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

٢٠٢٤/٢٠٢٥

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 short 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 staP 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, quaJerly), 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 programs and course description 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 description of 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. It is 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 achieve them 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 by students 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.

Academic Program Description Form

University Name : Tikrit University

Faculty/Institute : : College of Food Sciences - Shirqat

Scientific Department : Food Science and Technology

Academic or Professional Program Name : Bachelor's in Food Science

Final Certificate Name: Bachelor's of Dairy Science and Technology

Academic System: courses

Description Preparation Date: 1 – 10 - 2024

File Completion Date : 10 – 11 - 2024

جامعة تكريت
كلية علوم الاغذية / الشرقاط
قسم علوم وتكنولوجيا الالبان

Signature:

Head of Department Name: Assis Prof. Muhanad Hamed Salih

Date: 10 – 11 - 2024

Signature:

Scientific Associate Name: Date: Assis Prof. Sami Khudhur Saeed

Date: 10 – 11 - 2024

كلية علوم الاغذية / الشرقاط
شعبة ضمان الجودة وتقييم الاداء

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance

Department: Lecturer Abdullah Mahmoud Ajil

Date:10 – 11 - 2024

Signature:

Assis Prof. Sami Khudhur Saeed

Approval of the Dean

أ.م.د. سامي خضر سعيد
العميد / وكالة

1. Program Vision

The Department of Dairy Science and Technology has been established starting from the academic year 2024-2025, and the duration of the study in the college is four years, the graduate student is granted a bachelor's degree in food science, where graduates of the preparatory study for the scientific branch are accepted for both sexes and graduates of the professional study (agricultural and food industries department) and the graduate is prepared to work in scientific bodies and institutions working in the field of dairy and food science and technology in order to develop the reality of local production in this field.

2. Program Mission

Providing good educational service in terms of bachelor's degree and developing academic and applied research, whether on scientific degrees or solving manufacturing problems, in addition to the guiding role to serve and develop work in the field of dairy science and technology.

The activity of the department extends in addition to the educational process in other areas, including conducting scientific research, developing appropriate proposals to solve problems related to the field of dairy technology, holding training courses at the local level, holding workshops, seminars and scientific conferences in cooperation with the relevant local authorities and other universities, joint supervision of research projects, in addition to preparing some sober scientific references for dairy science and technology.

3. Program Objectives

Preparing specialists and researchers to work in scientific bodies and institutions, government and private factories, laboratories and research centers that work in various fields of dairy science and technology.

- Conducting applied research to solve manufacturing problems and improve the quality of production at work in factories and companies working in the field of food processing and preservation.
- Providing specialized scientific consultations and appropriate solutions to the problems facing food processing in our beloved country.
- Holding conferences and specialized scientific seminars in the field of food and dairy science and technology and cooperating with local, regional and international scientific bodies by holding scientific seminars and training courses in the field of dairy science and technology.
- Contribute to the preparation and provision of scientific references in Arabic and English in topics related to dairy science and technology.

4. Program Accreditation
Does the program have program accreditation? And from which agency? No
5. Other external influences
Is there a sponsor for the program? No
6 Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews•
Institution Requirements	4	13	5.41 %	
College Requirements	2	5	2.08 %	
	22	222	92.5 %	
Department Requirements				
Summer Training				
Other				

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

7. Program Description			Credit Hours	
Year/Level	Course Code	Course Name	theoretical	practical
First / First	UOT001	Arabic Language	2	-
First / First	UOT003	Computer	2	2
First / First	UOT004	Democracy and Human Rights	2	-
First / First	TUFSDT 1102	Analytical Chemistry	2	2
First / First	TUFSDT 1103	Mathematic	2	-
First / First	TUFSDT 1104	Establish engineering workshops	2	2
First/Second	TUFSDT 1105	physics	2	2
First/Second	TUFSDT 1106	Organic Chemistry	2	2
First/Second	TUFSDT 1107	Statistics of my life	2	2
First/Second	TUFSDT 1108	Biosafety and Security	2	2
First/Second	TUFSDT 1109	English	2	-
First/Second	TUFSDT 1110	Microbiology	2	2
Second / First	TUFSDT 1111	Biochemistry	2	2
Second / First	TUFSDT 1112	Food Processing Principles	2	2
Second / First	TUFSDT 1113	Dairy Engineering	2	2
Second / First	TUFSDT 1114	Dairy Principles	2	2
Second / First	TUFSDT 1115	Arabic language	2	-

Second / First	TUFSDT 1116	Baath crimes	2	-
Second/Second	TUFSDT 1117	Computer applications in manufacturing units	2	2
Second/Second	TUFSDT 1118	Physical Chemistry	2	2
Second/Second	TUFSDT 1119	Microbiology of dairy	2	2
Second/Second	TUFSDT 1120	Liquid and powdered milk industry	2	2
Second/Second	TUFSDT 1121	English	2	-
Second/Second	TUFSDT 1122	computer	2	2
Third / First	TUFSDT 1123	Quality control and quality control of dairy products	2	2
Third / First	TUFSDT 1124	Economics and marketing of dairy products	2	-
Third / First	TUFSDT 1125	Dairy Chemistry	3	3
Third / First	TUFSDT 1126	Enzyme Science	2	2
Third / First	TUFSDT 1127	Technology of starters and fermentations	3	3
Third /	TUFSDT 1128	Manufacturing with	2	2

Second		thermal and non-thermal treatments		
Third / Second	TUFSDT 1129	Fatty dairy products	2	3
Third / Second	TUFSDT 1130	Human nutrition	2	-
Third / Second	TUFSDT 1131	Food Processing	2	3
Third / Second	TUFSDT 1132	By-products and environmental pollutants of dairy products	2	2
Fourth / First	TUFSDT 1133	Cheese manufacturing	3	4
Fourth / First	TUFSDT 1134	Scientific Research Methodology	2	-
Fourth / First	TUFSDT 1135	Food Packaging	2	2
Fourth / First	TUFSDT 1136	Professional Ethics	2	-
Fourth / First	TUFSDT 1137	Evaluation and development of dairy products	2	2
Fourth / Second	TUFSDT 1138	Manufacturing of special milk and dairy products	2	-
Fourth / Second	TUFSDT 1139	Nanotechnology Applications	2	2

Fourth / Second	TUFSDT 1140	Food Analysis	3	2
Fourth / Second	TUFSDT 1141	Ice cream industry	3	3
Fourth / Second	TUFSDT 1142	Graduation Research Project	2	-

8. Expected learning outcomes of the program

Knowledge

1- Enabling students to obtain knowledge and understanding of the intellectual and skill framework of dairy science and technology. 2- Enabling students to obtain knowledge of food and dairy processing methods. 3- Enabling students to obtain knowledge of microbiology in dairy and how to deal with it. 4- Enable the applicant to obtain knowledge of the components of healthy food. 5- Enabling students to obtain knowledge of dairy products technology from cheese and fatty substances. 6- Enabling students to obtain knowledge of international laws adopted in food safety.	1- The student should know the basics of the required sciences. 2-The student should understand the required scientific details. 3-The student should analyze scientific developments.
(Field and laboratory studies) Graduates are able to carry out laboratory experiments and field studies using scientific requirements and computer techniques while	1 - Good knowledge of scientific terminology in the field of competence. 2- Good knowledge of the

observing the properties of the protection system.	English language.
(Scientific Knowledge) Graduates are able to demonstrate balanced concepts to develop their scientific knowledge and study all changes in dairy products within the vocabulary of food analysis and learn about modern technologies such as nanotechnology.	1- Commitment to the ethics of the university institution. 2- Receiving information and accepting knowledge.
(Results) Graduates are able to demonstrate quantitative scientific skills such as the ability to relate analysis of results.	1- Commitment to the ethics of the university institution. 2- Receiving information and accepting knowledge.

9. Teaching and learning strategies

1- Education inside the classroom through theoretical and scientific lectures.
2- Learning through the establishment of workshops, seminars and training courses related to the field of dairy industry.
3 - Preparation of reports and scientific research.

10. Evaluation methods

1- Exams.

2- Preparing and discussing research.

3- Writing reports.

4- Attendance and daily activities.

11. Faculty						
Faculty Members						
Academic Rank	Specialization		Special Requirements/ Skills (if applicable)		Preparation of the teaching staff	
	year	special			angel	lecturer
Assistant Professor	Life Sciences	Environment and pollution			1	
teacher	Food Science				1	
Assistant Professor	Chemistry	Organic Chemistry			1	
teacher	Life Sciences	parasites			1	
Assistant Lecturer	Agricultural Sciences				1	
Assistant Lecturer	Life Sciences				1	
Assistant Lecturer	Agricultural Sciences				1	
Assistant Lecturer	Agricultural Sciences				1	
teacher	Chemistry	Analytical Chemistry				1
teacher	Arabic language					1

Professional Development
Mentoring new faculty members
Directing the new faculty members to the need to work on developing the scientific method, methods of delivering the scientific lecture, and how to deliver the

scientific material to the student.

Professional development of faculty members
Work on holding training courses and workshops to develop the expertise of faculty members.

12. Acceptance Criterion
Students graduating from the preparatory school / scientific and vocational branch (agricultural and industrial - food industries) are accepted in the Department of Dairy Science and Technology.

13. The most important sources of information about the program
1- Methodological books prescribed by the Ministry of Higher Education and Scientific Research. 2- External scientific sources. 3- The use of libraries and the Internet.

14. **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 / First	UOT001	Arabic Language	Essential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	UOT003	Computer	Essential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	UOT004	Democracy and Human Rights	Essential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TUFSDT 1102	Analytical Chemistry	Essential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TUFSDT 1103	Mathematic	Essential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TUFSDT 1104	Establish engineering workshops	Essential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
First/Second	TUFSDT 1105	physics	Essential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TUFSDT 1106	Organic Chemistry	Essential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TUFSDT	Statistics of	Essential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

	1107	my life													
	TUFSDT 1108	Biosafety and Security	Essential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TUFSDT 1109	English	Essential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TUFSDT 1110	Microbiology	Essential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Second / First	TUFSDT 1111	Biochemistry	Essential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TUFSDT 1112	Food Processing Principles	Essential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TUFSDT 1113	Dairy Engineering	Essential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TUFSDT 1114	Dairy Principles	Essential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TUFSDT 1115	Arabic language	Essential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TUFSDT 1116	Baath crimes	Essential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Second/Second	TUFSDT 1117	Computer applications in manufacturin	Essential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

		g units													
	TUFSDT 1118	Physical Chemistry	Essential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TUFSDT 1119	Microbiology of dairy	Essential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TUFSDT 1120	Liquid and powdered milk industry	Essential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TUFSDT 1121	English	Essential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TUFSDT 1122	computer	Essential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Third / First	TUFSDT 1123	Quality control and quality control of dairy products	Essential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TUFSDT 1124	Economics and marketing of dairy products	Essential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TUFSDT 1125	Dairy Chemistry	Essential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TUFSDT 1126	Enzyme Science	Essential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

	TUFSDT 1127	Technology of starters and fermentations	Essential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Third / Second	TUFSDT 1128	Manufacturing with thermal and non-thermal treatments	Essential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TUFSDT 1129	Fatty dairy products	Essential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TUFSDT 1130	Human nutrition	Essential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TUFSDT 1131	Food Processing	Essential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TUFSDT 1132	By-products and environmental pollutants of dairy products	Essential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Fourth / First	TUFSDT 1133	Cheese manufacturing	Essential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TUFSDT 1134	Scientific Research Methodology	Essential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

	TUFSDT 1135	Food Packaging	Essential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TUFSDT 1136	Professional Ethics	Essential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TUFSDT 1137	Evaluation and development of dairy products	Essential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Fourth / Second	TUFSDT 1138	Manufacturing of special milk and dairy products	Essential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TUFSDT 1139	Nanotechnology Applications	Essential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TUFSDT 1140	Food Analysis	Essential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TUFSDT 1141	Ice cream industry	Essential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TUFSDT 1142	Graduation Research Project	Essential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

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

Course Description Form

1. Course Name:	
Computer (Fresh)	
2. Course Code:	
UOT003	
3. Semester / Year:	
2024-2025	
4. Date of preparation of this description:	
2/10/2024	
5. Available Attendance Forms:	
Came	
6. Number of credit hours (total) / number of units (total):	
60 hours/3	
7. Name of the course administrator (if more than one name is mentioned):	
1. Assistant teacher. Muaath Waad Akla Email:muaath.w.aoklh@tu.edu.iq 2. Assistant teacher. Abdullah Mahmoud Ajil Abdullah.m.ajil@tu.edu.iq	
8. Course Objectives	
Course Objectives	Training in the use of data analysis tools to understand nutritional information and statistical analysis. The use of computers in quality control and analysis of food laboratory data. Computer applications in food science. Learn about the use of computers in the design of food products and micro-food processes. Identify database management systems for easy retrieval of data related to food science.
9. Teaching and learning strategies	

Strategy	1- Face-to-face and electronic lectures through electronic classrooms, including video lectures and presentations 2. Use a thinking strategy 3- Brainstorming style

10. Course Structure

The week	Hours	Required Learning Outcomes	Unit Name	Learning method	Evaluation method
The first	2	Computer Fundamentals	Computer	1- Diction method. 2. Metacognitive method. 3- How to solve problems.	Structural or formative evaluation (daily exams, classroom discussion, homework and follow-up, classroom evaluation).
Second	2	The evolution of computer generations	Computer	1- Diction method. 2. Metacognitive method. 3- How to solve problems.	Structural or formative evaluation (daily exams, classroom discussion, homework and follow-up, classroom evaluation).
Third	2	Electronic Computer	Computer	1- Diction method. 2. Metacognitive method.	Structural or formative evaluation (daily exams,

				3- How to solve problems.	classroom discussion, homework and follow-up, classroom evaluation).
Fourth	2	Classification of computers	Computer	1- Diction method. 2. Metacognitive method. 3- How to solve problems.	Structural or formative evaluation (daily exams, classroom discussion, homework and follow-up, classroom evaluation).
V	2	Monthly exam	Computer	Came	Personal calendar (semester and final exams to issue the provisions of differentiation between students and the provisions of success and failure).
Sixth	2	Computer Components	Computer	-Diction method. 2.	Structural or formative evaluation

				Metacognitive method. 3-Problem solving method	(daily exams, classroom discussion, homework and follow-up, classroom evaluation).
Seventh	2	Keyboard sections	Computer	1- Diction method. 2. Metacognitive method. 3- How to solve problems.	Structural or formative evaluation (daily exams, classroom discussion, homework and follow-up, classroom evaluation).
Eighth	2	System Parts	Computer	1- Diction method. 2. Metacognitive method. 3- How to solve problems.	Structural or formative evaluation (daily exams, classroom discussion, homework and follow-up, classroom evaluation).
Ninth	2	Types of memory	Computer	1- Diction method. 2. Metacognitive	Structural or formative evaluation (daily

				method. 3- How to solve problems.	exams, classroom discussion, homework and follow-up, classroom evaluation).
X	2	Monthly exam	Computer	Came	Personal calendar (semester and final exams to issue the provisions of differentiation between students and the provisions of success and failure).
Eleventh	2	Software entity	Computer	-Diction method. 2. Metacognitive method. 3-Problem solving method	Structural or formative evaluation (daily exams, classroom discussion, homework and follow-up, classroom evaluation).

Twelfth	2	Computer Platform	Computer	1- Diction method. 2. Metacognitive method. 3- How to solve problems.	Structural or formative evaluation (daily exams, classroom discussion, homework and follow-up, classroom evaluation).
Thirteenth	2	Factors to consider when buying a computer	Computer	1- Diction method. 2. Metacognitive method. 3- How to solve problems.	Structural or formative evaluation (daily exams, classroom discussion, homework and follow-up, classroom evaluation).
Fourteenth	2	PC Features	Computer	1- Diction method. 2. Metacognitive method. 3- How to solve problems.	Structural or formative evaluation (daily exams, classroom discussion, homework and follow-up, classroom evaluation).
Fifteenth	2	Monthly	Computer	Came	Personal

		exam			calendar (semester and final exams to issue the provisions of differentiation between students and the provisions of success and failure).
Chapter Two First	2	Computer Security	Computer	1- Diction method. 2. Metacognitive method. 3- How to solve problems.	Structural or formative evaluation (daily exams, classroom discussion, homework and follow-up, classroom evaluation).
Second	2	Computer Security	Computer	1- Diction method. 2. Metacognitive method. 3- How to solve problems.	Structural or formative evaluation (daily exams, classroom discussion, homework and follow-up, classroom

					evaluation).
Third	2	Computer Licenses	Computer	1- Diction method. 2. Metacognitive method. 3-Problem solving method	Structural or formative evaluation (daily exams, classroom discussion, homework and follow-up, classroom evaluation).
Fourth	2	Electronic penetration	Computer	1- Diction method. 2. Metacognitive method. 3-Problem solving method	Structural or formative evaluation (daily exams, classroom discussion, homework and follow-up, classroom evaluation).
V	2	Monthly exam	Computer	Came	
Sixth	2	Computer viruses	Computer	1- Diction method. 2. Metacognitive method. 3-Problem solving method	Structural or formative evaluation (daily exams, classroom discussion, homework and follow-up,

					classroom evaluation).
Seventh	2	Computer damage to health	Computer	1- Diction method. 2. Metacognitive method. 3-Problem solving method	Structural or formative evaluation (daily exams, classroom discussion, homework and follow-up, classroom evaluation).
Eighth	2	Operating Systems	Computer	1- Diction method. 2. Metacognitive method. 3- How to solve problems.	Structural or formative evaluation (daily exams, classroom discussion, homework and follow-up, classroom evaluation).
Ninth	2	Monthly exam	Computer	Came	Structural or formative evaluation (daily exams, classroom discussion, homework and follow-up, classroom

					evaluation).
X	2	Classification of operating systems	Computer	1- Diction method. 2. Metacognitive method. 3-Problem solving method	Personal calendar (semester and final exams to issue the provisions of differentiation between students and the provisions of success and failure).
Eleventh	2	New features in Windows	Computer	1- Diction method. 2. Metacognitive method. 3- How to solve problems.	Structural or formative evaluation (daily exams, classroom discussion, homework and follow-up, classroom evaluation).
Twelfth	2	Desktop components	Computer	1- Diction method. 2. Metacognitive method. 3- How to solve problems.	Structural or formative evaluation (daily exams, classroom discussion, homework and follow-

					up, classroom evaluation).
Thirteenth	2	Folders and files	Computer	1- Diction method. 2. Metacognitive method. 3- How to solve problems.	Structural or formative evaluation (daily exams, classroom discussion, homework and follow-up, classroom evaluation).
Fourteenth	2	Control panel keys	Computer	1- Diction method. 2. Metacognitive method. 3- How to solve problems.	Structural or formative evaluation (daily exams, classroom discussion, homework and follow-up, classroom evaluation).
Fifteenth	2	Monthly exam	Computer	Came	Personal calendar (semester and final exams to issue the provisions of differentiation between

					students and the provisions of success and failure).

11. Course Evaluation	
Distribution of the score out of 100 according to the tasks assigned to the student First semester of 25 The student is examined monthly from 20 marks on attendance, participation and writing reports The second semester is similar to the first semester The student's annual pursuit becomes from 50 The student is practically examined from 15 and final from 35	
12. Learning and Teaching Resources	
Required textbooks (methodology, if any)	The methodological book of the Ministry of Higher Education Part 1 and Part 2 For the first stage (computer basics and office applications - part one)
Key references (sources)	The methodological book of the Ministry of Higher Education Part 1 and Part 2 For the first stage (computer basics and office applications - part one)
Recommended books and references (scientific journals, reports...)	Electronic lectures based on specialized websites
Electronic References, Websites	Windows 10, Microsoft Corporation Microsoft American, Company Official Website www.microsoft.com

1. Course Name:	
Computer (practical)	
2. Course Code:	
UOT003	
3. Semester / Year:	
First Semester/ 2024-2025	
4. Date of preparation of this description:	
2/10/2024	
5. Available Attendance Forms:	
Came	
6. Number of credit hours (total) / number of units (total):	
60 hours/3	
7. Name of the course administrator (if more than one name is mentioned):	
1. Assistant teacher. Moaz Waad Akla Email:muaath.w.aoklh@tu.edu.iq 2. Assistant teacher. Abdullah Mahmoud Ajeel Abdullah.m.ajil@tu.edu.iq	
8. Course Objectives	
Course Objectives	· Training in the use of data analysis tools to understand nutritional information and statistical analysis. · The use of computers in quality control and analysis of food laboratory data. · Computer applications in food science. · Learn about the use of computers in the design of food products and micro-food processes. · Identify database management systems for easy retrieval of data related to food science.
9. Teaching and learning strategies	
Strategy	1- Face-to-face and electronic lectures through electronic classrooms, including video lectures and presentations 2. Use a thinking strategy

	3- Brainstorming style

10. Course Structure					
The week	Hours	Required Learning Outcomes	Unit Name	Learning method	Evaluation method
The first	2	Recognize the physical parts of the calculator and see them visually, and the function and work of each part	See the physical parts and the work of each part	1- Diction method. 2. Metacognitive method. 3- How to solve problems.	Structural or formative evaluation (daily exams, classroom discussion, homework and follow-up, classroom evaluation).
Second	2	Knowledge of the operating system, its applications and foundations	Introducing the computer operating system in the laboratory	1- Diction method. 2. Metacognitive method. 3- How to solve problems.	Structural or formative evaluation (daily exams, classroom discussion, homework and follow-up, classroom evaluation).
Third	2	The student learns how to turn the computer on and off	How to operate the computer	1- Diction method. 2. Metacognitive method.	Structural or formative evaluation (daily exams,

				3- How to solve problems.	classroom discussion, homework and follow-up, classroom evaluation).
Fourth	2	The student's knowledge of the basics of Microsoft Word and the main interface of the program	Using Word	1- Diction method. 2. Metacognitive method. 3- How to solve problems.	Structural or formative evaluation (daily exams, classroom discussion, homework and follow-up, classroom evaluation).
V	2	Identify the bookmark bar, file menu, main page, and insert menu	Using Word	Came	Personal calendar (semester and final exams to issue the provisions of differentiation between students and the provisions of success and failure).
Sixth	2	Explanation and practical application of the page	Using Word	-Diction method. 2. Metacognitiv	Structural or formative evaluation (daily

		layout menu, references and the rest of the WordPress features with shortcuts		e method. 3-Problem solving method	exams, classroom discussion, homework and follow-up, classroom evaluation).
Seventh	2	Monthly exam			
Eighth	2	The basics of Excel and learning about the properties of the main file and page	Using Excel	1- Diction method. 2. Metacognitive method. 3- How to solve problems.	Structural or formative evaluation (daily exams, classroom discussion, homework and follow-up, classroom evaluation).
Ninth	2	Explain the application and making tables and use of mathematical formulas	Using Excel	1- Diction method. 2. Metacognitive method. 3- How to solve problems.	Structural or formative evaluation (daily exams, classroom discussion, homework and follow-up, classroom evaluation).
X	2	PowerPoint Basics ID	Using PowerPoint	Came	Personal calendar (semester and final

					exams to issue the provisions of differentiation between students and the provisions of success and failure).
Eleventh	2	Review the basics And how to make a presentation, design and transitions	Using PowerPoint	-Diction method. 2. Metacognitive method. 3-Problem solving method	Structural or formative evaluation (daily exams, classroom discussion, homework and follow-up, classroom evaluation).
Twelfth	2	A full explanation of how to make designs and navigation for your presentation	Using PowerPoint	1- Diction method. 2. Metacognitive method. 3- How to solve problems.	Structural or formative evaluation (daily exams, classroom discussion, homework and follow-up, classroom evaluation).
Thirteenth	2	Comprehensive review and practical	Using PowerPoint	1- Diction method. 2.	Structural or formative evaluation

		application of making a presentation		Metacognitive method. 3- How to solve problems.	(daily exams, classroom discussion, homework and follow-up, classroom evaluation).
Fourteenth	2	Explain the basics of the Internet and how to use it	Internet use	1- Diction method. 2. Metacognitive method. 3- How to solve problems.	Structural or formative evaluation (daily exams, classroom discussion, homework and follow-up, classroom evaluation).
Fifteenth	2	Monthly exam			

11. Course Evaluation	
Lab exam 2% , Homework 2% , Semester exam 6% Total = 10%	
12. Learning and Teaching Resources	
Required textbooks (methodology, if any)	The methodological book of the Ministry of Higher Education Part 1 and Part 2 For the first stage (computer basics and office applications - part one)
Key references (sources)	The methodological book of the Ministry of

	Higher Education Part 1 and Part 2 For the first stage (computer basics and office applications - part one)
Recommended books and references (scientific journals, reports...)	Electronic lectures based on specialized websites
Electronic References, Websites	Windows 10, Microsoft Corporation Microsoft American, Company Official Website www.microsoft.com

Course Description Form

1. Course Name:
Analytical chemistry
2. Course Code:
TUFSDT1102
3. Semester / Year:
Chapter one
4. Description Preparation Date:
٢٠٢٤/١٠/١
5. Available Attendance Forms:
In attendance (weekly)
6. Number of Credit Hours (Total) / Number of Units (Total)
200/8
7. Course administrator's name (mention all, if more than one name)
Name: Dr. Hassam Salah Dahkil Email: hassam.dakhil21@tu.edu.qi
8. Course Objectives

Course Objectives	- The student learns about the importance of analytical chemistry and its types. - The student learns the methods of finding concentrations of chemicals and the types of chemical titration. - The student learns the basic principles of quantitative and qualitative analysis methods in analytical chemistry.
9. Teaching and Learning Strategies	

Strategy	The main strategy for delivering this course will focus on maintaining student interest by using a simple format for teaching analytical chemistry. This approach involves explaining concepts clearly, demonstrating them through practical examples, and using simple analogies. Once students understand these concepts, they will be able to apply them in a variety of contexts in the future.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Explains the basics of analytical chemistry and the steps of distinctive analysis, and expresses the role of analytical chemistry in science.	The scope of analytical chemistry	Paper lecture Display Screen Blackboard and pen	Daily and monthly exams, homework
2	2	Comparing qualitative and quantitative analyses by: a-expressing quantitative analysis methods, b-expressing qualitative analysis methods, c-evaluating analytical data from a statistical	Quantitative analysis	Paper lecture Display Screen Blackboard and pen	Daily and monthly exams, homework

		perspective.			
3	2	Seminars on the analysis of milk derivatives and cheeses using spectroscopic analysis techniques	Seminar	Paper lecture Display Screen Blackboard and pen	Daily and monthly exams, homework
4	2	Definition of acids and bases, their theories, explanation of their behavior, and study of their properties	Acids and bases	Paper lecture Display Screen Blackboard and pen	Daily and monthly exams, homework
5	2	Basic concepts of chemical equilibrium, constants and laws, factors affecting equilibrium, equilibrium calculation	Chemical equilibrium.	Paper lecture Display Screen Blackboard and pen	Daily and monthly exams, homework
	2	First month exam			
7	2	ionic balance	Definition of ionic equilibrium and knowledge of its basic principles, understanding the concept of	Paper lecture Display Screen Blackboard and pen	Daily and monthly exams, homework

			equilibrium constant Ka, Kb and how to calculate it, explaining the behavior of strong and weak acids and bases in aqueous solutions, the concept of pH		
8	2	Buffer solution	Definition of buffer solutions and understanding their chemical nature, explaining the role of solutions in maintaining the pH value, calculating the pH of buffer solutions	Paper lecture Display Screen Blackboard and pen	Daily and monthly exams, homework
9	2	An introduction to volumetric methods of analysis	Explanation of volumetric analysis of solutions and expression of gravimetric calculations	Paper lecture Display Screen Blackboard and pen	Daily and monthly exams, homework
10	2	**Seminar**	Seminars on milk analysis using automated analysis techniques	Paper lecture Display Screen Blackboard and pen	Daily and monthly exams, homework

11	2	Volumetric calculations.	Understanding the concept of volumetric titration and its importance in analysis, identifying the types of titrations (acid-base, oxidation-reduction, complex formation, precipitation) and calculating volume and concentration using chemical laws.	Paper lecture Display Screen Blackboard and pen	Daily and monthly exams, homework
12	2	Precipitation titration.	Knowing the concept of titration by precipitation such as (Moore method, Volhard method)	Paper lecture Display Screen Blackboard and pen	Daily and monthly exams, homework
13	2	Second month exam			

11. Course Evaluation
Formative assessment = 40% (10% assignments + 10% homework + 10% report + 10% lab) Midterm exam = 10% Total (formative assessment + midterm exam) = 50% Final exam = 50% Final grade = 100%

12. Learning and teaching resources	
Required textbooks (methodology, if any)	Bio7th Edition of Analytical Chemistry Fundamentals of Analytical Chemistry Principles and Practice of Analytical Chemistry
Primary references (sources)	**Modern Analytical Chemistry.**
Recommended supporting books and references (scientific journals, reports...)	https://en.wikipedia.org/wiki/Analytical_chemistry

Course Description

1. Course name:
Analytical ChemistryAndPractical
2. Course code:
TUFSDT1102
3. the chapter/Year:Annual
First
4. Date this description was prepared
2024-10-1
5. Available attendance forms:
My presence/laboratory
6. Number of study hours (total) / Number of units (total):
30 hours
7. Name of the course administrator (if more than one name is mentioned)
Assistant teacher. Nameer Muayad Khalaf
8. Course objectives
1. Training students in the use of laboratory tools and techniques 2. Applying the theoretical concepts and foundations of analytical chemistry practically to better understand chemical processes. . 3. Enhance accuracy skills in measurements and handling of chemicals. 4. Preparing accurate laboratory reports that reflect the results and analyses that have been performed..
9. Teaching and learning strategies
The main strategy for delivering this course will focus on achieving a balance between theoretical knowledge and practical application, and includes the following: Direct practical explanation: Provide a practical explanation of the basic concepts and steps before starting the experiments. Assign students real-life problems that require the use of analytical techniques to solve them..Divide students into small groups to carry out experiments together, which enhances teamwork and communication skills. Role-playing among team members (e.g. preparation, measurement, documentation) to develop individual and team skills. Design experiments that give students the opportunity to discover analytical principles for themselves through observation and inference. Ask open-ended questions

that encourage critical thinking.Y.Providing digital educational tools and explanations such as videos, virtual reality simulations, and presentations. Train students on safety procedures and proper handling of chemicals and equipment.

Applying these strategies helps enhance students' scientific and practical skills, and prepares them to work efficiently in various fields of chemistry..

10. Course structure

Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	Watches	The week
Exams (monthly, daily) Homework	Paper lecture, projector screen, whiteboard and pen	Laboratory Safety and Familiarization with Glassware and Apparatus in Organic Chemistry Laboratory	Learn about the general rules and guidelines for safety in the laboratory. Understand the importance of using personal protective equipment such as (lab coat, gloves, head covers, and goggles). Recognizing chemical symbols and hazards Identify the tools used in the laboratory (burette, volumetric flask, graduated cylinder, beaker, sensitive balances, electric oven)	2	1
Exams (monthly, daily) Homework	Paper lecture, projector screen, whiteboard and pen	Prepare 0.1 M hydrochloric acid solution.	Learn the correct way to prepare solutions for liquid materials accurately and know how to measure the required volume of concentrated hydrochloric acid using a graduated cylinder. Learn how to add acid to water and not the other way around. Improve your calculation	2	2

			skills to find the required volume using the following equations $M=\frac{d\ x\ \%\ x\ 10}{M.wt}$ M1V1=M2V2 Document the steps followed in the experiment accurately. Record the data, calculations and results in an organized laboratory report.		
Exams (monthly, daily) Homework	Paper lecture, projector screen, whiteboard and pen	Preparation of 0.1 M solid sodium hydroxide	Learn the correct way to prepare solutions for solids accurately and know how to measure the required weight of sodium hydroxide using a sensitive balance. Learn how to dissolve a solid in distilled water. Improve your calculation skills to find the required weight using the following formula $M=\frac{wt\ \ x\ 1000}{M.wt\ x\ V\ ml}$ Document the steps followed in the experiment accurately. Record the data, calculations and results in an organized laboratory report.	2	3
Exams (monthly, daily)	Paper lecture, projector screen,	Discussion of the first and second experiment reports	Preparation of hydrochloric acid solution (0.1 mol): Calculate the volume of hydrochloric acid concentration:	2	4

Home work	whitebo ard and pen		Preparation requires careful calculations based on the formula. Incorrect calculations at this stage may result in incorrect concentrations. The correct addition of hydrochloric acid to water (and not the other way around) is critical to safety. Adding water to concentrated hydrochloric acid can cause a reaction.senderto heat, resulting in splashing or accidents. Miscalculation of the volume of concentrated hydrochloric acid due to. Not mixing the solution well, which may result in uneven concentration. Improvements and best practices: Use of calibration equipment (pipettes, volumetric flasks). Do the calculations in advance and double check them. Work under a fume hood to minimize exposure to hydrochloric acid fumes. 2. Prepare the solutionNaOH 0.1 mol: Particle weightNaOH: BecauseNaOH is a hygroscopic substance (absorbs moisture from the air), any exposure to air may		

			result in an inaccurate weight. This may result in a concentration slightly higher than intended. meltsNaOHThe motiveThe heat in the water, releasing heat. Gradually adding the granules and constant stirring was important to ensure complete dissolution. Possible errors: lossNaOH during transfer from weighing boat to beaker.Incorrect mixing of solution, resulting in inhomogeneous concentrations.Errors in adjusting final volume, which may change molarity. Improvements and best practices: Particle weightNaOH quickly and immediately transfer it to the beaker. Standardize the prepared solution to confirm its molarity. Accuracy: Preparing solutionsHCl is generally more accurate because it uses a concentrated stock solution of known molarity. On the other hand, NaOH solutions are subject to variability due to their hygroscopicity and absorption of CO2. Safety Considerations:		

			Includes preparationHCl handling is corrosive fumes, requiring a fume hood. NaOH preparation involves managing the heat generated during dissolution. Both require appropriate personal protective equipment. Both experiments emphasized the importance of accuracy in calculations, careful handling of chemicals, and proper use of laboratory equipment. Any deviations in the preparation steps can lead to large errors in the final molarity, affecting subsequent experiments that rely on these solutions.		
Exams (monthly, daily) Homework	Paper lecture, projector screen, whiteboard and pen	TasksAssignments	Calculating the concentrations of substances required to prepare standard solutions Conduct an experiment using the materials and tools available in the laboratory.	2	5
Exams (monthly, daily) Homework	Paper lecture, projector screen, whiteboard and pen	Separation of positive ions precipitation of the first group Ag+ , Pb+2 , Hg2+2	Understand the conditions that lead to precipitate formation. Learn about the chemical properties of silver (Ag^{+}), lead (Pb^{2+}), and mercury (Hg_2^{2+}). Understand how precipitates form with specific reagents such as hydrochloric acid (HCl). Distinguish between the precipitates formed based on	2	6

			their properties (colour, solubility). Carrying out the sedimentation process: Use of hydrochloric acid (HCl) to separate the first group ions by forming chloride precipitates (AgCl, PbCl).$_2$,Hg_2Cl_2). Conducting complementary examinations Use additional analytical methods to confirm the identity of the precipitate (eg, dissolution in hot water or ammonia). Ion purification and separation Apply precise steps to separate different sediments based on their different solubility.A Use of glass tubes, centrifuges Interpretation of sediment formation based on the properties of ions. Identify the ions present in a sample by comparing the results to expected standards. Discussing errors: Identify potential errors such as sample contamination or error in reagents, and how to correct them. Writing a practical report: Record observations during the experiment (e.g. color,		

			amount of sediment, solubility). Write a report explaining the work steps, results, and their interpretation.		
Exams (monthly, daily) Homework	Paper lecture, projector screen, whiteboard and pen	Negative ion deposition Cl-, Br-	Identify negative anions: Understanding the chemical properties of chloride anions (Cl^-) and bromide $(Br)^-$). Learn about the behavior of these ions when interacting with the reagents designated for litre.Leave Understand the processes that lead to the formation of precipitates with negative anions using certain reagents such as silver nitrate ($AgNO_3$). Carrying out the sedimentation experiment: UseConcentrated sulfuric acid andSilver nitrate KCAnd healFor precipitation of chloride and bromide Analyze the differences between the resulting sediments (such as color:AgCl is white, AgBr is yellowish). Interpret the nature of sediments based on chemical reactions. Writing a practical report: Record observations during the experiment carefully, such as color, sedimentation rate, and amount of precipitate.	2	7

			Understand the importance of identifying negative anions in the analysis of water, food and industrial materials.		
Exams (monthly, daily) Homework	Paper lecture, projector screen, whiteboard and pen	Discussion of the reports of the third and fourth experiments	Verify the student's ability to perform the steps of the experiment and understand the purpose of each step. Ensure that the practical steps are arranged accurately. Analyze the results and evaluate their accuracy compared to the expected values. Discuss potential errors and how to improve future work.	2	8
Exams (monthly, daily) Homework	Paper lecture, projector screen, whiteboard and pen	TasksAssignments	Give each student a model and ask him to identify the type of ion present and to use the approved working methods.	2	9
First month exam				2	10
Exams (monthly, daily) Homework	Paper lecture, projector screen, whiteboard and pen	Neutralization of strong acid with strong base	AUnderstand the concept of titration and how to apply it to determine the concentration of chemicals. Understand the chemical properties of strong acids and bases and how they react. Identify the equivalent point and its role in the correction process. Understanding the role ofEvidenceColor and	2	11

			selection ofguideSuitable for the reaction of a strong acid with a strong base. Gaining the skill of using laboratory tools such as burette, volumetric flask, and pipette. Learn to prepare standard solutions and prepare instruments in a correct and safe manner. Gain the ability to accurately perform the correction process and analyze the results. Calculate the concentration of the unknown solution using the data obtained from the experiment. Learn safety procedures when handling strong acids and bases. Follow good laboratory practices to avoid errors and reduce risks.		
Exams (monthly, daily) Homework	Paper lecture, projector screen, whiteboard and pen	Neutralization of strong acid with weak base	Understand the difference between strong and weak acids and bases in terms of ionization in solution. Understand that titration between a strong acid and a weak base results in an acidic solution at the equivalent point. Understand the shape of the titration curve for a strong acid and a weak base, including:	2	12

			Change valuepH gradually. Understand the formation of a buffer solution at the half-equivalence point and how to interpret it. Use the burette carefully to gradually add the acid to the base.. Select theguideSuitable color changing Draw the relationship betweenpH and volume of acid added Analyze the shape of the curve and deduce the location of the equivalent point. Use the titration equation to accurately calculate the concentration of a weak base. Determine the strength of a weak base. Derivation of the value of the weak base dissociation constant (Kb) Maintain accuracy and cleanliness while working in the laboratory to avoid contamination or errors. Understand the role of titration in practical applications, such as measuring alkalinity in water or manufacturing drugs.		
Exams (mont	Paper lecture, projecto	Discussion of Experiment Reports 6	First: Neutralization of a strong acid with a strong base It startspH is very low due to	2	13

hly, daily) Home work	r screen, whitebo ard and pen	and 7	the presence of a strong acid. risespH rises very quickly near the equivalent point. Equivalent point atpH = 7 (neutral solution). After the equivalent point, it rises.pH slowly with addition of excess base. Comparing results to theoretical expectations: If the equivalent point coincides withpH = 7, this indicates the accuracy of the experiment. A deviation in the curve may indicate errors such as inaccurate measurements or contamination. The final concentration of the unknown solution should match the theoretical values after calculations. The difference in results may be due to: Human errors: such as adding acid too quickly or not reading the burette accurately. Methodological errors: Using uncalibrated or unclean instruments. Second: Neutralization of a strong acid with a weak base Expected shape of the curve: It startspH is too low due to strong acid. It rises gradually slowly due to interaction with the weak		

			base. At the equivalent point, it ispH < 7 (acidic solution due to formation of weak conjugate acid). After the equivalent point, it rises.pH slowly. Comparing results to theoretical expectations: If the equivalent point is less thanpH = 7, this indicates the success of the experiment. Deviation from the expected shape may be due to errors such as selection of inappropriate indicators or contamination of samples. At the half-equivalent point, [base] = [conjugate acid] must equal, allowing calculation ofpKa. Students must calculate the value ofpKa accurately and deduce the strength of theAThe weak base is attached to the facility. Reports should explain how they are calculated.Kb of the experiment results. Comparing calculated values to theoretical values can reveal the quality of the data.		
Comprehensive review				2	14
Second month exam				2	15
11. Course Evaluation					
Formative assessment = 40% (10% assignments + 10% homework + 10% report + 10% lab)					

Midterm exam = 10% Total (formative assessment + semester exam) = 50% Final exam = 50% Final grade = 100% 12.

Bio7th Edition of Analytical Chemistry Fundamentals of Analytical Chemistry Principles and Practice of Analytical Chemistry	Required textbooks (methodology if any
Modern Analytical Chemistry.	Main References (Sources)
https://en.wikipedia.org/wiki/Analytical_chemistry	Electronic references, websites

Course Description Form

1. Course Name:	
Foundations of engineering workshops	
2. Course Code:	
TUFSDT1104	
3. Semester/ Year:	
Chapter One	
4. Date of preparation of this description	
01-09-2024	
5. Available Attendance Forms:	
In person (weekly)	
6. Number of credit hours (total) / number of units (total):	
108/8	
7. Course administrator's name (if more than one name)	
1- Assic. Prof. Muhannad Hamad Saleh nail: muhanad.h.salih@tu.edu.iq 2- Dr. Ahmed Hamad Jandal nail: ahmed.aljandal@tu.edu.iq	
8. Course Objectives	
Module Objectives Course Objectives	1 Knowledge of dimensions, units, geometric quantities and their derivations 2- Identify the types of movement and ways of transmission within the food processing workshops . 3- Studying the means of power transfer and how to transport and circulate liquids in food factories 4- Identify the water and electrical installations used in food factories. Knowledge of refrigeration and freezing equipment and methods of storing agricultural products -5
9. Teaching and learning strategies	
Strategies	The strategy used to give the subject is theoretical lectures, solving mathematical problems in addition to conducting some practical experiments, as well as conducting field visits to food laboratories.

10. Course Structure	

The week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	The student's knowledge of the dimensions and engineering units used in the field of food science	Dimensions and engineering units	Presence	Homework, Weekly report, Cobs
2	2	Know the concept of movement, its types and applications	Movement and its types	Presence	Homework, Weekly report, Cobs
3	2	Understand the student of the types used to transmit power transmitted by friction	Friction-based power transmission	Presence	Homework, Weekly report, Cobs
4	2	The student's knowledge of the means of power transmission based on engagement and the use of gears	Approved power transmission means interlock	Presence	Homework, Weekly report, Cobs
5	2	The student's knowledge of the means of direct transmission of power	Direct-based power transfer means	Presence	Homework, Weekly report, Cobs

		transmission			
6	2	identify fluid-dependent power transfer methods such as water and gases,	Fluid-based power transfer	Presence	Homework, Weekly report, Cobs
7	Midterm Exam				
8	2	The student's knowledge ofpumps and the basis of their work Means of controlling the water level in the tank	Pumps and the basis of their work Means of controlling the water level in the tank	Presence	Homework, Weekly report, Cobs
9	2	Identify the electrical foundation codes for switches, sockets and lamps	Main electricity (transmission of electrical power)	Presence	Homework, Weekly report, Cobs
10	2	Identify Ohm's law and mathematical relations used in food science	Ohm's Law	Presence	Homework, Weekly report, Cobs
11	2	The student's knowledge of the electrical refrigeration equipment and how to diagnose the associated malfunctions	The electrical cycle of the cooling device	Presence	Homework, Weekly report, Cobs

12	2	The student should know how to control temperature, humidity and weather conditions inside food laboratories	Control of weather conditions in food factories	Presence	Homework, Weekly report, Cobs
13	Final Exam				

11. Course Evaluation
Formative Assessment = 40% (10% Quiz + Homework 10% + Report 10% + Lab 10%) Semester exam = 10% Total (formative assessment + semester exam) = 50% Final exam = 50% Final score = 100%

12. Learning and Teaching Resources	
Required textbooks ethodology, if any)	The engineering foundations of food factory workshops - written by Lotfi Hussein Muhammad Ali
Main references (sources)	Food processing technology specialization / foundations of food science / edition 1429 AH
Recommended books and references (scientific journals, reports...)	https://drive.google.com/file/d/1n1mk677-6gMh3k-vaiDue45f2gYZJiBG/view Tech Pump Gnology Book2020
ectronic References, Websites	Wikipedia, Iraqi Magazine, Google Scholar

Course Description Form

1. Course Name:	
Foundations of Engineering Workshops (Practical)	
2. Course Code:	
TUFSDT1104	
3. Semester/ Year: Annual	
Chapter One/2024	
4. Date of preparation of this description	
01-10-2024	
5. Available Attendance Forms:	
In person (weekly)	
6. Number of credit hours (total) / number of units (total):	
30	
7. Course administrator's name (if more than one name)	
1- Assis. Prof. Muhannad Hamad Saleh Email: muhanad.h.salih@tu.edu.iq 2- Dr. Ahmed Hamad Jandal Email: ahmed.aljandal@tu.edu.iq 3- Assis. teach. Abdullah Mahmoud Ajeel Email: abdullah.m.ajil@tu.edu.iq	
8. Course Objectives	
Module Objectives Course Objectives	1- Knowledge of dimensions, units, geometric quantities and their derivations 2- Identify the types of movement and ways of transmission within the food processing workshops . 3- Studying the means of power transfer and how to transport and circulate liquids in food factories 4- Identify the water and electrical installations used in food factories. Knowledge of refrigeration and freezing equipment and methods of storing agricultural products -5
9. Teaching and learning strategies	
Strategies	The strategy used to give the subject is theoretical lectures, solving mathematical problems in addition to conducting some practical

	experiments, as well as conducting field visits to food laboratories.

10. Course Structure

The week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	The student's knowledge of the most important units of measurement for temperature and pressure and how to convert between thermometers	Measuring devices (temperature and pressure)	Presence	Homework
2	2	Know the concept of power transmission, what a gearbox is and the principle of work	Power transmission devices (gearbox)	Presence	Homework
3	2	Student understanding of how to know the reading of the curve diagram of pumps	Read the pump curve diagram	Presence	Homework

4	2	The student's knowledge of the most important tools and tools used in the water installations of factories, laboratories and homes	Tools and tools used in water installations	Presence	Homework
5	2	The student's knowledge of how the tank works and manufactures it	Practical tank application	Presence	Homework
6	2	Identify Ohm's law and what are the practical applications	Ohm's Law	Presence	Homework
7	Midterm Exam				
8	2	The student's knowledge of the tools and tools used in electrical installations	Tools and tools used in electrical installations	Presence	Homework
9	2	Identify the electrical foundation codes for switches, sockets and lamps	Symbols of electrical installations	Presence	Homework
10	2	Learn how to	Laboratory air	Presence	Homework

		distribute air in the laboratory and how to control it	distribution systems and methods of controlling them		
11	2	The student's knowledge of how to inspect refrigeration equipment and how to diagnose associated malfunctions	Refrigeration Equipment Inspection and Fault Diagnosis	Presence	Homework
12	2	The student should know what refrigeration welding equipment is and how to use it	Refrigeration Welding Equipment	Presence	Homework
	Final Exam				

11. Course Evaluation
Homework 2% , Attendance 2% , Semester Exam 6% Total = 10%

12. Learning and Teaching Resources	
Required textbooks (methodology, if any)	The engineering foundations of food factory workshops - written by Lotfi Hussein Muhammad Ali
Main references (sources)	Food processing technology specialization / foundations of food science / edition 1429 AH
Recommended books and references (scientific journals,	https://drive.google.com/file/d/1n1mk677-6gMh3k-vaiDue45f2gYZJiBG/view

reports...)	Tech Pump Gnology Book2020
Electronic References, Websites	Wikipedia, Iraqi Magazine, Google Scholar

Course Description Form

1. Course Name:
Arabic Language
2. Course Code:
UOT1101
3. Semester / Year:
First / First
4. Description Preparation Date:
2024-10-1
5. Available Attendance Forms:
In-person
6. Number of Credit Hours (Total) / Number of Units (Total)
50 / 2
7. Course administrator's name (mention all, if more than one name)
Name: Dr. Mohammad Abdullah Ghathwan

8. Course Objectives	
Course Objectives	Developing love for the Arabic language, the language of the Quran. Understanding the elements of beauty in the Arabic language and its literature. Enhancing the ability to study various aspects of the Arabic language. Learning vocabulary, structure, and the correct style of Arabic. Developing the ability to read Arabic correctly and use the language effectively in communication to improve presentation and expression. Enhancing students' literary sense so they can recognize the aesthetic aspects in presentation and meaning. Improving students' spelling and handwriting skills.

	□ Enabling students to understand complex linguistic structures and ambiguous forms of expression and to think critically. □ Teaching students to follow the rules of dialogue and respect differing viewpoints.
9. Teaching and Learning Strategies	
Strategy	I will use various teaching methods ranging from traditional to modern ones: 1. **Inductive Method:** This method starts from specific examples and reaches general conclusions. It begins by presenting diverse grammatical examples related to a specific topic on the board and explaining them interactively with students, allowing conclusions to be drawn naturally. 2. **Discovery Learning Method:** This method is the opposite of rote learning. In this case, the student is responsible for discovering knowledge and reaching conclusions independently. 3. **Dialogue Method:** This method depends on dialogue and discussion between the teacher and the students. I will prepare a series of questions related to the topic to help the student be prepared for the lesson and reach correct answers.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Arabized and indeclinable nouns, verbs: past, present, and imperative;	Parts of Speech: Noun, Verb, Preposition	Lecture, Projector, Whiteboard, Marker	Exams (Monthly, Daily), Homework

		meaningful and structural letters.			
2	2	Diacritical marks: damma (ُ), fatha (◌َ), kasra (◌ِ), and sukun (◌ْ); alif, waw, and ya; the addition and omission of the nun.	Original and Derivative Case Markers	Lecture, Projector, Whiteboard, Marker	Exams (Monthly, Daily), Homework
3	2	Dualization of nouns, their declension signs, and their analogous forms.	Dual Forms	Lecture, Projector, Whiteboard, Marker	Exams (Monthly, Daily), Homework
4	2	Nouns and their declension signs, along with their analogous forms in both masculine and feminine plural.	Masculine Plural	Lecture, Projector, Whiteboard, Marker	Exams (Monthly, Daily), Homework
5	2	The difference between indefinite and definite nouns, their categories, and how to convert an indefinite noun to a definite one.	Feminine Plural	Lecture, Projector, Whiteboard, Marker	Exams (Monthly, Daily), Homework
6	2	The five verb forms, their conjugations, and their declension signs.	Indefinite and Definite Nouns	Lecture, Projector, Whiteboard, Marker	Exams (Monthly, Daily), Homework

7	2	Types of hamza on alif, waw, ya, and on the line, with clarification of some common misused words and their corrections	The Five Verbs	Lecture, Projector, Whiteboard, Marker	Exams (Monthly, Daily), Homework
8	2	Midterm Exam	Midterm Exam	Lecture, Projector, Whiteboard, Marker	Exams (Monthly, Daily), Homework
9	2	Rules for Writing Hamza and Correcting Common Language Errors	Rules for Writing Hamza and Correcting Common Language Errors	Lecture, Projector, Whiteboard, Marker	Exams (Monthly, Daily), Homework
10	2	Sections of numerical sentences and types of numbers.	Numbers and Their Nouns	Lecture, Projector, Whiteboard, Marker	Exams (Monthly, Daily), Homework
11	2	Tied and untied ta’ and the difference between them.	Rules for Writing the Letter "T" at the End of a Word	Lecture, Projector, Whiteboard, Marker	Exams (Monthly, Daily), Homework
12	2	An overview of literature in the Islamic era, including the poem Banat Su’ad by Ka’b bin Zuhayr.	Literature in the Islamic Era	Lecture, Projector, Whiteboard, Marker	Exams (Monthly, Daily), Homework
13	2	A poem by Abdul Baqi Al-Omari in praise	Memorizing a Poem about Imam Ali	Lecture, Projector, Whiteboard	Exams (Monthly, Daily),

		of Imam Ali (peace be upon him).	(PBUH)	, Marker	Homework
14	2	The definition of rhetoric, Its founders, and the science of embellishment (al-badi’).	Rhetorical Arts and Their Techniques	Lecture, Projector, Whiteboard , Marker	Exams (Monthly, Daily), Homework
15	2	Diacritical marks: damma, fatha, kasra, sukun; alif, waw, ya; the addition and omission of the nun.	Original and Derivative Case Markers (Repeated)	Lecture, Projector, Whiteboard , Marker	Exams (Monthly, Daily), Homework

9. Course Evaluation

Module Evaluation					
As		**Time/ Number**	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	3	10% (10)	3,7 and 14	LO #2 and #6 #13
	Assignments	٢	10% (10)	5 and 12	LO #4 and #11
	نشاط لاصفي	١	10% (10)	١٣	LO #12
	Report	1	10% (10)	11	LO #7 #9 and #10
Summative assessment	**Midterm Exam**	2hr	10% (10)	8	LO #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

10. Learning and Teaching Resources

Learning and Teaching Resources		
	Text	**Available in the Library?**
Required Texts	البلاغة فنونها وافنانها علم البيان والبديع . د. غضل حسن عباس، دار الفرقان للنشر والتوزيع ، ٢٠٠٥، عمان – الأردن الشامل في اللغة العربية ، د.عبدالله النقراط، دار قتيبة ط١، ٢٠٠٣	yes
Recommended Texts	العربية الجامعية لغير المختصين، د.عبده الراجحي، دار النهضة الحديثة، بيروت-لبنان، ٢٠٠٧	no
Websites	https://www.almrsal.com/post/874898 https://kenoozarabia.com/2019/12/20/	

Course Description

1. Course name
Mathematics
2. Course code
TUFSDT1103
3. Annual semester
First
4. Date this description was prepared
15-10-2024
5. Available attendance forms
In-Person
6. Number of Credit Hours (Total) / Number of Units (Total)
125 /5
7. Course administrator's name (mention all, if more than one name)
Eng. Khairallah Faraj Sabhan Al-Jubouri
8. Course objectives
1. Demonstrate proficiency in problem-solving and logical reasoning skills. 2. Demonstrate a thorough understanding of mathematical theory. 3. Demonstrate proficiency in basic statistics. 4. Mathematics is a powerful tool for developing mental discipline and logical thinking skills. 5. Systematically organize, represent, analyze, and interpret data to draw conclusions and make predictions based on findings.
9. Teaching and learning strategies
This course provides a comprehensive introduction to basic concepts in mathematics, calculus, and integration, including topics such as functions, inequalities, limits, derivatives, and integrals. The main objective of this course is to enhance students' mathematical skills and problem-solving ability in various disciplines. Emphasis is placed on understanding theoretical concepts and applying them in real-life situations. The course will include periodic tests, a midterm exam, and a final exam to assess students' progress and understanding.

10. Course Structure					
Week	Credits	Intended Learning Outcomes	Unit or Topic Name	Learning Method	Method of Evaluation
1	2	The required learning outcomes from the "Introduction to Functions" material can include the following points: 1. Understanding the concept of a function: defining the function, and distinguishing it from other relationships. 2. Function graphing: The ability to draw functions at the coordinate level (x, y) and understand the relationship between values. 3. Types of functions: Distinguish between different types of functions such as linear, quadratic, radical, and trigonometric functions. 4. Function components: Understanding terms such as domain, range, and output value. 5. Calculation of function values: The ability to calculate the values output from a given function at a specified input. 6. Analysis of the properties of functions:	Introduction to Functions	Paper lecture, display, whiteboard and pen	Exams (Monthly, Daily) Homework

		such as increasing and decreasing, symmetry, and transformations (translation, expansion, contraction). 7. Inverse Functions: Learn about the concept of an inverse function and how to calculate it. 8. Solving equations using functions: Using functions to solve equations and various mathematical problems.			
2	2	The required learning outcomes of the "Inequalities" material include the following points: 1. Understanding the concept of inequality: Defining the inequality and distinguishing it from the equation. 2. Types of inequalities: Understanding the different types of inequalities such as linear and nonlinear inequalities, and inequalities with positive and negative coefficients. 3. Solving inequalities: The ability to solve inequalities using appropriate methods such as simplification, distribution, and division by cases.	Inequalities	Paper lecture, display, whiteboard and pen	Exams (Monthly, Daily) Homework

		4. Representing inequalities on a number line: Understand how solutions to inequalities are represented on a number line or in a coordinate system. 5. Compound inequalities: The ability to deal with inequalities involving the addition or subtraction of two or more inequalities (e.g. compound inequalities). 6. Solving inequalities with absolute variables: Solving inequalities that contain absolute values (|x|). 7. Study of inequalities with functions: Solve inequalities that contain functions such as root functions, trigonometric functions, or quadratic functions.			
3	2	Limits: The ability to calculate limits using direct values, divide by zero, and apply algebraic laws and special algebraics. 1- Limits at infinity: Study the limits when the variable approaches infinity or negative infinity, and understand the behavior of the function in these cases.	Maximum	Paper lecture, display, whiteboard and pen	Exams (Monthly, Daily) Homework

		2- Infinite Limits: Analyze the states of the limits that lead to infinite values such as ±∞. 3. Continuity of functions: Understand the relationship between limits and continuity and how the value of the limit at a point is equal to the value of the function at that point in the case of continuity. 4. Special limits: Dealing with limits that contain functions such as square root, trigonometric functions, and compound functions. 5. Laws of limits: Apply different mathematical laws to calculate limits, such as the Lubital rule, or the Law of Combined Functions.			
4	2	The required learning outcomes of the course "Derivatives" include the following points: 1. Understand the concept of derivative: Define derivative as the calculation of the instantaneous rate of change of a function at a given point, and correlate it with the concept of velocity or temporal change.	(Part 1)	Paper lecture, display, whiteboard and pen	Exams (Monthly, Daily) Homework

		2. Derivative calculation: The ability to calculate the derivative using basic derivative rules such as: power rule product rule Division rule Ex chain rule 3. Derivatives of basic functions: The ability to derive basic functions such as: Identifying Linear Functions Quadratic functions Root Functions Differentiating Trigonometric Functions			
5	2	1. Derivatives of complex functions: Learn how to calculate derivatives of complex functions using the chain rule. 2. Engineering and physical applications of derivatives: The use of derivatives in the analysis of the speed of change, inclination, and real-world issues such as determining the maximum and minimum values (practical applications such as calculations in motion, economics, and engineering). 3. Implicit differentiation: The ability to derive	(Part 2)	Paper lecture, display, whiteboard and pen	Exams (Monthly, Daily) Homework

		equations containing non-explicit variables using implicit differentiation. 4. Derivative of Multivariate Functions: Understanding the Fundamentals of Partial Derivatives			
6	2	After this lecture, students can find solutions to all functions and find their derivatives . through knowledge of derivative applications.	Derivative Applications	Paper lecture, display, whiteboard and pen	Exams (Monthly, Daily) Homework
7	2	Mid-term Exam			
8	2	The required learning outcomes from the topic of "indefinite integrals" in mathematics can be summarized in the following points: 1. Understand the concept of indefinite integrals: Recognize the types of indefinite integrals in mathematics, such as and , and understand how these types of expressions do not directly carry a specific value. 2. Recognize cases of indefinite integrals: Recognize cases that result in indefinite transactions when trying to calculate limits, derivatives, or integrals. 3. Use the Lubital rule: Understand and apply the	Unlimited integrations	Paper lecture, display, whiteboard and pen	Exams (Monthly, Daily) Homework

		Lubital rule to solve indeterminate integrals of type F using derivatives, and how to calculate the first (or second if necessary) derivative of numbers in the denominator and the numerical to determine the term. 4. Dealing with indefinite integrals at the ends: The ability to solve endings that contain indefinite transactions using techniques such as: Simplify expressions. Perform algebraic transformations (such as multiplying or dividing by factors). Use appropriate derivative rules or integrals. 5. Applying indefinite integrals in real-world applications: Using indefinite integrals in solving real-world mathematical problems that require finding boundary values or behaviors of functions at certain points (such as studying the behavior of velocity or acceleration in the physics of motion).			

9	2	Students can answer all exercises and questions about unspecified integrations	Practical exercises and drills	Paper lecture, display, whiteboard and pen	Exams (Monthly, Daily) Homework
10	2	The required learning outcomes from the topic of “Specific Interactions” in mathematics can be summarized in the following points: 1. Understand the concept of specific transactions: Recognize cases that contain transactions that carry a specific value in mathematics, such as where and two fixed and non-zero numbers, and understand how these values are calculated directly. 2. Dealing with specific limits: The ability to calculate the limits that fall to specific values when the variable approaches a certain point, whether the end is direct or through other techniques such as division and simplification. 3. Dealing with terms in calculus: The ability to find limits that contain constant coefficients or functions that contain	Limited Integrations (Part 1)	Paper lecture, display, whiteboard and pen	Exams (Monthly, Daily) Homework

		constants, such as calculating the limits of rational, exponential or trigonometric functions in certain cases.			
11	2	1. Distinguish between specific and undefined situations: Understand the difference between specific and undefined interactions (e.g.) and apply correct solutions based on the type of engagement. 2. Dealing with Specific Infinite Values: Learn how to deal with terms that devolve into infinite values such as or . 3. Applications in Engineering and Physics: Using Transactions	Limited Integrations (Part II)	Paper lecture, display, whiteboard and pen	Exams (Monthly, Daily) Homework
12	2	After this lecture, students can find solutions to all integrals of functions and find their solutions. by knowing the applications of integration.	Integration Applications	Paper lecture, display, whiteboard and pen	Exams (Monthly, Daily) Homework
13	2	The required learning outcomes of the course "Differential Equations" include the following points: 1. Understand the basics of differential equations: Define differential equations and their types (ordinary differential	Differential Equations	Paper lecture, display, whiteboard and pen	Exams (Monthly, Daily) Homework

		equations and partial differential equations) with an understanding of the relationship between differential equations and unknown functions. 2. Classification of differential equations: Distinguishing between differential equations in terms of type (linear, non-linear) and order (first or second order, and so on) and identifying appropriate methods for solving each type. 3. Solving first-order differential equations: The ability to solve first-order differential equations using different methods such as: Split Method The method of equivalent coefficients. Method of detachable equations. The method of homogeneous and heterogeneous equations. 4. Solve quadratic differential equations: Learn how to solve quadratic differential equations using techniques such as: Analytical methods (such as finding roots for			

		distinct denominators in linear equations).			
14	2	The required learning outcomes of the course "Multivariate Calculus" include the following points: Some Basic Concepts: Multiple variables: Understand how to work with functions that depend on more than one variable. Derivation in multiple variables: Learn how to calculate derivatives of functions that contain more than one variable using partial derivatives. Integration in multiple variables: Learn how to calculate double and triple integrals, and how to apply them in engineering and physical problems. 2. Partial Derivatives: Partial derivative calculation: The ability to derive functions that contain two or more variables. Derivative laws: Application of derivative rules such as chain rule, multiplication rule, division rule and second order derivatives. High Derivation: Calculate second- or	MULTIVARIATE CALCULUS	Paper lecture, display, whiteboard and pen	Exams (Monthly, Daily) Homework

		higher-order partial derivatives, and understand the reciprocal relationship between derivatives. 3. Engineering Representation: Directional Derivative: Understanding directional derivatives and how to calculate them in multidimensional space. Gradient: The ability to calculate the gradient and understand how it can be used to find the most increasing or decreasing trends of a multivariate function. Slope and coefficients: Study the slope of the surface of a function in three-dimensional space using partial derivatives.			
14	2	Reviewing all lectures that are determined by the professor, identifying weaknesses, preparing students and preparing them psychologically and mentally for the final exam	A week of preparation before the final exam	Paper lecture, display, whiteboard and pen	Exams (Monthly, Daily) Homework
11. Course Evaluation					
Module Evaluation					

As		number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative Assessment	|||UNTRANSLATED_CONTENT_START|||Quizzes|||UNTRANSLATED_CONTENT_END|||	2	10:10	5 and 10	LO #1- #4 and #5- #9
	Online Assignments	2	10:10	SR.11 and 14)	LO #1 #3 and #10, #13
	onsite Assignments	2	10:10	4 and 8	LO #1- #3 and #7- #7
	Seminars	1	10-10	14	1=14
Summative Assessment	Midterm Exam	2hrs	10:10	7	1-7
	Final Exam	3hrs	%50 %50	16	All
Total assessment			100% (100 Marks)		

12. learning and teaching resources;	
Required textbooks (methodology if any)	An Introduction to Higher Mathematics, Patrick Kee,f2021 No 5 AN introduction TO materials, A. N. Whitehead,2020
Key References (Sources)	Common core State standards for mathematicians, William Schmidt,

	2018
|||UNTRANSLATED_CONTENT_START|||.... |||UNTRANSLATED_CONTENT_END|||)	
E-References , Websites	https://www.mrbartonmaths.com/resources/keystage3/the-maths-ebook.pdf

Course Description

1. Course name:English poetry
Human rights and democracy
2. Course code:
UOT004
3. the chapter/Year: Annual
Chapter One/The first
4. Date this description was prepared
2024/10/02
5. Available attendance forms:
Attendance in the classroom
6. Number of study hours (total) / Number of units (total):
50/2
7. Name of the course administrator (if more than one name is mentioned)
Assistant teacher .Marwan Saleh Farhan mirwan.saleh@tu.edu.iq
8. Course objectives
1- Developing the love of human rights and democracy. 2- Identify the most important topics and vocabulary of human rights. 3- Developing the ability to study different areas of human rights. 4- Teaching vocabulary, structure and the correct method for studying human rights. 5- Enabling students to learn about the most important topics about human rights. 6- Enabling students to understand and identify the vocabulary of the constitution. 7-Teaching students to follow dialogue and respect points of view.
9. Teaching and learning strategies
They are the strategies used by a faculty member to develop student teaching and learning. They are plans that are implemented to achieve learning objectives.

10. Course structure					
Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	Watches	The week
Exams (monthly, daily) Homework	Paper lecture, projector screen, whiteboard and pen	Introduction to Democracy	Students' knowledge of the definition of human rights as well as their knowledge of the characteristics of rights.	2	the first
Exams (monthly, daily) Homework	Paper lecture, projector screen, whiteboard and pen	Historical development of human rights	Students know the historical development of human rights.	2	the second
Exams (monthly, daily) Homework	Paper lecture, projector screen, whiteboard and pen	Human rights in ancient civilizations and societies	Students' knowledge of human rights in ancient civilizations and societies As well as knowledge of the civilization of Mesopotamia and the Greek and Roman civilizations.	2	the third
Exams (monthly,	Paper lecture, projecto	Human rights in Islam	Introducing students to the definition	2	Fourth

daily) Homework	r screen, whitebo ard and pen		of Islam		
Exams (monthly, daily) Homework	Paper lecture, projecto r screen, whitebo ard and pen	Islam's view of man	Students' knowledge of the Islamic view of Islam	2	Fifth
Exams (monthly, daily) Homework	Paper lecture, projecto r screen, whitebo ard and pen	Human rights in the modern era	To acquaint students with human rights in the modern era and who are the most prominent activists demanding liberation.	2	Sixth
Exams (monthly, daily) Homework	Paper lecture, projecto r screen, whitebo ard and pen	Constitution of the Republic of Iraq for the year2005	Students' knowledge of the Constitution of the Republic of Iraq for the year2005And their knowledge of the types of rights included in the Iraqi Constitution	2	Sevent h
Exams	Paper lecture,	popular vote	Students' knowledge of	2	The eighth

(monthly, daily) Homework	projecto r screen, whitebo ard and pen		popular vote, election laws, and penal laws.		
Exams (monthly, daily) Homework	Paper lecture, projecto r screen, whitebo ard and pen	Human rights guarantees The concept of democracy	Students' knowledge of human rights guarantees, constitutional and political guarantees, and judicial guarantees.	2	Ninth
Exams (monthly, daily) Homework	Paper lecture, projecto r screen, whitebo ard and pen	Elements of democracy and democratic society	To familiarize students with the concept of democracy, as well as the components of democracy and democratic society, which includes political pluralism and the peaceful transfer of power.	2	tenth
Exams (monthly, daily) Homework	Paper lecture, projecto r screen, whitebo ard and pen	Islam's position on democracy	To make students aware of Islam’s position on democracy as a special system under	2	eleventh

			a general banner.		
Exams (monthly, daily) Homework	Paper lecture, projector screen, whiteboard and pen	Pictures and forms of democracy	To familiarize students with the forms and types of democracy, and what is direct democracy, representative democracy, liberalism, and consensual democracy.	2	twelfth
Exams (monthly, daily) Homework	Paper lecture, projector screen, whiteboard and pen	referendum	Definition of referendum, popular objection and popular proposal and what are the differences between them?	2	thirteenth
Exams (monthly, daily) Homework	Paper lecture, projector screen, whiteboard and pen	indirect democracy	Students' knowledge of indirect democracy, also called representative or parliamentary democracy.	2	fourteenth

11. Course Evaluation

Module Evaluation Course material evaluation					
As		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	4 and 10	All
	Assignments	2	10% (10)	9 and 13	All
	Projects /Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	14	All
Summative assessment	Midterm Exam	2hr	10% (10)	7	All
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

12. Learning and teaching resources

Al-Jubouri, Maher Saleh and others, for the book Human Rights, Children and Democracy, College of Law, Tikrit University, 2008.	Required textbooks (methodology if any)
Muhammad Al-Ghazali, Human Rights between the Teachings of Islam and the Declaration of Human Rights, Al-Mustaqbal Al-Arabi (41), 2000. Lana Ismat, International Protection of the Rights of the Child, Master's Thesis,	Main References (Sources)

College of Law, Al-Nahrain University, 2000.	
John Hallowell, The Moral Foundation of Democracy, translated by: Afif: A Baalbeki, Dar Al-Kitab, Beirut. Hussein Jamil, Human Rights and Criminal Law, Department of Legal and Sharia Research and Studies, April, 1971.	Recommended supporting books and references (scientific journals, reports, etc.)
https://www.un.org/ar/global-issues/human-rights	Electronic references, websites