.**	**Construction of major connectors and minor connectors, types& uses.**		
12	**2+8**	**Types of the reciprocal force for retainer and the effect of it in success of the partial denture.**	**Construction of Spruing, types of sprue direct and indirect types of sprue.**		
13	**2+8**	**Occlusal rest, functions, preparation, types of Occlusal rest.**	**Investing the Sprued Pattern: the investment for an RPD casting consists of two parts: a. The investment cast on which the wax pattern is made. b. The outer investment was surrounding the cast and pattern.**		
14	**2+8**	**Major connector, mandibular major connector, properties, types**	**Burn out [The burnout procedure serves three purposes: i. It drives off moisture in the mold. ii. It vaporizes and thus eliminates the pattern, leaving a cavity in the mold. iii. It expands the mold to compensate for contraction of the metal on cooling.**		
15	**2+8**	**Maxillary major connector, properties, types, (Single palatal strap, strap U.**	**Casting metal frame- work [melting the alloys (chromium- cobalt)].**		

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports.....etc

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**1.Removable Partial Denture Manual Robert W. Loney, DMD, MS 2011**
Main references (sources)	**2. *Stewart's Clinical* REMOVABLE PARTIAL PROSTHODONTICS *Fourth Edition* ---- [DNLM: 1. Denture, Partial, Removable. 2. Denture Design. WU 515 P574s 2008]**
Recommended books and references (scientific journals, reports...)	**3. Removable Partial Dentures: A Practitioners'Manual 1st ed. 2016 Edition**
Electronic References, Websites	Net

Course Description Form

1. Course Name:
Crown &Bridge (Basic)
2. Course Code:
2
3. Semester / Year:
second year- Course 1 2025-2026
4. Description Preparation Date:
15/2/2026
5. Available Attendance Forms:
Theory / Practical
6. Number of Credit Hours (Total) / Number of Units (Total)
250/10
7. Course administrator's name (mention all, if more than one name)
Name: Yassir Hamid

8. Course Objectives	
Course Objectives	**The student should be able at the end of the year to know all the anatomical signs of all teeth and be able to carve all the anatomical signs of all teeth in the upper and lower jaws, through training and refining the technical skills in performing the laboratory steps in making crowns and bridges**

9. Teaching and Learning Strategies	
Strategy	**1-** Acquiring the skill to know the materials used in crowns and bridges laboratories. **2-** Training on how to manufacture crowns and bridges of all kinds from metal, porcelain and zirconia. **3-** Methods of manufacturing dental implants from zirconia and using modern CAT CAM devices.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2+8	History of Crown and Bridge-Introduction , Definition-Types of Restoration	Primary impression, Designing the prosthesis, and Final impression.	1-Method of lecture 2. Discussion. 3Questioning. 4Presentation and learn skills 5. The use of educational audio-visual as a show movies in addition to systematic training in practical health Facilities	1. Assessment directing questions directly 2. editorial tests 3-step re-learn the skill by the student 4. feedback And reporting 5-chapter exam after the first 15 weeks
2	2+8	Types of crowns (classification), A: according to coverage area, B: According to materials, Indications of crown.	Working cast with removable dies, Method of pouring and preparation.		
3	2+8	Bridge (fixed partial denture): Components of the bridge, Bridge classification, Contra indication of the bridge, Objectives of tooth Preparation, Finishing line of the preparation, Requirement and Types (design or configuration) of the finish line	Trimming the Die, Occlusal record techniques, with an Articulator.		
4	2+8	Impression for crown and bridge work, Objective and Requirements of taking an impression, Primary and Final impression, Working casts and dies, Requirement of a good working cast, Requirement of the dies, and Type of the dies materials.	Techniques of construction of wax pattern, [Waxing of Full Metal crown, Waxing of Full veneer Crown, Jacket Crown, Waxing of 3/4 veneer Crown] for anterior teeth.		
5	2+8	Construction of a stone die (working cast with removable dies), Clinical procedure to obtain a working cast with removable dies, Cast and Dies formation Using dowel Pin – Index – Di-Lock Tray Systems – Sewing the Cast-Separation The Die – Trimming the Die.			
6	2+8	Why we do trimming to the die, Position of finishing line, Centric relationship, Methods of inter-Occlusal record techniques, with an Articulator.	Techniques of construction of wax pattern, [Waxing of Full Metal crown, Waxing of Full veneer Crown, Jacket Crown , Waxing of 3/4 veneer Crown] for posterior teeth		
7	2+8	Techniques of construction of wax pattern, The advantage of the indirect over the direct technique, Inlay Wax Composition, Classification of inlay wax, Three requirements and properties of wax.			
8	2+8	Correction of defects, Adding of adequate cement spacer or die spacer, Marking the finishing lines, Waxing technique, Steps of wax pattern procedure.	Window of veneer Crown anterior and posterior teeth		
9	2+8	Wax pattern of posterior teeth, Waxing the Occlusal surface, Distortion of the wax pattern cannot be prevented, but can be minimized.	Spruing with wax Pattern, Venting, and, Investing crown.		
10	2+8	Sprue – Definition, Spruing	Burnout the Ring,		

		Procedure, Sprue design, Role of the sprue, Purposes and Requirements of the sprue, Types of Sprue, Spruing with wax Pattern, Venting.	**Casting, Cleaning of Cast Restorations, Laboratory Seating & Adjustment of the Crown Framework, Finishing off the Cast Restoration, and Polishing.**		
11	**2+8**	**Investment – Definition – Types, Objectives of investing, Ideal properties required for an investment, General composition of investment materials.**			
12	**2+8**	**To do investing we need, Advantages of the ring liner, Crucible Former, Purposes of using conical crucible former, Classification of Dental Investment Materials, Methods of mixing the investment material, Step-by-step procedure.**			
13	**2+8**	**Wax elimination or burnout, Casting machines, The flame used in the casting composes of 4 zones, casting technique.**	**Waxing of Full veneer Crown, Flasking, wax elimination and packing of acrylic (Laboratory step).**		
14	**2+8**	**Casting procedure, Dental casting alloy, Properties of alloys, Classification of casting alloys by physical properties.**	**Finishing and Polishing.**		
15	**2+8**	**Cleaning Of Cast Restorations, Purposes or Benefits of Quenching, Laboratory Seating & Adjustment of the Crown Framework, Finishing off the Cast Restoration, Casting Finishing/ Polishing summary**	**Spruing with wax Pattern, Venting, and, Investing crown.**		

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as dailypreparation, daily oral, monthly, or written exams, reports ..... etc

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	1- Textbook of Crown and Bridge Prosthodontics.
Main references (sources)	**2- Planning and Making Crowns and Bridges.**
Recommended books and references (scientific journals, reports...)	**3- Dental Crowns and Bridges** **4- Dental Laboratory Technology - Crown and Bridge Techniques**
Electronic References, Websites	

Course Description Form

1. Course Name:
Orthodontic Appliances(Basic)
2. Course Code:
4
3. Semester / Year:
Second 1 2025-2026
4. Description Preparation Date:
15/2/2026
5. Available Attendance Forms:
Theoretical and practical
6. Number of Credit Hours (Total) / Number of Units (Total) 45/3
6 /150
7. Course administrator's name (mention all, if more than one name)
Name: Ali Dureed

8. Course Objectives	
Course Objectives	**Knowledge of manufacturing all devices for fixed and removable orthodontics and enabling the student to treat all crookedness ofall teeth for the upper and lower jaws**

9. Teaching and Learning Strategies	
Strategy	1. Identify the properties of wires, their types and sizes and deal with them correctly. 2. Create manual skills to make braces for orthodontics. 3. Develop the student's skills in how to make orthodontic devices 4. The student studies the manufacture of all fixed and removable orthodontic devices for the purpose of benefiting from them in his technical field of work. 5. How to make removable orthodontics for all ages and all medical conditions.

10. Course Structure					
Week	**Hours**	**Unit or subject name theory**	**Unit or subject name practical**	**Learning method**	**Evaluation method**
1	**4+2**	Definition of orthodontic, Aims of orthodontic, types of orthodontic treatment.	Recognize the types of tools and wire that used in orthodontic laboratory.	1-Method of lecture 2. Discussion. 3Questioning. 4Presentation and learn skills 5. The use of educational audio-visual as a show movies in addition to systematic training in practical health Facilities	.1Assessment directing questions directly 2. editorial tests 3-step re-learn the skill by the student 4. feedback And reporting 5-chapter exam after the first 15 weeks
2	**4+2**	Wire bending, principle in wire bending towels used in wire bending, false point in wire bending.	Wire bending of different figures (straight, circle, triangle, rectangle and cube).		
3	**4+2**	Stainless steel wire used in dentistry and in the laboratory work	Manufacture of Z – Spring		
4	**4+2**	Characteristic of stain lees steel wire used in orthodontic, composition types gage.	Manufacture of recurved Z – Spring		
5	**4+2**	Occlusion, definition, centric occlusion, centric relation, types of occlusion, centric relation, types of occlusion in orthodontic, characteristic of normal occlusion.	Manufacture of finger spring		
6	**4+2**	Occlusion at birth, characteristic of dental arch in new baby, sequence of eruption of deciduous teeth, sequence of eruption of ugly dug ling stage.	. Manufacture of Modified finger spring		
7	**4+2**	Malocclusion, definition, etiology of mal occlusion, classification of mal occlusion.	Modification of Buccal canine retractor		
8	**4+2**	Factors affected malocclusion, general factor, local factor, individual mal posit tooth.	Modification of Modified Buccal canine retractor		
9	**4+2**	Orthodontic appliances, definition, types of orthodontic appliance requirement of orthodontic appliances.	Modification of Fitted labial arch.		
10	**4+2**	Removable orthodontic appliance function, type’s passive removable orthodontic appliance, active or mechanical removable orthodontic appliance, functional appliance.	Modification of T clasp		
11	**4+2**	Active or mechanical orthodontic appliance	Modification of		

		component parts (retention part Base active part , Anchorage part)	Adams clasp & its modification.		
12	**4+2**	Retention part (Adam's clasp, construction of Adam's clasp. Advantages of Adams clasp, modification of Adam's clasp, fitted labial arch.			
13	**4+2**	Base , definition , extension , active part of base function of base , Anterior bite plane , posterior bite plane , material used in construction of base types of material , characteristic of material.	Modification of Hawly labial arch		
14	**4+2**	Active part, spring (z spring, modified, z spring) finger spring. Modified finger spring) Buckle canine retractor modified buckle canine retractor, labial arch, Robert arch elastic, screw.			
15	**4+2**	Anchorage, type of anchorage, Extra oral, intra oral anchorage, simple anchorage, reciprocal and change.	Modifications of Base plate construction		

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .....etc

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**1- Sandhya Shyam Lohakare, Orthodontic Removable Appliances, ed.1, 2008.**
Main references (sources)	**2- Laura Mitchell MBE, introduction to orthodontics, ed.4, 2013.**
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	Net

Course Description Form

1. Course Name:
Maxillofacial Prosthesis- (Basic)
2. Course Code:
5
3. Semester / Year:
Semester- 2nd stage – 1 st semester
4. Description Preparation Date:
15-2-2026
5. Available Attendance Forms:
Theoretical and practical
6. Number of Credit Hours (Total) / Number of Units (Total)
30 hours -2 units
7. Course administrator's name (mention all, if more than one name)
Name: Ali Reead

8. Course Objectives	
Course Objectives:	**Introducing modern technical materials and methods that work with the electronic computer system and practical laboratory steps to improve the specifications of facial and jaw prostheses into the curriculum**
9. Teaching and Learning Strategies	
Strategy	1. Identify the types of deformities in the face and jaws and methodsof compensation. 2. Identify the materials used in facial and jaw prostheses. 3. Manufacture of various prosthetic devices such as (eye, nose, deformities of the roof of the mouth, ear). 4. The student will be able to perform the practical steps in thelaboratory and make facial and jaw prostheses

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3+2	History of maxillofacial	Construction of special tray for the facial and dental impression, Impression taking & requirements Study the landmarks for the dental impression and Pouring the impression, making cast.	1-Method of lecture 2. Discussion. 3Questioning. 4Presentation and learn skills 5. The use of educational audio-visual as a show movies in addition to systematic training in practical health Facilities	.1Assessment directingquestions directly 2. editorial tests 3-step re-learn the skill by the student 4. feedback And reporting 5-chapter exam after the first 15 weeks
2	3+2	Definition – prostheses, prosthodontics			
3	3+2	Appliance palatial obturators stent	Construction of feeding plate (waxing, flasking, packing, curing and finishing).		
4	3+2	The causes of maxillofacial defect			
5	3+2	Maxillofacial defect types	Construction of the palatal obturator (waxing, setting teeth, modification Adams clasp retention)		
6	3+2	Anatomy of head and neck			
7	3+2	Anatomy of the face	Flasking, packing, curing, finishing and polishing of obturator prosthesis.		
8	3+2	History of maxillofacial			
9	3+2	Palate-pharyngeal mechanism Types of palatal defect	Construct the Ocular tray & Construction of the wax pattern ocular prosthesis g.		
10	3+2				
11	3+2	Cleft lip and pellet Types of cleft lip and palate	flasking, packing, curing, finishing and polishing of ocular prosthesis		
12	3+2				
13	3+2	Causes of cleft lip and palate	Construction of the wax pattern Ear prosthesis.		
14	3+2	Palate-pharyngeal mechanism			
15	3+2	Types of palatal defect	flasking, packing, curing, finishing and polishing of Ear prosthesis		

11. Course Evaluation

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**1- M. C. Goiato, M. Miyashita, D. M. dos Santos et al., "Radipherous**
Main references (sources)	**protheses, an alternative for the treatment of head and neck neoplasias," *Revista Cubana Estomatologia*, vol. 43, no. 2, 2016.**
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

1. Course Name:
Acrylic Partial Denture - ((Basic))
2. Course Code:
6
3. Semester / Year:
second year- Course 1 2025-2026
4. Description Preparation Date:
15/2/2026
5. Available Attendance Forms:
Practical
6. Number of Credit Hours (Total) / Number of Units (Total)
250/10
7. Course administrator's name (mention all, if more than one name)
Name: Ali kamal
8. Course Objectives

Course Objectives	Graduating technical staff qualified cognitively and professionally to manufacture acrylic partial dentures and how to repair them when broken or missing teeth while the patient wears them for several years

9. Teaching and Learning Strategies	
Strategy	1-Learn how to make metal clasps for each tooth. 2- Learn how to arrange the front teeth and wax the experimental partial denture 3-Learn how to arrange the back teeth and wax the experimental partial denture 4- Learn how to convert the wax experimental denture to acrylic 5- Learn how to polish and polish it and make it acceptable to the patient 6- Repair the partial denture in two ways (using hot acrylic and cold acrylic) 7- Learn how to receive the patient and how to deal with him

10. Course Structure

Week	Hours	Required Learning Outcomes	Learning method	Evaluation method
1	4	Stock tray-----primary impression---- pouring with plaster----- Study cast]+ [special tray --- Final impression---- pouring with stone -------master cast]	**1-Method of lecture 2. Discussion. 3Questioning. 4Presentation and learn skills 5. The use of educational audio-visual as a show movies in addition to systematic training in practical health Facilities**	**1.Assessment directingquestions directly 2. editorial tests 3-step re-learn the skill by the student 4. feedback And reporting 5-chapter exam after the first 15 weeks**
2	**4**			
3	**4**	Construction of base plates and the making of bite rims, Mounting casts in a jaw relation [casts in a class.1, class2 and class 3]. of partial denture		
4	**4**	Place the cast on the surveyor table and orient the plane of occlusion relatively horizontally. The final tilt of the cast for the ideal path of insertion, and blocking undercut area.		
5	**4**	Arrangement of anterior and posterior teeth of partial denture in a class. 1 Jaw relation. Waxing &carving of a trial of partial denture.		
6	**4**			
7	**4**	Flasking, packing, curing, Deflasking, finishing, polishing for partial denture.		
8	**4**			
9	**4**	Remounting of casts and selective grinding, Semi adjustable articulator, adjustment and uses. Balancing the occlusion		
10	**4**	Place the cast on the surveyor table and orient the plane of occlusion relatively horizontally. The final tilt of the cast for the ideal path of insertion, and blocking undercut area. Arrangement of anterior and posterior teeth in a CII J.R. with errors of partial denture. Waxing &carving of trial denture.		
11	**4**			
12	**4**	Flasking, packing, curing, Deflasking, finishing, polishing for partial denture.		
13	**4**			
14	**4**	Remounting of casts and selective grinding,		
15	**4**			

		Semi adjustable articulator, adjustment and uses. Balancing the occlusion		

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports ..... etc

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	1- Textbook of Crown and Bridge Prosthodontics.
Main references (sources)	1.Removable Partial Denture Manual Robert W. Loney, DMD, MS 2011
Recommended books and references (scientific journals, reports...)	2. *Stewart's Clinical* REMOVABLE PARTIAL PROSTHODONTICS *Fourth Edition* ---- [DNLM: 1. Denture, Partial, Removable. 2. Denture Design. WU 515 P574s 2008
Electronic References, Websites	

Course Description Form

13. Course Name:	
Complete Denture (Advanced)	
14. Course Code:	
2	
15. Semester / Year:	
second year- Course 2	
16. Description Preparation Date:	
15/2/2026	
17. Available Attendance Forms:	
Practical + theoretical	
18. Number of Credit Hours (Total) / Number of Units (Total)	
(250) hour (10 unit)	
19. Course administrator's name (mention all, if more than one name)	
Name: Huda Ayad	
20. Course Objectives	
Course Objectives	**After completing the study, the graduate will be able to manufacture the complete acrylic denture on dental implants**
21. Teaching and Learning Strategies	
Strategy	1-.Gain sufficient skill to manufacture complete dentures of all types and how to deal with the materials and laboratory equipment used to make dentures on dental implants 2- In addition to his ability to recognize the impression and deal with types on dental implants and according to the molds. 3- Know the jaw relationships and transfer them to the dental articulator and deal with dental implants correctly 4- Arrange artificial teeth with jaw relationships of degrees 1, 2, 3. 5- Waxing the denture and carving the wax. 6- Converting the wax denture to acrylic and finishing and polishing the denture.

22. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	**2+8**	Patient Selection and Treatment Planning for Implant Restorations How do dental implants work	[Stock tray ----primary impression ---pouring with plaster----- Study cast]+ [special tray --- Final impression---- pouring with stone------- master cast]	1. Method of lecture 2. Discussion . 3.Questioning. 4. Presentation and learning skills 5. The use of educational audio-visual as a show movie in addition to systematic training in practical health Facilities	1. Assessment directing questions directly. 2. editorial tests 3. step re-learn the skill by the student. 4. feedback And reporting. 5-chapter exam after the first 15 weeks
2	**2+8**	Systemic contraindications to implant therapy: Local contraindications to implant therapy.	Construction of base plates and the making of bite rims, Mounting casts in a jaw relation casts in a class.1		
3		What is a dental implant: definition, objectives, materials used, description of the procedure? How long should I wait after tooth extraction to get my teeth replaced by implants?			
4	**2+8**	Dental Implants Advantages and Disadvantages, contraindications to dental implant surgery	Waxing &carving of trial denture.		
5	**2+8**	Different types of dental implants: Short implants, Zygomatic implants,			
6	**2+8**	Procedure done: *Single-Stage Treatment, Two-Stage Treatment*.	Flasking, packing, curing, Deflasking, finishing, polishing.		
7		Type of implant: 1. Endosseous (en-doss-ee-us)- *"*within the bone*"* 2. Subperiosteal (sub-pear-ee-oss-tee-al)-*"*on top of the bone" 3. Transosteal (trans-oss-tee-al)-*"*through the bone. 4. Epithelial Implants.			
8	**2+8**	Dental Implants Component: 1 .The implant root or screw, A. Fixture construction, b. Surface texture, c. Fixture coatings. 2 .The implant abutment. 3. The crown/dental prosthesis.	Remounting of casts and selective grinding, Semi adjustable articulator, adjustment and uses. Balancing the occlusion		
9	**2+8**		Arrangement of anterior and posterior teeth in a CII J.R. with errors.		
10	**2+8**	Artificial teeth: Final prosthetic Restoration Short-term failure Long-Term			

		Complications with Dental Implants.	Waxing &carving of trial denture.		
11	**2+8**		Flasking, packing, curing, Deflasking, finishing, polishing.		
12		Maxillary and Mandibular implants site selection: Overdentures Treatment Options.	Remounting of casts and selective grinding, Semi adjustable articulator, adjustment and uses. Balancing the occlusion		
13	**2+8**	3- Abutments with attachment. 4. Submerged Vital Roots. 5- Abutments with telescopic crown.	Arrangement of anterior and posterior teeth in a C III J.R. with errors Waxing &carving of trial denture.		
14		1- Periodontal status.			
15	**2+8**	2- Endodontic considerations 3-The number and position of abutment teeth in the arch	Remounting of casts and selective grinding, Semi adjustable articulator, adjustment and uses. Balancing the occlusion		

23. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .....etc

24. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**Boucher's Prosthodontic Treatment for Edentulous Patients (11th Edition) 11th Edition**
Main references (sources)	**Dental Laboratory Procedures (Complete Denture)**
Recommended books and references (scientific journals, reports...)	

Electronic References, Websites

Course Description Form

13. Course Name:	
Chromium- Cobalt (Advanced)	
14. Course Code:	
2	
15. Semester / Year:	
second year- Course 2 2025-2026	
16. Description Preparation Date:	
15/2/2026	
17. Available Attendance Forms:	
Theory Practical	
18. Number of Credit Hours (Total) / Number of Units (Total)	
250/ 10	
19. Course administrator's name (mention all, if more than one name)	
Name: Ali Reead	
20. Course Objectives	
Course Objectives	**The student will be able at the end of the year to identify the materials and devices used in the manufacture of chrome cobalt removable partial dentures through training and honing technical skills in performing laboratory steps in the manufacture of chrome cobalt removable partial dentures.**
21. Teaching and Learning Strategies	
Strategy	1-Acquire the skill to know the materials used in the metal partial denture laboratories. 2-Training on how to design the metal partial denture with all its parts. 3-Methods of manufacturing the metal partial denture.

22. Course Structure

Week	Hours	Unit or subject name theory	Unit or subject name practical	Learning method	Evaluation method
1	**2+8**	Minor connectors, functions, preparation, properties, indication and uses.	Primary impression, Designing the prosthesis, and Final impression & Master Cast, Method of pouring and preparation.	1-Method of lecture 2. Discussion. 3Questioning. 4Presentation and learn skills 5. The use of educational audio-visual as a show movies in addition to systematic training in practical health Facilities	Assessment directing questions directly 2. editorial tests 3-step re-learn the skill by the student 4. feedback And reporting 5-chapter exam after the first 15 weeks
2	**2+8**	Indirect retainer, function and location, types, the Factor which effected on it.	Tertiary surveying to the master cast, Surveying of master cast, types of surveyor device, Types of tilting for master cast.		
3	**2+8**	Edentulous areas, denture bases and saddles, designing, functions, properties.	Path of insertion and removed of partial dentures, Types of under cuts, desirable and undesirable under- cut.		
4	**2+8**	Stress breaker, types of stress breaker, advantage, disadvantages.	Wax-up (relief and block out, How to block- out undesirable under- cuts. Relief in the edentulous areas. • Beneath lingual bar connectors. • Areas in contact with thin tissues.		
5	**2+8**	Jaw relations, centric occlusion, setting of artificial teeth.	Types of Block Out: 1. Paralleled Blackout. 2. Shaped Blackout. 3. Arbitrary Blackout		
6	**2+8**	Flasking of partial dentures (Chromium-cobalt) packing of acrylic base dentures, deflasking.	Component parts of metal removable partial denture, Types of direct retainer, Types of saddles area.		
7	**2+8**	Finishing of partial dentures (chromium-cobalt) polishing of metal partial dentures before delivery.	Duplicating Master Cast by (agar) ,and preparation of refractory casts		
8	**2+8**	Soldering the fracture pieces of partial denture (chromium- cobalt), procedure of soldering	Design Transfer: Before the actual waxing can begin, the design must be transferred on the refractory cast		
9	**2+8**	Immediate partial denture, properties, uses,& setting of teeth for immediate partial denture	Waxing the RPD Framework: Wax pattern on the duplicate cast according to the established design.		
10	**2+8**	CAD-CAM Technique, Definition, All CAD/CAM systems consist of three components, Materials for CAD/CAM processing,	Properties of direct retainer (clasp), Types of retainer.		

11	**2+8**	Manufacturing steps for framework of partial prosthesis, Advantages of digital fabrication of dentures, Limitations and disadvantages of digital fabrication of dentures,	Construction of major connectors and minor connectors, types& uses.		
12	**2+8**	Seminars	Construction of Spruing, types of sprue direct and indirect types of sprue.		
13	**2+8**	Slides projection with seminars.	Investing the Sprued Pattern: the investment for an RPD casting consists of two parts: a. The investment cast on which the wax pattern is made. b. The outer investment was surrounding the cast and pattern.		
14	**2+8**	Slides projection with seminars	Burn out [The burnout procedure serves three purposes: i. It drives off moisture in the mold. ii. It vaporizes and thus eliminates the pattern, leaving a cavity in the mold. iii. It expands the mold to compensate for contraction of the metal on cooling.		
15	**2+8**	Showing films.	Casting metal frame- work [melting the alloys (chromium- cobalt)].		

23. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports.....etc

24. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**1.Removable Partial Denture Manual Robert W. Loney, DMD, MS 2011**
Main references (sources)	**2. *Stewart's Clinical* REMOVABLE PARTIAL PROSTHODONTICS *Fourth Edition* ---- [DNLM: 1. Denture, Partial, Removable. 2. Denture Design. WU 515 P574s 2008]**
Recommended books and references (scientific journals, reports...)	**3. Removable Partial Dentures: A Practitioners'Manual 1st ed. 2016 Editio**
Electronic References, Websites	Net

Course Description Form

13. Course Name:	
Crown &Bridge (Advanced)	
14. Course Code:	
2	
15. Semester / Year:	
second year- Course 2 2025-2026	
16. Description Preparation Date:	
15/2/2026	
17. Available Attendance Forms:	
Theory / Practical	
18. Number of Credit Hours (Total) / Number of Units (Total)	
250/10	
19. Course administrator's name (mention all, if more than one name)	
Name: Yassir Hameed	
20. Course Objectives	
Course Objectives	**The student should be able at the end of the year to know all the anatomical signs of all teeth and be able to carve all the anatomical signs of all teeth in the upper and lower jaws, through training and refining the technical skills in performing the laboratory steps in making crowns and bridges**
21. Teaching and Learning Strategies	
Strategy	**1-** Acquiring the skill to know the materials used in crowns and bridges laboratories. **2-** Training on how to manufacture crowns and bridges of all kinds from metal, porcelain and zirconia. **3-** Methods of manufacturing dental implants from zirconia and using modern CAT CAM devices.

22. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	**2+8**	Types of Casting Defects	Techniques of construction of [Wax-up for dental copping metal frame].	**1-Mmethod of lecture 2. Discussion. 3Questioning. 4Presentation and learn skills 5. The use of educational audio-visual as a show movies in addition to systematic training in practical health Facilities**	**1.Assessment Majadharh directing questions directly 2. editorial tests 3-step re-learn the skill by the student 4. feedback And reporting 5-chapter exam after the first 15 weeks**
2	**2+8**	Full Metal With or Without Acrylic or Ceramic Facing, Indications, Acrylic resin Jacket Crown, Disadvantages.	Wax-up for dental Bridge metal frame (Pontic)		
3	**2+8**	What Types of Crowns are available, General wax-up characteristics.	Spruing with wax Pattern, Venting, and, Investing ceramic framework.		
4	**2+8**	Pontic, Benefits, Materials used in pontic fabrication, Pontic design principles, Pontic designed according to the shape.	Burnout the Ring, Casting, Cleaning of Cast Restorations, Laboratory Seating & Adjustment of the ceramic framework, Finishing off the ceramic framework, and Polishing.		
5	**2+8**	Metal frame construction for ceramic, Wax-up for dental ceramic metal frame.			
6	**2+8**	Porcelain fused to metal crowns, The success of any dental prosthesis depends on several factors, including, Dental ceramic, Advantages of all ceramic restorations.	Conventional ceramic jacket crown of porcelain [Layers of porcelain in P.F.M: Opaque porcelain, Body porcelain (dentine), Incisal porcelain, Glaze.]		
7	**2+8**	Applications of ceramics in prosthetic dentistry, Classification of Dental Ceramics Composition of Ceramic. Dental porcelain, Classification of porcelain, 1. Type of restoration. 2 .Fusing temperature.			
8	**2+8**	Fabrication technique [Conventional ceramic jacket crown of porcelain, Castable ceramic, Machinable ceramic, Copy milling technology, Pressable ceramic, Infiltrated ceramic]	Porcelain fused to metal crowns [Alumina Core Ceramics, Heat-pressed technique] Layers of porcelain in P.F.M. Layers of porcelain in P.F.M: Opaque porcelain, Body porcelain (dentine), Incisal porcelain, Glaze.		
9	**2+8**	Ceramics for metal-ceramic restorations, Porcelain reaction to firing (phase of maturation), Nature of bond between porcelain and metal, Layers of porcelain in P.F.M.			
10	**2+8**	Requirements of the alloys for the Dental ceramic, Properties of porcelain, A Disadvantage of dental porcelain.			

11	**2+8**	Several processing techniques are available for fabricating all-ceramic crowns, I-All ceramic systems, Aluminous core technique. b- Slip-cast ceramic (In-ceram), In-Ceram Zirconia, Fabrication Procedure.			
12	**2+8**	Dental implant- Introduction , Definition, Dental Implants Advantages and Disadvantages Types of Implants - 1. Endosseous (en-doss-ee-us)-"within the bone. 2. Subperiosteal (sub-pear-ee-oss-tee-al)-"on top of the bone. 3. Transosteal (trans-oss-tee-al) - through the bone. 4. Epithelial Implants.	Slip-casting technique: Slip-casting involves the condensation of an aqueous porcelain slip on a refractory die.		
13	**2+8**	Dental Implants Component: 1 .The implant root or screw, A. Fixture construction b. Surface texture, c. Fixture coatin 2 .The implant abutment 3. The crown/dental prosthesis Artificial teeth: Final prosthetic Restoration Short-term failure, Long-Term Complications with Dental Implant			
14	**2+8**	Fabrication metal framework by CA CAM Technique Introduction ,Definition: CAD/CAM CAD/CAM systems Advantages of CAD/CAM systems	Machinable ceramic. CAD/CAM system (computer aid design /computer aid machine) computer integrate imaging and milling system, with the restoration design on the computer screen.		
15	**2+8**	Drawbacks: 1. Aesthetics, 2. Cost. The components of the CAD/ CAM system Milling machine, Scanner. What is the difference between CAD and CAM dentistry? Classification of milling unit of CAD-CAM system according to the processing technique. Accuracy and Longevity of CAD/CAM Restorations			

23. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports ..... etc

24. Learning and Teaching Resources

Required textbooks (curricular books, if any)	1- Textbook of Crown and Bridge Prosthodontics.

Main references (sources)	**2- Planning and Making Crowns and Bridges.**
Recommended books and references (scientific journals, reports...)	**3- Dental Crowns and Bridges**
	4- Dental Laboratory Technology - Crown and Bridge Techniques
Electronic References, Websites	

Course Description Form

13. Course Name:	
Orthodontic Appliances (Advanced)	
14. Course Code:	
4	
15. Semester / Year:	
second year- Course-2 2025-2026	
16. Description Preparation Date:	
15/2/2026	
17. Available Attendance Forms:	
Theoretical and practical	
18. Number of Credit Hours (Total) / Number of Units (Total) 45/3	
6 /150	
19. Course administrator's name (mention all, if more than one name)	
Name: Ali Kamal	
20. Course Objectives	
Course Objectives	**Knowledge of manufacturing all devices for fixed and removable orthodontics and enabling the student to treat all crookedness ofall teeth for the upper and lower jaws**
21. Teaching and Learning Strategies	
Strategy	1. Identify the properties of wires, their types and sizes and deal with them correctly. 2. Create manual skills to make braces for orthodontics. 3. Develop the student's skills in how to make orthodontic devices 4. The student studies the manufacture of all fixed and removable orthodontic devices for the purpose of benefiting from them in his technical field of work. 5. How to make removable orthodontics for all ages and all medical conditions.

22. Course Structure					
Week	**Hours**	**Unit or subject name theory**	**Unit or subject name practical**	**Learning method**	**Evaluation method**
1	**4+2**	Passive appliance, space maintainer, requirement of space maintainer, types of space maintainer (fixed, removable) advantages and advantages.	Modifications of Base plate construction by using sprinkle method.	1-Method of lecture 2. Discussion. 3Questioning. 4Presentation and learn skills 5. The use of educational audio-visual as a show movies in addition to systematic training in practical health Facilities	.1Assessment directing questions directly 2. editorial tests 3-step re-learn the skill by the student 4. feedback And reporting 5-chapter exam after the first 15 weeks
2	**4+2**	Bad habit, types of bad habit, factors affecting the effect of bad habit.			
3	**4+2**	Types of orthodontic appliances used to break bad habit.	Modifications of wax pattern Anterior bite plate.		
4	**4+2**	Retention appliance, simple labial arch retention appliance, Haw ally appliance, Beg appliance.	Flacking and pucking and finishing of Anterior bite plate.		
5	**4+2**	Functional appliance definition mode of action characteristic of patient treated functional appliance type of functional appliance.	Modifications of wax pattern Posterior bite plate.		
6	**4+2**	Orthodontic tooth movement, definition factors affecting orthodontic tooth, types of orthodontic tooth movement, effect of tooth movement.	Flacking and pucking and finishing of Posterior bite plate.		
7	**4+2**	Soldering definition , material used in soldering process , principle of soldering solder material , flux , anti-flux.	construction of denture base acrylic resin (flasking, pucking, curing, finishing and polishing)		
8	**4+2**	Welding , definition , Spot welding machine parts of machine , how can use this machine for welding metallic Pont of removable orthodontic appliance	Modifications Clear aligner by using a biostar machine		
9	**4+2**	Repair of removable orthodontic appliance, types of fracture, causes of fracture, repairing procedure.	Repairing fractured base plate removable orthodontic appliance		
10	**4+2**	Biostar machine, The using a biostar machine in orthodontic treatment,	Repairing fractured wire component removable orthodontic appliance		

		Clear aligner, Types, Advantages, Disadvantages, Essix system (invisalign system), Processing.			
11	**4+2**	Construction orthodontic acrylic denture base by using Sprinkle-on Technique (Orthocryl), define, advantage, processing.	Recognize the Different type of screws and component of screw. Modifications of removable orthodontic appliance with a screw.		
12	**4+2**	Expansion screw, define, Indication, contraindication, Application of Expansion screw, types of screw.			
13	**4+2**	Management of cleft palate, Causes, Problem associated with cleft palate, orthodontic treatment of cleft palate	Modifications of Palatal crib(fork) habit breaker Soldering procedure		
14	**4+2**	Orthodontic cast, how to prepare and trim these cast, purposes of orthodontist to technician type of orthodontic cast			
15	**4+2**	Reading literature of orthodontist, types of this literature.	Welding procedure		

23. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports ..... etc

24. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**2- Sandhya Shyam Lohakare, Orthodontic Removable Appliances, ed.1, 2008.**
Main references (sources)	**2- Laura Mitchell MBE, introduction to orthodontics, ed.4, 2013.**
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	Net

Course Description Form

13. Course Name:	
Maxillofacial Prosthesis- (Basic)	
14. Course Code:	
5	
15. Semester / Year:	
Semester- 2nd stage – 1 st semester	
16. Description Preparation Date:	
15-2-2026	
17. Available Attendance Forms:	
18. Number of Credit Hours (Total) / Number of Units (Total)	
30 hours -2 units	
19. Course administrator's name (mention all, if more than one name)	
Name: Dhyaa Hassan	
20. Course Objectives	
Course Objectives:	**Introducing modern technical materials and methods that work with the electronic computer system and practical laboratory steps to improve the specifications of facial and jaw prostheses into the curriculum**
21. Teaching and Learning Strategies	
Strategy	1. Identify the types of deformities in the face and jaws and methodsof compensation. 2. Identify the materials used in facial and jaw prostheses. 3. Manufacture of various prosthetic devices such as (eye, nose, deformities of the roof of the mouth, ear). 4. The student will be able to perform the practical steps in thelaboratory and make facial and jaw prostheses

22. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3+2	History of maxillofacial	Construction of special tray for the facial and dental impression, Impression taking & requirements Study the landmarks for the dental impression and Pouring the impression, making cast.	1-Mmethod of lecture 2. Discussion. 3Questioning. 4Presentation and learn skills 5. The use of educational audio-visual as a show movies in addition to systematic training in practical health Facilities	.1Assessment directingquestions directly 2. editorial tests 3-step re-learn the skill by the student 4. feedback And reporting 5-chapter exam after the first 15 weeks
2	3+2	Definition – prostheses, prosthodontics			
3	3+2	Appliance palatial obturators stent	Construction of feeding plate (waxing, flasking, packing, curing and finishing).		
4	3+2	The causes of maxillofacial defect			
5	3+2	Maxillofacial defect types	Construction of the palatal obturator (waxing, setting teeth, modification Adams clasp retention)		
6	3+2	Anatomy of head and neck			
7	3+2	Anatomy of the face	Flasking, packing, curing, finishing and polishing of obturator prosthesis.		
8	3+2	History of maxillofacial			
9	3+2	Palate-pharyngeal mechanism Types of palatal defect	Construct the Ocular tray & Construction of the wax pattern ocular prosthesis g.		
10	3+2				
11	3+2	Cleft lip and pellet Types of cleft lip and palate	flasking, packing, curing, finishing and polishing of ocular prosthesis		
12	3+2				
13	3+2	Causes of cleft lip and palate	Construction of the wax pattern Ear prosthesis.		
14	3+2	Palate-pharyngeal mechanism			
15	3+2	Types of palatal defect	flasking, packing, curing, finishing and polishing of Ear prosthesis		

23. Course Evaluation

24. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**1- M. C. Goiato, M. Miyashita, D. M. dos Santos et al., "Radipherous**
Main references (sources)	**protheses, an alternative for the treatment of head and neck neoplasias," *Revista Cubana Estomatologia*, vol. 43, no. 2, 2016.**
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

25. Course Name:	
Acrylic Partial Denture - (Advanced)	
26. Course Code:	
6	
27. Semester / Year:	
second year- Course 2 2025-2026	
28. Description Preparation Date:	
15/2/2026	
29. Available Attendance Forms:	
Practical	
30. Number of Credit Hours (Total) / Number of Units (Total)	
250/10	
31. Course administrator's name (mention all, if more than one name)	
Name: Saeef Ali	
32. Course Objectives	
Course Objectives	Graduating technical staff qualified cognitively and professionally to manufacture acrylic partial dentures and how to repair them when broken or missing teeth while the patient wears them for several years
33. Teaching and Learning Strategies	
Strategy	1-Learn how to make metal clasps for each tooth. 2- Learn how to arrange the front teeth and wax the experimental partial denture 3-Learn how to arrange the back teeth and wax the experimental partial denture 8- Learn how to convert the wax experimental denture to acrylic 9- Learn how to polish and polish it and make it acceptable to the patient 10- Repair the partial denture in two ways (using hot acrylic and cold acrylic) 11- Learn how to receive the patient and how to deal with him

34. Course Structure

Week	Hours	Required Learning Outcomes	Learning method	Evaluation method
1	4	Place the cast on the surveyor table and orient the plane of occlusion relatively horizontally. The final tilt of the cast for the ideal path of insertion, and blocking undercut area. Arrangement of anterior and posterior teeth in a C III J.R. with errors for partial denture. Waxing &carving of trial denture.	**1-Mmethod of lecture** **2. Discussion.** **3Questioning.** **4Presentation and learn skills** **5. The use of educational audio-visual as a show movies in addition to systematic training in practical health Facilities**	**1.Assessment directingquestions directly** **2. editorial tests** **3-step re-learn the skill by the student** **4. feedback** **And reporting** **5-chapter exam after the first 15 weeks**
2	4			
3	4	Remounting of casts and selective grinding, Semi adjustable articulator, adjustment and uses. Balancing the occlusion		
4	4			
5	4	Construction of anterior Immediate partial denture [complete all steps of laboratory procedure].		
6	4			
7	4	Construction of posterior Immediate partial denture [complete all steps of laboratory procedure]		
8	4			
9	4	Construction of Over denture [complete all steps of laboratory procedure].		
10	4	Relining of partial denture in different techniques [complete all steps of laboratory procedure].		
11	4			
12	4	Repairing of partial denture with missing labial or lingual border [complete all steps of laboratory procedure]. Replacement of a broken or missing tooth or teeth.		
13	4			
14	4	A flexible anterior partial denture.		
15	4			

35. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports ..... etc

36. Learning and Teaching Resources

Required textbooks (curricular books, if any)	1.Removable Partial Denture Manual Robert W. Loney, DMD, MS 2011
Main references (sources)	2. *Stewart's Clinical* REMOVABLE PARTIAL PROSTHODONTICS *Fourth Edition* ---- [DNLM: 1. Denture, Partial, Removable. 2. Denture Design. WU 515 P574s 2008
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

Course Description Form

13. Course Name:
Computer application
14. Course Code:
15. Semester / Year:
2 nd Semester , Second Year
16. Description Preparation Date:
2/2/2026
17. Available Attendance Forms:
Theory and Practical
18. Number of Credit Hours (Total) / Number of Units (Total)
Number of college hours: 30 Hours Units: 2
19. Course administrator's name (mention all, if more than one name)
Name :Noor Rezake
20. Course Objectives

Course Objectives	At the end of the semester, the student should be able to know the following: 1- Security and Networking. 2- E-Commerce. 3-Computer Troubleshooting. 4-The Role of Artificial Intelligent-AI in Modern Smartphones. 5-Applications and Tools of Artificial Intelligent-AI. 6-Artificial Intelligent-AI and Society. 7-Ethical Challenges in Artificial Intelligent-AI. 8-The Future of Artificial Intelligent-AI.

21. Teaching and Learning Strategies	
Strategy	1- Using multiple teaching methods (lecture, discussion, report, etc.) 2- Using a projector for illustration. 3- Using a computer in practical training.

22. Course Structure

Week	Theory hours	Practical hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	1	1	The student will learn Security and Networking.	What is a network? Types of networks. Basic network components	Lecture, discussion	Oral and written examinations. Attendance record
2	1	1	The student will learn security and Networking.	Network Security Basics. Understanding network threats	Lecture, discussion	Oral and written examinations. Attendance record
3	1	1	The student will learn E-Commerce.	Concepts of Electronic banking services this include online banking: ATM and debit card services, Phone banking, SMS banking, electronic alert, Mobile banking	Lecture, discussion	Oral and written examinations. Attendance record
4	1	1	The student will learn computer Troubleshooting.	Identifying and solving common hardware and software problems that computer users encounter	Lecture, discussion And practice on computer	Oral and written examinations. Attendance record
5	1	1	The student will learn computer Troubleshooting.	Basic troubleshooting techniques and tools for diagnosing and resolving issues	Lecture, discussion And practice on computer	Oral and written examinations. Attendance record
6	1	1	The student will learn introduction to	Definition of AI, History of AI, AI Techniques and	Lecture, discussion	Oral and written examinations.
			AI	Approaches		Attendance record

7	1	1	The student will learn introduction to AI	Key Characteristics of AI, Benefits of AI, Challenges and Ethical considerations	Lecture, discussion	Oral and written examinations. Attendance record
8	1	1	The student will learn the role of AI in modern Smartphones	AI-Driven Mobile Technologies, Virtual Assistants (Siri, Google Assistant, A texa)	Lecture, discussion	Oral and written examinations. Attendance record
9	1	1	The student will learn the role of AI in modern Smartphones	Adaptive Learning, Real Time Translation Services	Lecture, discussion	Oral and written examinations. Attendance record
10	1	1	The student will learn applications and Tools of AI	Overview of AI Applications in Various Industries, Education and Healthcare	Lecture, discussion	Oral and written examinations. Attendance record
11	1	1	The student will learn applications and Tools of AI	Transportation, Marketing and Advertising	Lecture, discussion	Oral and written examinations. Attendance record
12	1	1	The student will learn applications and Tools of AI	Finance, Robotics and Automation Technologies	Lecture, discussion	Oral and written examinations. Attendance record
13	1	1	The student will learn AI and Society	How AI affects social, AI and international relations, AI and the future of humanity	Lecture, discussion	Oral and written examinations. Attendance record
14	1	1	The student will learn ethical Challenges in AI	AI ethics, Privacy and Surveillance, the impact of AI on the job market	Lecture, discussion	Oral and written examinations. Attendance record
15	1	1	The student will learn the Future of AI	Future trends in AI, recent research and emerging technologies	Lecture, discussion	Oral and written examinations. Attendance record

23. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, short exams, reports.... etc.

24. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	5. Ahmed Banafa, "Introduction to Artificial Intelligence (AI)", 1st Edition (2024). 6. 2005 "مدخل الى عالم الذكاء الاصطناعي", الدكتور عادل عبد النور.
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	