Ministry of Higher Education and Scientific Research

Scientific supervision and evaluation device

Department of Quality Assurance and Academic Accreditation

Accreditation Department

Academic program and course description guide

the **introduction**

The educational program is considered a coordinated and organized package of academic courses that includes procedures organized in the form of academic vocabulary, the primary purpose of which is to build and refine the skills of graduates, making them qualified to meet the requirements of the labor market. It is reviewed and evaluated annually through internal or external audit procedures and programs such as the external examiner program.

The description of the academic program provides a brief summary of the main features of the program and its decisions, indicating the skills that are being worked on to acquire the students, based on the objectives of the program. The importance of this description is evident because it represents the cornerstone of obtaining program accreditation, and the teaching staff participates in writing it under the supervision of the scientific committees in the scientific departments.

This guide, in its second edition, includes a description of the academic program after updating the vocabulary and paragraphs of the previous guide in light of the latest developments in the educational system in Iraq, which included a description of the academic program in its traditional form (annual, quarterly), in addition to adopting the description of the academic program circulated according to the book of the Department of Studies TM 2906/3. On 5/3/2023

Regarding the program, which adopts the Bologna system as a basis for its teaching.

In this area, we can only emphasize the importance of writing a description of the academic program and curricula to ensure the smooth conduct of the educational process.

نموذج وصف البرنامج الأكاديمي

اسم الجامعة: جامعة البصرة....

الكلية/ المعهد: كلية التربية....

القسم العلمي: قسم علوم الاغذية

اسم البرنامج الأكاديمي او المهني: بكالوريوس علوم اغذية

اسم الشهادة النهائية: بكالوريوس في علوم الاغذية

النظام الدراسي: فصلي

تاريخ اعداد الوصف: ٢٠٢٥/٨/٢٩

تاريخ ملء الملف: ٢٠٢٥/٨/٢٩

التوقيع :

اسم رئيس القسم: د. وائل علي سوادي

التاريخ : ٢٠٢٥/٨/٢٩

التوقيع

اسم المعاون العلمي: د. هدى [illegible]

التاريخ : ٢٠٢٥/٨/٢٩

دقـــق الملف من قبل

شعبة ضمان الجودة والأداء الجامعي

اسم مدير شعبة ضمان الجودة والأداء الجامعي:

التاريخ ٢٠٢٥/٨/٢٩

التوقيع

أ.د. رياض عدنان اسماعيل

مصادقة السيد العميد

1. Program vision

To educate and develop undergraduate and graduate students to assume leadership roles in the food industry, academia, and government, and to conduct research that will expand our understanding of the biological, microbiological, chemical, physical, sensory, nutritional, and engineering properties of foods and beverages to enhance the palatability and health-promoting properties of consumer foodstuffs, with special emphasis To give added value to raw agricultural products. It is hoped that the Department of Food Science will be a center for teaching, learning, research and consultation in the field of food science and technology, food quality and human nutrition at ..both the local and regional levels

2-Program message

Developing and transferring knowledge in the fields of food science and nutrition, providing sources of knowledge and research and training capabilities to develop the department's graduates by preparing qualified cadres for the labor market who hold bachelor's and higher degrees, developing academic and applied research and solving problems facing the food industry sector, in addition to the advisory role of serving and developing work in The field of food science and manufacturing, and community service

3-Program objectives .

Objectives of the academic program

-1 Qualifying specialists in the fields of food science and human nutrition with knowledge and skills appropriate for the labor market, by providing high-quality academic .programs at the university and postgraduate levels

-2 Developing knowledge in the fields of food science and human nutrition through conducting creative applied research

-3 Transferring knowledge through writing and translating books in the fields of food science and human nutrition

-4 .Disseminating knowledge in the fields of food science and human nutrition

-5 Educating society about the role of human nutrition in supporting health and .preventing disease and the importance of eliminating wrong dietary methods

-6 Community service and providing technical consultations to food manufacturers and .nutrition supervisors

-7 Developing continuous training programs for graduates to keep abreast of the latest .scientific developments in the field of specialization and raise the level of performance

4-Programmatic accreditation .
?Does the program have program accreditation? From which side seeking accreditation ,Yes

5-Other external influences
Is there a sponsor for the program Yes, there are opportunities for support

6-Program structure

*comments	percentage	Study unit	Number of courses	Program structure
Basic	%9	16	8	Enterprise requirements
Basic	%30	49.5	16	College requirements
Basic	%61	98.5	33	Department requirements
Basic	%100	third level	1	summer training
				Other

.Notes may include whether the course is core or elective *

7-Program description				
Credit hours		**Name of the course or course**	**Course or course code**	**Year/level**
practical	**theoretical**			
		General Chemistry	GECH127	**/ First semester first year**
3	2	Horticulture	HORT116	
3	2	Agricultural Economy	AGEC129	
-	2	Mathematics	MATH111	
-	2	Democracy and Human Rights	DEHR105	
-	2	Engineering drawing	ENDR117	
-	2	English Language/1	ENGL106	
	-	Computers / 1	COMP101	
3	2	Quantitative Chemistry	QUCH112	**Second first / semester year**
3	2	Animal Production	ANPR123	
3	2	Food Industries	FOIN131	
3	2	Principle of Engineering	ENWK113	
3	2	Statistics	STAT124	
-	2	Arabic Language	ARAL104	
	2	Soil Science	SOIL114	
	2	Organic Chemistry	ORCH225	**/ First semester second year**
3	2	Industrial Crops	INCR212	
3	2	Microbiology	MICB218	
3	2	Dairy Science	DAIR240	

3	2	Design and Analysis of	DAEX227	
	2	Computer Applications /3	COMP202	
	2	AL Baath Crimes	BACR205	
2	2	Agricultural Extension	AGEX213	
3	2	Physical Chemistry	PHCH219	
3	2	Biochemistry	BICH230	
3	2	Stores Pests	STPE214	
3	2	Food Sanitation	FOSA215	
-	2	Food Factories Management	FCMA216	
3	2	Food Factories Engineering	FAEN217	
-	1	English Language/2	ENGL206	
	2	Computer Applications /**4**	COMP203	
3	2	Food Chemistry	FOCH312	**/ First semester third year**
3	2	Cereal Processing	CEPR313	
3	2	Molecular Biology	MOBI314	
3	2	Food Microbiology	FOMB315	
-	2	Human Nutrition	HUNU316	
3	2	Dates Processing	DTPR317	
-	2	Agricultural Marketing	AGMA318	
3	2	Dairy Chemistry	DACH319	**/ Second semester third year**
3	2	Bread and Doughs	BRDO320	

3	2	Genetic Engineering	GENG321	
3	2	Dairy Microbiology	DAMB322	
3	2	Metabolic Pathways	MEPA323	
3	2	English	ENGL306	
2	1	Liquid Milk Products	LIML324	
		Food Processing/ 1	FOPR412	/ **First semester fourth year**
3	2	Dairy Products / 1	DAPR414	
3	2	Food Analysis	FOAN416	
3	2	Biotechnology/ 1	BITE442	
3	2	Applications of	AHNU417	
3	2	Handling and Storage	HAST418	
3	-	Graduate Project / 1	GRPR421	
-	1	Seminars	SEMN423	
3	2	Food Processing/ 2	FOPR413	/ Second semester fourth year
3	2	Dairy Products / 2	DAPR415	
3	2	Biotechnology /2	BITE443	
3	2	Quality Control	QUCO419	
3	2	Meat Processing	MEPR420	
3	-	English Language/4	ENGL406	
		Graduate Project / 2	GRPR422	

8-Expected learning outcomes of the program
Knowledge

Statement of learning outcomes Lectures And seminars And discussion sessions	Learning Outcomes -2 .A- Cognitive objectives A1- A1- Knowledge of theories related to food processing and microbiological aspects A 2- Understanding food analysis methods A A3 - Knowledge of scientific problem solving skills A4 - Enabling the student to understand the conversation about food science and technology and equipping food laboratories with specialized scientific cadres
Skills	
Statement of learning outcomes -2 Other skills related to employability and personal .(development D1- Using computers and display screens to explain lectures to students to increase the student's mental comprehension	Learning Outcomes -3 B1- Fish and meat technology B2 - Technology of grains and dates B3 – Dairy technology and food engineering B4-Food microbiology
Statement of learning outcomes -4 Teaching students how to use methods of objective thinking and analysis Providing students with the basics of the course and - additional topics Asking intellectual questions that require presenting -	Learning outcomes -3 Teaching students how to use methods of objective thinking and analysis Providing students with the - basics of the course and additional topics Asking intellectual questions - Dividing students into groups - in practical lessons
Value	
Statement of learning outcomes -5 Quarterly tests Monthly tests - Homework - Graduation research discussion tests -	Learning outcomes -4 Practical training for - each course Developing creative - thinking among students and the individual Knowing the - developments that occur and have an impact on the course material

Statement of learning outcomes 5 Exercises in some lessons Written and oral exams - Knowing the latest developments that occur -	Learning Outcomes -6

9-Teaching and learning strategies
Teaching and learning strategies and methods adopted in implementing the program in .general Using modern teaching methods and illustrative films, as well as involving students in the .scientific lecture .Reports on one of the topics related to the specialty * .Discussions inside the hall *

10-Evaluation methods .
.Implemented in all stages of the program in general -Exercises in some lessons - Written and oral exams Knowing the latest developments that occur Practical training for each course Developing creative thinking among students and the individual Knowing the developments that occur and have an impact on the course material -

11-The teaching staff

Faculty members

Preparing the teaching staff		**Special requirements/skills (If any)**		**Specialization**		**Scientific rank**
lecturer	**angel**			**private**	**general**	
	16			✓		**.Mr**
	13			✓		**Assistant Professor**
	16			✓		**Doctor**
	7				✓	**assistant teacher**

Professional development
Orienting new faculty members
Briefly describes the process used to orient new, visiting, full-time, and part-time faculty at .the institution and department levels
Professional development for faculty members
Briefly describe the academic and professional development plan and arrangements for faculty members such as teaching and learning strategies, assessment of learning outcomes, .professional development, etc

12-Acceptance criterion
Developing regulations related to admission to the college or institute, whether central) (admission or others mentioned Admission is central The system in the department, first and second semesters- All students are exposed to the same subjects, and at the beginning of each semester the

13-The most important sources of information about the program
From methodical books And helpful books And the Internet The central library, the electronic library, and scientific journals

14-Program development plan

Program skills chart															
Learning outcomes required from the programme															
Value				**Skills**				**Knowledge**				**Essential or ?optional**	**Course Name**	**Course Code**	**Year/level**
C4	**C3**	**C2**	**C1**	**B4**	**B3**	**B2**	**B 1**	**A4**	**A3**	**A2**	**A1**				
	✔	✔	✔	✓	✓	✓	✓	✓	✓	✓	✓	Basic	General Chemistry	GECH127	**first/ 2024**
	✔	✔	✔	✓	✓	✓	✓	✓	✓	✓	✓	Basic	Horticulture	HORT116	first/2024
	✔	✔	✔	✓	✓	✓	✓	✓	✓	✓	✓	Basic	Agricultural Economy	AGEC129	first/2024
	✔	✔	✔	✓	✓	✓	✓	✓	✓	✓	✓	Basic	Mathematics	MATH111	first/2024
	✔	✔	✔	✓	✓	✓	✓	✓	✓	✓	✓	Basic	Democracy and Human Rights	DEHR105	first/2024
	✔	✔	✔	✓	✓	✓	✓	✓	✓	✓	✓	Basic	Engineering drawing	ENDR117	first/2024
	✔	✔		✓	✓	✓	✓	✓	✓	✓	✓	Basic	English Language/1	ENGL106	first/2024
	✔	✔	✔	✓	✓	✓	✓	✓	✓	✓	✓	Basic	Computers / 1	COMP101	first/2024
	✔	✔	✔	✓	✓	✓	✓	✓	✓	✓	✓	Basic	Quantitative Chemistry	QUCH112	first/2024
	✔	✔	✔	✓	✓	✓	✓	✓	✓	✓	✓	Basic	Animal Production	ANPR123	first/2024
	✔	✔	✔	✓	✓	✓	✓	✓	✓	✓	✓	Basic	Food Industries	FOIN131	first/2024

	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Basic	Principle of Engineering	ENWK113	first/2024
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Basic	Statistics	STAT124	first/2024
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Basic	Arabic Language	ARAL104	first/2024
	✓	✓	✓	✓	✓		✓	✓		✓	✓	Basic	Soil Science	SOIL114	first/2024

Program skills chart

Learning outcomes required from the programme															
Value				**Skills**				**Knowledge**				**Essential or ?optional**	**Course Name**	**Course Code**	**Year/level**
C4	**C3**	**C2**	**C1**	**B4**	**B3**	**B2**	**B 1**	**A4**	**A3**	**A2**	**A1**				**second/2024**
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Basic	Organic Chemistry	ORCH225	**second/2024**
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Basic	Industrial Crops	INCR212	second/2024
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Basic	Microbiology	MICB218	second/2024
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Basic	Dairy Science	DAIR240	second/2024
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Basic	Design and Analysis of	DAEX227	second/2024
	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	Basic	Computer Applications	COMP202	second/2024
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Basic	AL Baath Crimes	BACR205	second/2024

	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Basic	Agricultural Extension	AGEX213	second/2024
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Basic	Physical Chemistry	PHCH219	second/2024
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Basic	Biochemistry	BICH230	second/2024
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Basic	Stores Pests	STPE214	second/2024
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Basic	Food Sanitation	FOSA215	second/2024
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Basic	Food Factories	FCMA216	second/2024
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Basic	Food Factories	FAEN217	second/2024
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Basic	English Language/2	ENGL206	second/2024
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Basic	Computer Applications	COMP203	second/2024
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Basic	Agricultural Extension	AGEX213	second/2024

Program skills chart

Learning outcomes required from the programme															
Value				**Skills**				**Knowledge**				**Essential or ?optional**	**Course Name**	**Course Code**	**Year/level**
C4	**C3**	**C2**	**C1**	**B4**	**B3**	**B2**	**B 1**	**A4**	**A3**	**A2**	**A1**				**third/ 2024**
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Basic	Food Chemistry	FOCH312	third/2024

✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Basic	Cereal Processing	CEPR313	third/2024
✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	Basic	Molecular Biology	MOBI314	third/2024
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Basic	Food Microbiology	FOMB315	third/2024
✓	✓	✓				✓		✓	✓	✓	✓	Basic	Human Nutrition	HUNU316	third/2024
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Basic	Dates Processing	DTPR317	third/2024
		✓		✓	✓	✓	✓	✓	✓	✓	✓	Basic	Agricultural Marketing	AGMA318	third/2024
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Basic	Dairy Chemistry	DACH319	third/2024
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Basic	Bread and Doughs	BRDO320	third/2024
✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	Basic	Genetic Engineering	GENG321	third/2024
✓		✓		✓	✓	✓	✓	✓	✓	✓	✓	Basic	Dairy Microbiology	DAMB322	third/2024
✓		✓		✓	✓	✓	✓	✓	✓	✓	✓	Basic	Metabolic Pathways	MEPA323	third/2024
✓		✓		✓	✓	✓	✓	✓	✓	✓	✓	Basic	English language\3	ENGL306	
✓	✓	✓	✓			✓		✓	✓	✓	✓	Basic	Liquid Milk Products	LIML324	third/2024

Program skills chart	
Learning outcomes required from the programme	

Value				Skills				Knowledge				Essential or ?optional	Course Name	Course Code	Year/level
C4	C3	C2	C1	B4	B3	B2	B 1	A4	A3	A2	A1				fourth/ 2024
	✓	✓	✓	✓	✓	✓		✓	✓	✓		Basic	Food Processing/ 1	FOPR412	fourth/2024
	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	Basic	Dairy Products / 1	DAPR414	fourth/2024
	✓	✓	✓	✓	✓	✓		✓	✓	✓		Basic	Food Analysis	FOAN416	fourth/2024
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		Basic	Biotechnology/ 1	BITE442	fourth/2024
	✓	✓	✓	✓	✓	✓		✓	✓	✓		Basic	Applications of Human	AHNU417	fourth/2024
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		Basic	Handling and Storage	HAST418	fourth/2024
		✓	✓	✓	✓	✓		✓	✓	✓		Basic	Graduate Project / 1	GRPR421	fourth/2024
	✓	✓	✓	✓	✓	✓		✓	✓	✓		Basic	Seminars	SEMN423	fourth/2024
	✓	✓	✓	✓	✓	✓		✓	✓	✓		Basic	Food Processing/ 2	FOPR413	fourth/2024
		✓	✓	✓	✓	✓	✓	✓	✓	✓		Basic	Dairy Products / 2	DAPR415	fourth/2024
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		Basic	Biotechnology /2	BITE443	fourth/2024
	✓	✓	✓	✓				✓	✓	✓		Basic	Quality Control	QUCO419	fourth/2024
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		Basic	Meat Processing	MEPR420	fourth/2024
													English Language/4	ENGL406	fourth/2024

												Graduate Project / 2	GRPR422	fourth/2024

Please tick the boxes corresponding to the individual learning outcomes from the program being assessed •

Course Description Form

1. Course Name:
Food chemistry
2. Course Code:
FOCH312
3. Semester / Year:
first **2023-2024**
4. Description Preparation Date:
2024
5. Available Attendance Forms:
Essentially
6. Number of Credit Hours (Total) / Number of Units (Total)
5 (2 theoretical + 3 practical)
7. Course Administrator's Name (Mention All, If More Than One Name)
Name: prof. ***dr. sawsan ali hameed*** Email: *:* *sawsan.ali@uobasrah.edu.iq* prof. dr. RAWDAH MAHMOD ALI rawdah.ali@uobasrah.edu.
8. Course Objectives

The importance of natural chemical components of foods and their function. 1. Chemical composition and proportions of ingredients in foods and food products. • 3.1 Important chemical reactions in	• T The importance and function of the natural chemical components of food. • How does the body obtain energy. • Mechanisms of energy conversion and how it is produced inside the cell

9. Teaching and Learning Strategies	
Strategy	1. Estimate the additives and whether they are within permissible and safe limits. 2. Apply methods to detect adulteration of food and food products and determine the type and percentage of adulteration. 3. Applies methods for detecting spoilage of food and its products during storage and its causes resulting from manufacturing processes. 4. Diagnoses the causes of food production (manufacturing) problems and develops appropriate solutions to them. Th. General and transferable skills: 1. Presents information and explains phenomena orally and in writing. 2. Communicates appropriately in Arabic and English. 3. He works within a team and understands group behavior

10. Course Structure					
Week	**Hours**	**Required learning outcomes**	**Unit or Subject Name**	**Learning Method**	**Evaluation Method**
15	**2**		Water, its composition, types and .hardness .Colloids, emulsions, foams, gels Carbohydrates - cycle shift - .caramelization Crystallization, corn sweeteners, modified starch, sweeteners Fats, classification, triglycerides, fatty acids, phospholipids Food rancidity, self-oxidation, .(antioxidants, water rancidity Proteins, amino acids and peptide .bonds, classification of amino acids Classification of proteins, their structure, denaturation and functional properties Enzymes, active sites, activators and inhibitors of enzymes Beneficial and unhelpful changes to enzymes, food enzymes Solutions Coloring substances, chlorophyll, carotenoids, flavonoids.	Assignment 1 Assignment 2	

11. Course Evaluation
Distribution of 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 Sources	
Required Textbooks (Curricular Books, If Any)	Frennema,O.R.(1996).Food chemistery [1] .3Ed.Marcel Dekner ,Inc.Newyork . ,Basel,Hongkong
Main References (Sources)	
Recommended Books and References (Scientific Journals, Reports...)	
Electronic References, Websites	

Course Description Form

1. Course Name:					
dairy chemistry					
2. Course Code:					
DACH319					
3. Semester / Year					
the second 2024-2023					
4. Description Preparation Date					
2024/2/5					
5. Available Attendance Forms:					
Hall					
6. Number of Credit Hours (Total) / Number of Units (Total)					
2 hours for 14 weeks 4 units					
7. Course Administrator's Name (Mention All, If More Than One Name)					
Name: Najla housen saper Email: **Najla.saper@@uobasrah.edu.iq**					
8. Course Objectives					
Course Objectives	• **Understanding the chemical composition of milk.** • **• Study of variation in milk composition.** • **• Follow correct and scientific methods in raising dairy cattle and provide healthy conditions for milk production**				
9. Teaching and Learning Strategies					
Strategy	**The Frankincense Chemistry curriculum is one of the important curriculum series in the Department of Food Sciences, as it guides students to the most important dairy principles, explaining the chemical composition of dairy products to help in knowing the benefits of these**				
10. Course Structure					
Week	**Hours**	**Required learning outcomes**	**Unit or Subject Name**	**Learning Method**	**Evaluation Method**

1	**2**	**Knowledge and understanding, brainstorming and mental skills,**	**Milk composition**	**PowerPoint display on screen**	**Daily questions, discussions and**
2	**2**	_	**milk fat**	_	_
3	**2**	_	**Milk proteins**	_	_
4	**2**	_	**Milk spoilage**	_	_
5	**2**	_	**rancidity,fat**	_	_
6	**2**	_	**fat oxidation**	_	_
7	**2**	_	**Milk sugar**	_	_
8	**2**	_	**Milk salts**	_	_
9		_	**Milk vitamins**	_	_
10		_	**Milk enzymes**	_	_

11. Course Evaluation

Distribution of 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 Sources

Required Textbooks (Curricular Books, If Any)	**dairy Chemistry / Dr. Mohsen Al-Shabibi and Dr. Amer Muhammad Ali**
Main References (Sources)	**dairy chemistry**
Recommended Books and References (Scientific Journals, Reports...)	**Principles of dairy chemistry**
Electronic References, Websites	**Research in dairy chemistry**

Course Description Form

1. Course Name:	
Metabolic pathways	
2. Course Code:	
MEPA323	
3. Semester / Year:	
Second 2023-2024	
4. Description Preparation Date:	
2014	
5. Available Attendance Forms:	
Essentially	
6. Number of Credit Hours (Total) / Number of Units (Total)	
5 (2 theoretical + 3 practical)	
7. Course Administrator's Name (Mention All, If More Than One Name)	
Name: prof. ***dr. sawsan ali hameed*** Email: *: sawsan.ali@uobasrah.edu.iq*	
8. Course Objectives	
Course Objectives	• T The importance and function of the natural chemical components
9. Teaching and Learning Strategies	

Strategy	Metabolic pathways are a series of chemical reactions that occur within a cell. These pathways are responsible for converting substrates into products, and are essential for maintaining cellular homeostasis. Understanding these pathways and their role in cellular processes can provide valuable insights into potential therapeutic targets. By studying the metabolic pathways associated with a particular disease or condition, researchers can identify potential targets for drug development. For

10. Course Structure

		Required learning outcomes			
		Metabolism			
		Bioenergy uses: energy houses			
		Respiration			
		Krebs Cycle			
		Electron transport system and phosphorylation			
		The role of hormones in carbohydrate metabolism			
		lipid metabolism/digestion and absorption of .lipids			
		Classification of			

11. Course Evaluation

Distribution of 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 Sources	
Required Textbooks (Curricular Books, If Any)	
Main References (Sources)	
Recommended Books and References (Scientific Journals,	
Electronic References, Websites	

Course Description Form

1. Course Name:
Biotechnology /2
2. Course Code:
BITE443
3. Semester / Year:
Second / 2023-2024
4. Description Preparation Date:
5/2/2024
5. Available Attendance Forms:
In person
6. Number of Credit Hours (Total) / Number of Units (Total)
5 / 3
7. Course Administrator's Name (Mention All, If More Than One Name)
Name: **Dr. Shayma Thyab Gddoa** Email: shayma.gddoa@uobasrah.edu.iq
8. Course Objectives

Course Objectives	**1-organisms or their extracts are used to develop or improve the production of medicines, food, agricultural crops, and health care requirements, and to treat many environmental and agricultural problems.** **2-The use of genetic engineering (genetic engineering) and heredity and its applications, as genetic engineering depends on controlling genes in a way that allows the emergence of new, preferred traits in the organism that it did not possess or that removes undesirable traits.** **3-Disposing of waste and producing useful, environmentally-friendly materials.**

9. Teaching and Learning Strategies

Strategy	

10. Course Structure

Week	Hours	Required learning outcomes	Unit or Subject Name	Learning Method	Evaluation Method
First	**2**		**Production of organic acids from microorganisms**	**In person**	
Second	**2**		**Industrial Fermentation**	**In person**	
Third	**2**		**Production technology of bread yeast**	**In person**	
Fourth	**2**		**Production of vitamins from microorganisms**	**In person**	
Fifth	**2**		**Antibiotics**	**In person**	
Sixth	**2**		**Immobilized cells and enzymes**	**In person**	
Seventh	**2**		**First exam month**	**In person**	

11. Course Evaluation	
Distribution of 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 Sources	
Required Textbooks (Curricular Books, If Any)	**Faiez A.Al-Ani, Biotechnology,1993**
Main References (Sources)	**Basil Kamil Dalaly, Selected Topics in Biotechnology, 1993**
Recommended Books and References (Scientific Journals, Reports...)	**DR.R.C.DUBEY ,Textbook Of Biotechnology, 2007**
Electronic References, Websites	

Course Description Form

1. Course Name:
Biotechnology /1
2. Course Code:
BITE442
3. Semester / Year:
First / 2023-2024
4. Description Preparation Date:
5/2/2024
5. Available Attendance Forms:
In person
6. Number of Credit Hours (Total) / Number of Units (Total)
5 / 3
7. Course Administrator's Name (Mention All, If More Than One Name)

Name: **Dr. Shayma Thyab Gddoa** Email: shayma.gddoa@uobasrah.edu.iq Name: Raghad Saad Musa Email: raghad.saad@uobasrah.edu.iq	
8. Course Objectives	
Course Objectives	**1-organisms or their extracts are used to develop or improve the production of medicines, food, agricultural crops, and health care requirements, and to treat many environmental and agricultural problems.** **2-The use of genetic engineering (genetic engineering) and heredity and its applications, as genetic engineering depends on controlling genes in a way that allows the emergence of new, preferred traits in the organism that it did not possess or that removes undesirable traits.** **3-Disposing of waste and producing useful, environmentally-friendly materials.**
9. Teaching and Learning Strategies	
Strategy	

10. Course Structure

Week	Hours	Required learning outcomes	Unit or Subject Name	Learning Method	Evaluation Method
First	**2**		**The ways in which industrial microorganisms metabolize organic**	**In person**	
Second	**2**		**Energy metabolism in living organisms under aerobic and anaerobic conditions**	**In person**	
Third	**2**		**Cultivation methods used in Biotechnology**	**In person**	
Fourth	**2**		**Solid State Fermentation (SSF)**	**In person**	
Fifth	**2**		**Downstream processing in Biotechnology**	**In person**	

Sixth	**2**		**The production of amino acids**	**In person**	
Seventh	**2**		**First exam month**	**In person**	

11. Course Evaluation
Distribution of 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 Sources	
Required Textbooks (Curricular Books, If Any)	**Faiez A.Al-Ani, Biotechnology,1993**
Main References (Sources)	**Basil Kamil Dalaly, Selected Topics in Biotechnology, 1993**
Recommended Books and References (Scientific Journals, Reports...)	**DR.R.C.DUBEY ,Textbook Of Biotechnology, 2007**
Electronic References, Websites	

Course Description Form

1. Course Name:
Biotechnology /2
2. Course Code:
BITE443
3. Semester / Year:
Second / 2023-2024
4. Description Preparation Date:
28/2/2024
5. Available Attendance Forms:
In person
6. Number of Credit Hours (Total) / Number of Units (Total)

5 / 3
7. Course Administrator's Name (Mention All, If More Than One Name)
Name: **Dr. Sarmad Ghazi Al-Shawi** Email: **sarmad.mohammed@uobasrah.edu.iq**
8. Course Objectives

Course Objectives	**1- The use of living organisms or their products in developing or improving the production of food, medicines, therapeutic nutrition, and food crops.** **- 2- The use of genetic engineering and heredity and its applications in the production of genetically modified foods and genetically modified organisms that are used in the production of foods with health, nutritional and economic returns.** **3- Disposing of waste and producing useful environmentally friendly materials, including enzymes, organic and fatty acids, sugars, antibiotics, etc.**

9. Teaching and Learning Strategies	
Strategy	**Lectures delivered directly by lecturer with enough discussion from the students, also using scientific illustration and virtual methods**

10. Course Structure

Week	Hours	Required learning outcomes	Unit or Subject Name	Learning Method	Evaluation Method
First	**2**		**Introduction about starters**	**In person**	
Second	**2**		**Starters types**	**In person**	
Third	**2**		**PCR**	**In person**	
Fourth	**2**		**Probiotics types**	**In person**	
Fifth	**2**		**Probiotics choosing criteria and their applications**	**In person**	

Sixth	**2**		**Single Cell Protein**	**In person**	
Seventh	**2**		**Exam**	**In person**	

11. Course Evaluation	
Distribution of 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 Sources	
Required Textbooks (Curricular Books, If Any)	**Faiez A.Al-Ani, Biotechnology,1993**
Main References (Sources)	**Basil Kamil Dalaly, Selected Topics in Biotechnology, 1993**
Recommended Books and References (Scientific Journals, Reports...)	**DR.R.C.DUBEY ,Textbook Of Biotechnology, 2007**
Electronic References, Websites	**https://www.labster.com/course-packages/biotechnology**

Course Description Form

1. Course Name:
Principles of human nutrition
2. Course Code:
HUNU316
3. Semester / Year:
First / 2023-2034
4. Description Preparation Date:
30-1-2024
5. Available Attendance Forms:
Attendance/weekly

6. Number of Credit Hours (Total) / Number of Units (Total)	
2 Hours / 3 Units	
7. Course Administrator's Name	
Name: Alaa Mohamed Sadkhan Email: alaa.sadkhan@uobasrah.edu.iq	
8. Course Objectives: **Studying the main components of food, their nutritional value, their health importance to humans, how the process of digesting food occurs within the human body, and studying the processes of metabolism and absorption and food-related diseases that humans can be infected with.**	
Course Objectives	**• Study the chemical composition and physical characteristics of food, know the nutritional value and its effect on the body's health, the mechanism of food digestion in the human body, and know the natural and chemical changes of food that enters the human body.**
9. Teaching and Learning Strategies	
Strategy	**The lecturing strategy is used using PowerPoint slides, and while explaining the scientific material, the material is discussed with the student, and then questions are asked about the current material and linked to the previously explained material, while distinguishing the student who gives the correct answer and motivating him with thanks and praise and giving him a grade based on that answer. He is also asked to conduct reports. Semester for the same course subject, and a grade is calculated for it, with attention paid to the student's attendance and distinguishing him from others who are not committed to attendance, in addition to conducting daily and monthly examinations. (The strategy emphasizes linking learning to daily life, and female learners feel its benefit because the subject is related to human nutrition and health).**
10. Course Structure	

Week	**Hours**	**Required learning outcomes**	**Unit or Subject Name**	**Learning Method**	**Evaluation Method**
1	**2**	**Introduction to food and nutrition**	**Introduction to food, nutrition, nutritional terms, and the relationship of food to other sciences**	**Two hours of theoretical lectures**	**Daily exam, quarterly exam and report**
2	**2**	**Nutrients**	**Water and proteins**		
3	**2**	**Nutrients**	**Carbohydrates (sugars and fiber)**		
4	**2**	**Nutrients**	**Fats**		
5	**2**	**An exam based on the four lectures above**			
6	**2**	**Nutrients**	**Vitamins and mineral elements**		
7	**2**	**Digestion and absorption**	**Digestion, hunger, thirst, food additives and nutritional planning**		
8	**2**	**Metabolic processes**	**Absorption and metabolism**		
9	**2**	**Food energy**	**Food energy calculations**		
10	**2**	**Nutrition and modern diseases**	**Obesity**		

11	**2**	**Nutrition and modern diseases**	**Nutrition and diabetes**		
12	**2**	**Nutrition and modern diseases**	**Nutrition, heart disease and atherosclerosis**		
13	**2**	**Nutrition and modern diseases**	**Nutrition and cancer**		
14	**2**	**Nutrition and modern diseases**	**Nutrition, nutritional deficiencies and anemia**		
15	**2**	**Calculate daily nutritional needs**	**Calculate daily nutritional needs**		
16	**2**	**A second exam using the above**			

11. Course Evaluation

50 Exams (monthly and daily)
10 degree of comprehension
20 engagement
10 attendance
10 report
100 total score

12. Learning and Teaching Sources

Required Textbooks (Curricular Books, If Any)	**Principles of human nutrition**

Main References (Sources)	**Marei, Abdel Karim (2019). * Fundamentals of Nutrition, Dar Jalis Al-Zaman, Al-Zaytoonah University of .Jordan** **Owaida, Issam Hassan (2012). • Fundamentals of Human Nutrition, .Obeikan Library, Riyadh, fourth edition** **Al-Sharjabi, Fahd Abdel Hamid (2015). • Principles of human nutrition and metabolism. Aden House for Printing and Publishing, Taiz University, Republic .of Yemen** **Aboul Fotouh, Sharifa (2006). Healthy • nutrition and a healthy body. Atlas Publishing House and Media Production. Cairo, Arab Republic of Egypt. first .edition** **Gandhi, Joanne Webster and Monem, • Zainab (translator) (2013). Food and Nutrition. King Abdulaziz City for Science and Technology, King Fahd National Library, Riyadh, Saudi Arabia. [first edition**

Course Description Form

1. Course Name
Practical food manufacturing
2. Course Code:
HUNU316
3. Semester / Year:

First / 2023-2034
4. Description Preparation Date:
30-1-2024
5. Available Attendance Forms:
Attendance/weekly
6. Number of Credit Hours (Total) / Number of Units (Total)
3 Hours / 3 Units
7. Course Administrator's Name
Name: Alaa Mohamed Sadkhan Email: alaa.sadkhan@uobasrah.edu.iq
8. Course Objectives:. Preparing various types of solutions and preserving methods for various foods, such as preserving by canning, freezing and drying, making jams and marmalades, making fruit candied and concentrated, making juice and syrup, and making soft drinks.

Course Objectives	**Learn how to prepare solutions that use to preserve some types of food, as well as learn about ways to preserve food in different ways, how to make jams, juices, and soft drinks, and what are the problems facing these industries.**
9. Teaching and Learning Strategies	

Strategy	The lecturing strategy is used using PowerPoint slides, and while explaining the scientific material, the material is discussed with the student, and then questions are asked about the current material and linked to the previously explained material, while distinguishing the student who gives the correct answer and motivating him with thanks and praise and giving him a grade based on that answer. He is also asked to conduct reports. Semester for the same course subject, and a grade is calculated for it, with attention paid to the student's attendance and distinguishing him from others who are not committed to attendance, in addition to conducting daily and monthly examinations. (The strategy emphasizes linking learning to daily life, and female learners feel its

10. Course Structure

Wee	Ho	Required	Unit or	Learn	Evalua
1	3	Preparation of solutions	Sugary, salty and acidic solutions	Three hours of	Daily exam, quarterly
2	3	Methods for measurin	Study the types of devices		
3	3	Food preservation	Cold preservation		
4	3	Food preservation	Freezing preservation		
5	3	An exam based on the four			

6	3	Food preservation	Preservation by		
7	3	Food preservation	Preservation by		
8	3	Food preservation	Preservation with		
9	3	The nannies industry	Methods of		
10	3	Marmalade industry	Methods of		
11	3	Pickles industry	Manufacture of tarshi		
12	3	Juice industry	Methods of		
13	3	Estimation of plant	Methods for		
14	2	A second exam			

11. Course Evaluation

7 Exams (monthly and daily)

3 degree of comprehension

5 Share

2 Attendance

3 Report

12. Learning and Teaching Sources

Required Textbooks (Curricular Books, If Any)	

Main References (Sources)	1 . I, de, Zoysa. B, Kirkwood. R., Feachem and E Lindsay-Smith. 1984. Preparation of sugar-salt solutions. Trans R Soc Trop Med Hyg.78(2):260-2. doi: 10.1016/0035-9203(84)90294-3. 2 .Mohammad Shafiur Rahman. 2007. Handbook of Food Preservation. Second Edition. CRC Press, Boca Raton, FL. DOI: 10.1201/9781420017373. ISBN: ISBN-13: 978-1-57444606-7. 3 . Susan Featherstone. 2015. A

Course Description Form

1. Course Name:
physical chemistry
2. Course Code:
PHCH219
3. Semester / Year:
Second Semester
4. Description Preparation Date:
7/ 2/ 2024
5. Available Attendance Forms:
Attendance in the class of sections 1, 2 and 3 , the practical part in the laboratory

6. Number of Credit Hours (Total) / Number of Units (Total)					
5 hr. / 3 units					
7. Course Administrator's Name (Mention All, If More Than One Name)					
Name: Prof.Dr.Alaa Jabbar Abd Email: alaa.abd@uobasrah.edu.iq Name Dr. Abdulbasit Hasan Email: abdulbasit.hasan@uobasrah.edu.iq					
8. Course Objectives					
Course Objectives	**•Introducing students to the physical chemistry of food products according to the vocabulary of the physical chemistry curriculum by giving a detailed idea about it and how to deal with it and benefit from it in the various food industries.** **•Introducing students to the physical chemistry of food products and the applications of physical chemistry to solutions or living fluids that exist within living organisms, whether plant or animal, or their products, such as foodstuffs such as meat, milk, vegetables, and fruits.** **• Gaining experience in the field of food physical chemistry qualifies him to work in quality control laboratories**				
9. Teaching and Learning Strategies					
Strategy	***Using modern teaching methods and illustrative films, as well as involving students in scientific lectures.** ***Reports on one of the topics related to the specialty.** *** Discussions inside the classroom**				
10. Course Structure					
Week	**Hours**	**Required learning outcomes**	**Unit or Subject Name**	**Learning Method**	**Evaluation Method**

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	**2 Theory 3 practical**	**Introduction of physical chemistry General Gas Law Boyles law-R-constant Daltton law for molecular pressur Thermodynamic Enthlphy – second law of thermodynamic First exam Liquid state- pressure vaporation Ideal solution- Raoults law Boiling point-Freezing Point Osmotic Pressure Chemical equilibrium -Non-ideal solution Ionization equilibrium- Water dissociation pH – buffers solution Second exam**	**Calculation methods for laboratory experiment Refractive index Rotation of polarized light Spectrophotometry Surface tension Viscosity First exam Boiling point Week acids dissociation Week acids dissociation Triplicate solution Extraction constant Westaphal balance The capacity of buffer solutions Second exam**		

11. Course Evaluation
25 marks for the monthly theoretical exam, 5 marks for the student's activity in discussion during the lecture and scientific reports, 20 marks for the monthly practical exam, 50 marks for the semester exam (end of the semester)

12. Learning and Teaching Sources	
Required Textbooks (Curricular Books, If Any)	**Physical chemistry for Food products, by Abid Ali Mahdi**
Main References (Sources)	
Recommended Books and References (Scientific Journals, Reports...)	
Electronic References, Websites	**Lectures prepared by the subject teacher based on methodological books and**

Course Description Form

1. Course Name:
Meat Processing / theoretical
2. Course Code:
MEPR420
3. Semester / Year: Second / 2023-2034
Second / 2023-2034
4. Description Preparation Date:
30-1-2024
5. Available Attendance Forms:
Attendance/weekly
6. Number of Credit Hours (Total) / Number of Units (Total) 2 Hours / 3.5 Units
) 2 Hours / 3.5 Units
7. Course Administrator's Name
Name: Alaa Mohamed Sadkhan Email: alaa.sadkhan@uobasrah.edu.iq
8. Course Objectives: Studying The Types Of Red And White Meat And Fish, Studying The Chemical And Physical Composition, Nutritional Value And Health Importance, Knowing The Types Of Meat Preservation Methods And What Changes May Occur In These Different Methods.

Course Objectives	**Knowing the chemical composition and physical characteristics of meat and fish and knowing its nutritional value and studying the changes that occur to it after slaughter and also during its preservation and its impact on the health of the body.**

9. Teaching and Learning Strategies	
Strategy	**The lecturing strategy is used using PowerPoint slides, and while explaining the scientific material, the material is discussed with the student, and then questions are asked about the current material and linked to the previously explained material, while distinguishing the student who gives the correct answer and motivating him with thanks and praise and giving him a grade based on that answer. He is also asked to conduct reports. Semester for the same course subject, and a grade is calculated for it, with attention paid to the student's attendance and distinguishing him from others who are not committed to attendance, in addition to conducting daily and monthly examinations. (The strategy emphasizes linking learning to daily life, and female learners feel its benefit because the subject is related to human nutrition and health).**

10. Course Structure

Week	Hours	Required learning outcomes	Unit or Subject Name	Learning Method	Evaluation Method
1	2	Introduction to types of red and white meat	Classification and classification of meat types	Two hours of theoretical lectures	Daily exam, quarterly exam and report
2	2	Specific characteristics of the muscle	The chemical composition and physical composition of the carcass and the		
3	2	Meat proteins and their types	Meat proteins and its types		
4	2	The nutritional importance of types of meat	The nutritional value of meat and the study of the basic elements to determine the quality of meat		

5	**2**	**An exam based on the four lectures above**			
6	**2**	**Types of changes that occur in meat**	**Changes that occur after slaughter, turning muscles into meat and a change in**		
7	**2**	**Methods of preserving meat, including refrigeration and**	**Changes that occur after slaughter and the transformation of muscles into meat and**		
8	**2**	**Unconsumed meat**	**Methods of preserving meat, including cooling and freezing, and studying methods**		
9	**2**	**Qualitative characteristics of fish**	**Study of some types of meat unfit for human consumption and types of meat poisoning**		
10	**2**	**Chemical analysis of fish**	**The physical composition and chemical composition of fish**		
11	**2**	**Methods of preserving fish**	**Analysis of the main components of Mecca and the study of pigments and color**		
12	**2**	**Methods of preserving fish**	**Fish preservation and processing by cooling, freezing and drying**		
13	**2**	**Methods of preserving fish**	**Preserving fish by freezing, smoking, canning, and knowing fish spoilage**		
14	**2**	**Fish products**	**Preserving fish by irradiation, pickling, preservatives, studying**		
15	**2**	**Types of use of fish and their waste**	**Learn about fish products and the chemical, physical and sensory methods used in assessing the quality of fish**		
16	**2**	**A second exam using the above lecture material**			

11. Course Evaluation	
50 Exams (monthly and daily) 10 degree of comprehension 20 engagement 10 attendance 10 report 100 total score	
12. Learning and Teaching Sources	
Required Textbooks (Curricular Books, If Any)	**MEAT AND FISH TECHNOLOGY**
Main References (Sources)	**[1] AL-TAI, MUNIR ABOUD JASSIM AL-TAI (1986). MEAT AND FISH TECHNOLOGY** **[2]HINDI, MAZEN JAMEEL (1985). FISH PRODUCTS TECHNOLOGY.** **[3]REFORMER RASHID MAHJOUB (1990). MICROBIOLOGY IN FOODS. SECOND EDITION. HIGHER EDUCATION PRESS, UNIVERSITY OF BAGHDAD. 560 PAGES** **[4] PARTNER, YOUSSEF MOHAMED (2005) MEAT TECHNOLOGY. AL-FATEH UNIVERSITY PUBLICATIONS, TRIPOLI, LIBYA, 376 PAGES.** **[5] AL-AFANDI, SALAH MAHMOUD YOUSSEF (2012). MEAT HEALTH AND SAFETY, GENERAL ORGANIZATION FOR EXPORT AND IMPORT CONTROL, ARAB REPUBLIC OF EGYPT, 100 PAGES.COURSE ASSESSMENTS**

Course Description Form

1- Course Name
Mathematics
2- Course Code:
MATH111

3- Semester/Year
First Semester/2023 - 2024
4- Date of Description Preparation
2024/2/1
5- Available Attendance Forms
Full-time (Theoretical Lecture)
6- Total Credit Hours/Units
2 hours per week for 14 weeks
7- Course Coordinator:
Jenan Abd Alemam Najem, Email: jenan.najem@uobasrah.edu.iq
8- Course Objectives:

Course Description Form

1. Course Name:
The basics of horticulture, the practical part
2. Course Code:
HOT112
3. Semester / Year:
First Semester : / 2023-2024
4. Description Preparation Date:
First course for the academic: 2023-2024
5. Available Attendance Forms:
6. Number of Credit Hours (Total) / Number of Units (Total)
3Hours / 1.5 Unite
7. Course Administrator's Name (Mention All, If More Than One Name)
Name: Zainab abd alameer Email: Zainab saihood.uobasrah.edu.iq

8. Course Objectives

. The curriculum included the study of the concept of horticulture, the division of horticultural crops according to the time period, horticultural division and according to the duration of their life, the study and methods of growing horticultural crop species, methods of reproduction, horticultural service, cutting and shaping	• Student review of his knowledge of chemistry • This information is needed throughout the study period .. . • ..... • .....

9. Teaching and Learning Strategies

Strategy	**It includes a modern teaching strategy in achieving learning goals in general and education in particular and identifying the types of horticultural crops grown in Iraq and methods of propagation and agricultural circles suitable for growing plants and the difficulties faced by the student in understanding and acquiring the concepts of growing horticultural plants and treating difficulties by determining the appropriate date for planting each crop and conducting agricultural service operations and determining the appropriate environment for planting each plant and helping students to acquire the correct scientific concepts for growing and caring for plants**

10. Course Structure

Week	Hours	Required learning	Unit or Subject Name	Learning Method	Evaluation Method
the first the second the third the fourth Fifth VI Seventh VIII Ninth The tenth	**2 2 2 2 2 2 2 2 2 2 2 2**		**The concept of horticulture and the division of horticultural crops by time period Seed planting method Agricultural circles Learn about horticultural plants, vegetable fruits, ornamental plants, and medicinal drug plants Reproduction in horticultural plants Sexual reproduction, vegetative propagation by cuttings, budding, rhizomes, grafting Horticultural crop composition, service process Hoeing, mulching, Annuals, fertilizing and irrigation Plant non-annuals and perennials Cutting and Recycling Process shaping Horticultural plant breeding methods**	My presence	Students participate in the lecture through questions coz exam Monthly exams

11. Course Evaluation

Distribution of 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 Sources	
Required Textbooks (Curricular Books, If Any)	Principles of Horticulture and Garden Engineering Book Ayad Hani Al-Allaf
Main References (Sources)	
Recommended Books and References (Scientific Journals, Reports...)	
Electronic References, Websites	

Course Description Form

1. Course Name:
Principles of Horticulture, theoretical part
2. Course Code:
3. Semester / Year:
First Semester : / 2023-2024
4. Description Preparation Date:
First course for the academic: 2023-2024
5. Available Attendance Forms:
In a present way
6. Number of Credit Hours (Total) / Number of Units (Total)
2Hours 3 Unite
7. Course Administrator's Name (Mention All, If More Than One Name)
Name: Dr. Nadia naser hamed Email: nadia.hamed@uobasrah.edu.iq **Dr. jamal abdulrida abdulsaed Email: jamal.abdulredha@uobasrah.edu.iq**

8. Course Objectives	
1- Giving an introduction to orchard plants and knowing the nutritional value of these crops. 2- Identify the most important protected agricultural facilities, such as glass and plastic houses, wooden canopies, and others. 3 - Design and planning systems for gardens and outdoor spaces. 4. Environmental conditions and their effect on horticultural plants 5. Learn how to grow vegetable and fruit plants and what their most	• .... The student reviews his information about how to grow horticultural plants and the appropriate time to plant each crop..... . • .. Need for this information throughout the study period.....

9. Teaching and Learning Strategies	
Strategy	**The modern teaching strategy includes achieving the objectives of learning in general and teaching in particular, identifying the types of horticultural crops grown in Iraq, methods of their propagation, the appropriate agricultural media for growing plants, the difficulties that the student faces in understanding and acquiring the concepts of growing horticultural plants, and treating difficulties by determining the appropriate date for planting each crop and performing service operations. Agriculture, determining the appropriate environment for growing each plant, and helping students acquire the correct scientific concepts for growing and caring for plants, as well as knowing the effect of environmental conditions on the growth and distribution of these plants and the nutritional value of economic horticultural plants. It also includes: 1- Education strategy: collaborative concept planning. 2- Education strategy: brainstorming. 3- Education Strategy: Notes Series**

10. Course Structure					
Week	**Hours**	**Required learning**	**Unit or Subject Name**	**Learning Method**	**Evaluation Method**

the first the second the third the fourth Fifth VI Seventh VIII Ninth The tenth 11 12 13 14 15	**2 2 2 2 2 2 2 2 2 2 2 2 2 2 2**	**Introduction to horticulture Nutritional value of horticultural crops Effect of temperature on crops Farming in air-conditioned homes First month exam Garden design and planning systems Basics of harvesting horticultural crops Establishing fruit orchards Fertilizing ornamental plants Second month exam**	**1-Explaining the scientific material by displaying the lectures on the screen. 2- Involving students in the lecture by asking them scientific questions. 3-Requesting scientific reports to be done after each lecture.**	In a present way	Weekly, monthly, daily, and written exams, and the end-of-course exam

11. Course Evaluation
It is distributed as follows: 30 marks for the theoretical exam, 20 marks for the practical exam, 50 marks for the final exam.

12. Learning and Teaching Sources	
Required Textbooks (Curricular Books, If Any)	Principles of Horticulture and Garden Engineering Book
Main References (Sources)	Al-Alaf, Iyad Hani, Principles of Basta Science, University of Mosul 2016
Recommended Books and References (Scientific Journals, Reports...)	**Al-Muhtasib, Jalal, A guide to propagating and grafting citrus seedlings, Ministry of Agriculture**
Electronic References, Websites	**https://www.noor-book.com/%D9%83%D8%AA%D8%A7%D8%A8-The-manual-of-horticulture-pdf#google_vignette**

- Educational Objectives of the Course	**-Enable students to think critically and find new solutions to problems using mathematics** **-Develop the ability to apply mathematical concepts to real-world challenges in agriculture, such as improving productivity and reducing negative environmental impacts** **- Engage in scientific research in agriculture and the environment, where agricultural research relies on the analysis and use of mathematical data and information**
9- Teaching and Learning Strategies	
Strategies	-Provide students with the fundamentals and additional topics related to previous learning outcomes -Enable students to acquire knowledge and understand the domain of functions and determine the range of functions -Enable students to acquire knowledge and understanding of the basics of integration and its applications
Course Structure (Week by Week)	

Week	Hours	Required Learning	Unit or Topic Name	Learning Method	Assessment Method
1	2	Introduction to Functions	Functions	Lectures Theoretical + Dialogue and Discussion	Exams Daily and Monthly Including Final Exams and Daily Reports

2	2	Methods of Finding the Domain of Functions	Domain of Functions	Lectures Theoretical + Dialogue and Discussion	Exams Daily and Monthly Including Final Exams and Daily Reports
3	2	Methods of Finding the Range of Functions	Range of Functions	Lectures Theoretical + Dialogue and Discussion	Exams Daily and Monthly Including Final Exams and Daily Reports
4	2	Methods of Finding the Limits of Functions	Limits of Functions	Lectures Theoretical + Dialogue and Discussion	Exams Daily and Monthly Including Final Exams and Daily Reports
5	2	Properties of the Limits and Methods of Finding It at Infinity	limits at Infinity	Lectures Theoretical + Dialogue and Discussion	Exams Daily and Monthly Including Final Exams and
6	2	Introduction to Function Graphing	Function Graphing	Lectures Theoretical + Dialogue and Discussion	Exams Daily and Monthly Including Final Exams and Daily Reports
7	2	Methods of Function Derivation Using Definitions and Differentiation Methods	Derivation of Function	Lectures Theoretical + Dialogue and Discussion	Exams Daily and Monthly Including Final Exams and Daily Reports
8	2	Explanation of Finding the Equation of the Tangent for Functions	Equation of the Tangent	Lectures Theoretical + Dialogue and Discussion	Exams Daily and Monthly Including Final Exams and Daily Reports

9	2	Introduction to Indefinite Integration and its Properties	Indefinite Integration	Lectures Theoretical + Dialogue and Discussion	Exams Daily and Monthly Including Final Exams and Daily Reports
10	2	Explanation of How to Calculate Definite Integration and its Properties	Definite Integration	Lectures Theoretical + Dialogue and Discussion	Exams Daily and Monthly Including Final Exams and Daily Reports
11	2	Explanation and Definition of Derivatives and Integration of Trigonometric Functions and their Properties	Trigonometric Functions	Lectures Theoretical + Dialogue and Discussion	Exams Daily and Monthly Including Final Exams and Daily Reports
12	2	Explanation and Definition of Derivatives and Integration of Logarithmic Functions and their Properties	Logarithmic Functions	Lectures Theoretical + Dialogue and Discussion	Exams Daily and Monthly Including Final Exams and Daily Reports
13	2	Explanation and Definition of Exponential Functions and their Properties, and how to Calculate Derivatives and Integrals	Exponential Functions	Lectures Theoretical + Dialogue and Discussion	Exams Daily and Monthly Including Final Exams and Daily Reports
14	2	Explanation of Some Integration Methods	Integration Methods	Lectures Theoretical + Dialogue and Discussion	Exams Daily and Monthly Including Final Exams and Daily Reports

11- Course Evaluation	
- Daily exams with scientific questions - Participation grades for competitive questions on study topics - Assign grades for homework and reports - Assign grades for student activity during lectures and their commitment to attendance	
12- Resources	
Textbooks	
Main references	1) Ayres,Frank and Mendelson,Elliott.,(2012),Schaum's Outline of Calculus, 6th Edition. US:McGraw- Hill 2) Thomas, Jr., Weir, Hass, (2014), Thoma's Calculus, 13th Edition.
Recommended Books and Supplementary References (Scientific Journals, Reports,	Various Research on Functions and Integrals
Electronic References, Internet Websites	Mathway | Algebra Problem Solver

Course Description Form

1. Course Name:
Storage pests
2. Course Code:
STPE214
3. Semester / Year:
Second / 2023-2024
4. Description Preparation Date:
5/2/2024
5. Available Attendance Forms:

In person
6. Number of Credit Hours (Total) / Number of Units (Total)
5 / 3
7. Course Administrator's Name (Mention All, If More Than One Name)
Name: Dr. Shayma Thyab Gddoa Email: shayma.gddoa@uobasrah.edu.iq
8. Course Objectives

Course Objectives	1-Introducing food store pests that include microorganisms (bacteria, fungi, and viruses), insects of all kinds, rodents (mice and rats), birds of all kinds, and animals. 2-Use good specifications and conditions when setting up stores to store food products.

9. Teaching and Learning Strategies	
Strategy	

10. Course Structure					
Week	Hours	Required learning	Unit or Subject	Learning Method	Evaluation Method
First	2		Pests	In person	
Second	2		Pests affect fruits and	In person	
Third	2		Pests found in	In person	
Fourth	2		Pests attack	In person	

Fifth	2		Pests of cold food stores	In person	
Sixth	2		Pests of canned food stores	In person	
Seventh	2		First month exam	In person	
6weake	2h		According to the curriculum	In person	

11. Course Evaluation	
Distribution of 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 Sources	
Required Textbooks (Curricular Books, If Any)	Abdul Qader Aqab Qassem, pests of
Main References (Sources)	Hisham Mohamed Salih, Food
Recommended Books and References (Scientific	
Electronic References, Websites	

Course Description Form

1. Course Name:
general chemistry Theoretical
2. Course Code:
GECH127
3. Semester / Year:
First/ 2022-2023
4. Description Preparation Date:
30/1/2024

5. Available Attendance Forms:
In the hall
6. Number of Credit Hours (Total) / Number of Units (Total)
3.5 /30
7. Course Administrator's Name (Mention All, If More Than One Name)
Name: **FALEEHA HASAN HUSSEIN** Email: faleeha.hussein@uobasrah.edu.iq Enas Abdul-Rahman Ali enas.ali@uobasrah.edu.iq
8. Course Objectives

Course Objectives	**The curriculum included a general study of chemistry for some of its branches, including theories, laws of solubility and the solubility product constant, giving some examples of them.**

9. Teaching and Learning Strategies	
Strategy	

10. Course Structure

Week	Hours	Required learning outcomes	Unit or Subject Name	Learning Method	Evaluation Method
15	**2**	**Preparing highly competent students in theoretical and practical foundations and methods of conducting laboratory analyzes using modern technologies.**	**Theoretical general chemistry**	**Explanation, presentation of the model and lecture**	**Exams**
12	**3**				

11. Course Evaluation
Distribution of 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 Sources

Required Textbooks (Curricular Books, If Any)	**Nothing**
Main References (Sources)	**[1]Basics of general chemistry** **[2]Foundations of quantum chemistry: theory and application** **{3} Muhyiddin Al-Bakoush and others. (2003). Principles of General Chemistry, Tripoli, 687 pages.** **[4] Theoretical and practical foundations of quantitative and gravimetric chemistry (2023)**
Recommended Books and References (Scientific Journals, Reports...)	**Scientific journals in the field of general chemistry**
Electronic References, Websites	**The website of the College of Agriculture in addition to the Internet**

Course Description Form

1. Course Name
Meat Processing /Practical
2. Course Code:
MEPR420
3. Semester / Year:
Second / 2023-2034
4. Description Preparation Date:
30-1-2024
5. Available Attendance Forms:
Attendance/weekly
6. Number of Credit Hours (Total) / Number of Units (Total)
3 Hours / 3.5 Units
7. Course Administrator's Name Alaa Mohamed Sadkhan
Name: Alaa Mohamed Sadkhan Email: alaa.sadkhan@uobasrah.edu.iq

8. Course Objectives: Analysis of the main components of meat (red and white) by studying the physical and chemical tests for them and qualitative tests for raw meat and its products, estimating the quality and freshness of meat and fish, methods of preservation and manufacturing some meat and fish products	
Course Objectives	**•Knowing the quality and freshness of meat of all kinds, red and white, assessing its qualitative and sensory characteristics, and its ability to be consumed or not, as well as studying some products manufactured from it.**
9. Teaching and Learning Strategies	
Strategy	**The lecturing strategy is used using PowerPoint slides, and while explaining the scientific material, the material is discussed with the student, and then questions are asked about the current material and linked to the previously explained material, while distinguishing the student who gives the correct answer and motivating him with thanks and praise and giving him a grade based on that answer. He is also asked to conduct reports. Semester for the same course subject, and a grade is calculated for it, with attention paid to the student's attendance and distinguishing him from others who are not committed to attendance, in addition to conducting daily and monthly examinations. (The strategy emphasizes linking learning to daily life, and female learners feel its benefit because the subject is related to human nutrition and health).**

10. Course Structure

Week	Hours	Required learning outcomes	Unit or Subject Name	Learning Method	Evaluation Method
1	**3**	**Main components of meat**	**Analysis of the main components of meat (red and white)**	**Three hours of practical lectures**	**Daily exam, quarterly exam and report**

2	**3**	**Estimation of the chemical content of meat**	**Fat Determination**		
3	**3**	**Estimation of the chemical content of meat**	**Protein Determination**		
4	**3**	**Quality characteristics of meat**	**Quality checks for raw meat and meat products**		
5	**3**	**An exam based on the four lectures above**			
6	**3**	**Fish quality**	**Assessment of fish quality and freshness**		
7	**3**	**Meat preservation**	**Methods of preserving meat and fish**		
8	**3**	**Fish meat processing**	**Various uses of fish and its leftovers**		
9	**3**	**Quality characteristics of protein**	**Studying the functional properties of proteins**		
10	**3**	**Meat and fish products**	**Manufacture of various products of meat and fish**		
11	**3**	**Measuring the tenderness and juiciness of meat**	**Effect of pH on muscle ability to hold water in meat, fish and poultry**		
12	**2**	**A second exam using the above lecture material**			
11. Course Evaluation					

7 Exams (monthly and daily) 3 degree of comprehension 5 Share 2 Attendance 3 Report total score 20

12. Learning and Teaching Sources	
Required Textbooks (Curricular Books, If Any)	**Practical meat and fish technology**
Main References (Sources)	**•Al-Tai, Munir Abboud and Al-Mousawi, Umm Al-Bishr Hamid Jaber (1992). Practical meat and fish technology. College of Agriculture, University of Basra, 142 pages.** **•Partner, Youssef Mohamed (2005) Meat Technology. Al-Fateh University Publications, Tripoli, Libya, 376 pages.** **•Al-Afandi, Salah Mahmoud Youssef (2012). Meat Health and Safety, General Organization for Export and Import Control, Arab Republic of Egypt, 100 pages.**

Course Description Form

1. Course Name:
Computer Applications /2
2. Course Code:
COMP101
3. Semester / Year:
2/2024
4. Description Preparation Date:
It is the complementary curriculum for the first semester, as it provides a more comprehensive approach to computer applications by incorporating computer
5. Available Attendance Forms:

6. Number of Credit Hours (Total) / Number of Units (Total)
(3 ساعات) / 1.5
7. Course Administrator's Name (Mention All, If More Than One Name)
Name: Dr. zina tareq alkanan Email: Zina_altmeme@yahoo.com
8. Course Objectives

Course Objectives	• Dealing with computer applications • Dealing with printing, organizing reports, and handling tables • Preparing statistics and ensuring ease of

9. Teaching and Learning Strategies	
Strategy	Practical application on the calculator.

10. Course Structure

The grade of the subject depends on the following aspects:

Week	Hours	Required	Unit or Subject	Learning	Evaluation
1	3		Reviewing Computer Compone		
2	3		Tab: Home Tab: Insert Dealing		
3	3		Inserting page numbers Page layout		

4	**3**		Input data into a spreadsheet.		
5			Exam 1.		
6	**3**		Insert Column Insert Row Delete		
7	**3**		Types of protection		
8	**3**		Microsoft Office Wore Power point Open the		
9			Exam 2		
10	**3**		Structural diagrams Function		
11	**3**		Running Access program Securing the database with a password		

12	**3**		Import a pre-created		
13	**3**		Sorting data Restrictin g data		
14	**3**		Discussio n of reports		
15	**3**		General exercises and		

11. Course Evaluation	
50 Midterm Exam + 50 Final Exam	
12. Learning and Teaching Sources	
Required Textbooks (Curricular Books, If Any)	The Basics of Computers and Office Applications
Main References (Sources)	الانترنت
Recommended Books and References (Scientific Journals, Reports...)	Curriculum of the Computer and Internet Unit
Electronic References, Websites	] Curricula of several different colleges that teach computer science

Course Description Form

1. Course Name:
Liquid milk
2. Course Code:
LIML324

3. Semester / Year:
2023/2
4. Description Preparation Date:
It is the complementary curriculum for the first semester, as it provides a more comprehensive approach to computer applications by incorporating computer
5. Available Attendance Forms:
6. Number of Credit Hours (Total) / Number of Units (Total)
3.5 and (2 hours)
7. Course Administrator's Name (Mention All, If More Than One Name)
Name: Dr. zina tareq alkanan Email: Zina_altmame@yahoo.com
8. Course Objectives

Course Objectives	• The student should be familiar with the basic components of milk. 2- The student should be familiar with the physicochemical properties of milk and the factors that affect milk components. 3- The student should be familiar

9. Teaching and Learning Strategies	
Strategy	Display on the video screen, photos, illustrations, and a slide presentation.
10. Course Structure	
The grade of the subject depends on the following aspects:	

Week	Hours	Required	Unit or Subject	Learning	Evaluation
1			**Liquid Milk: Definition and T**		
2			**Composition of Milk**		
3			**Properties of Natural Milk**		

4			**Milk Production and**		
5			**Healthy Milk Productio**		
6			**Milk Adulteration**		
7			**Diseases Transmitted by**		
8					
9			**Transporting Raw Milk to**		
10			**Processing Milk in Dairy**		
11			**Thermal Treatments of Milk**		
12			**Effect of Thermal Treatment**		
13					
14			**Cream Manufacturing**		
15			**Condensed and Powdered**		

11. Course Evaluation	
50 Midterm Exam + 50 Final Exam	
12. Learning and Teaching Sources	
Required Textbooks (Curricular Books, If Any)	The Basics of Computers and Office Applications
Main References (Sources)	الانترنت
Recommended Books and References (Scientific Journals, Reports ...)	Curriculum of the Computer
Electronic References, Websites	] Curricula of several different colleges that teach computer science for the

Course Description Form

1. Course Name:
English Language
2. Course Code:
ENGL106
3. Semester / Year:
2023
4. Description Preparation Date:
2018
5. Available Attendance Forms:
On campus
6. Number of Credit Hours (Total) / Number of Units (Total)
2 units
7. Course Administrator's Name (Mention All, If More Than One Name)
Name: Abdulrahman H. Laftah Email: uneabdo@yahoo.com

8. Course Objectives	
Course Objectives	• To enable the learner to communicate effectively and appropriately in real life situation • To use English effectively for study purpose across the curriculum • To develop and integrate the use of the four language
9. Teaching and Learning Strategies	
Strategy	This class focuses on essential language abilities such as reading, writing, speaking, listening, and critical thinking, observing, and delivering presentations. Continuous attention will be given to building vocabulary and honing composition skills throughout the program. The curriculum encompasses the exploration of diverse literary forms, including short stories and non-fiction. The primary emphasis of the course lies in advancing proficiency in both reading and writing.

10. Course Structure

Week	Hours	Requirements	Unit or Subject	Learning	Evaluation
15	**2**	Reading Writi	**Grammars Communi**	**At class**	**Exams**

11. Course Evaluation

Distribution of 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 Sources

Required Textbooks (Curricular Books, If Any)	Pre-Intermediate Student's Book: New Headway Plus: John and Liz
Main References (Sources)	
Recommended Books and References (Scientific Journals, Reports...)	
Electronic References, Websites	

Course Description Form

1. Course Name:
DAIRY CHEMESTRY
2. Course Code:
DACH319
3. Semester / Year:
Second Semester/2023
4. Description Preparation Date:
30/1/2024
5. Available Attendance Forms:
Laboratories
6. Number of Credit Hours (Total) / Number of Units (Total)
3 hours per week distributed over 14 weeks / number of unit 6
7. Course Administrator's Name (Mention All, If More Than One Name)
Name: Najla housen saper Email: Najla.saper@@uobasrah.edu.iq Name: Raghad Saad Musa Email: raghad.saad@uobasrah.edu.iq

8. Course Objectives	
Course Objectives	**• Teaching the student to understand the components of milk and its products, and methods for measuring the proportions of milk components and its products.**
9. Teaching and Learning Strategies	
Strategy	**Generating creative ideas and emphasizing the importance of opinions and diverse perspectives, as well as fostering teamwork in the laboratory for students.**

10. Course Structure

Week	Hours	Required learning outcomes	Unit or Subject Name	Learning Method	Evaluation Method
1	**3**		**Definition of milk and its components**		

2	**3**		**milk proteins**		
3	**3**		**Methods of estimating protein in milk**		
4	**3**		**Paper chromatography**		
5	**1**		**the first exam**		
6	**3**		**Estimate the percentage of milk fat**		
7	**3**		**Lactose sugar crystal**		
8	**3**		**Effect of exhaustion and salts on clotting**		
9	**1**		**Second exam**		
10	**3**		**Types of cheesed enzymes and estimate the strength of exhausted**		
11	**3**		**Types of cheeses**		
12	**3**		**Estimate calcium and magnesium with milk**		
13	**3**		**Structural interactions**		

14	**1**		**Practical**		
15	**2**				
Mid Exam					

11. Course Evaluation
Distribution of the score out of 20 according to the tasks assigned to the student, such as daily preparation, daily oral, monthly, or written exams, reports, etc.

12. Learning and Teaching Sources	
Required Textbooks (Curricular Books, If Any)	**Book of dairy Chemistry**
Main References (Sources)	**Reading of dairy Chemistry**
Recommended Books and References (Scientific Journals, Reports...)	
Electronic References, Websites	

Course Description Form

1. Course Name:
Dairy microbiology
2. Course Code:
DAMB322
3. Semester / Year:
Second / 2023-2024
4. Description Preparation Date:
5/2/2024
5. Available Attendance Forms:
In person
6. Number of Credit Hours (Total) / Number of Units (Total)

5 / 3	
7. Course Administrator's Name (Mention All, If More Than One Name)	
Name: Prof. Dr. Alaa Kareem Niamah Email: alaa.niamah@uobasrah.edu.iq	
8. Course Objectives	
Course Objectives	• Knowing the natural antibiotics found in milk • Detect types of harmful bacteria transmitted through milk and its products
9. Teaching and Learning Strategies	
Strategy	• **Receiving direct lectures from the teacher.** • **Using modern learning methods.**
10. Course Structure	

Week	Hours	Requir	Unit or Subject	Learning	Evaluation
First	2		The introduc	In pers	
Secon	2		Milk	In	
Third	2		Natural antibioti	In pers	
Fourt	2		Cream	In	
Fifth	2		Butter	In	
Sixth	2		Margen	In	
Seven	2		First	In	
Eight	2		Cheese	In	
Ninth	2		Dairy ferment	In pers	
Tenth	2		Starters	In	
Eleve	2		Lactic	In	
Twelv	2		Probioti	In	
Thirteenth	2		Antigens	In pers	
Fourteenth	2		Metabolic	In pers	
Fiftee	2		Second	In	

11. Course Evaluation	
Distribution of 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 Sources	
Required Textbooks (Curricular Books, If Any)	
Main References (Sources)	**1. Probiotic Dairy Products (book).**
Recommended Books and References (Scientific Journals, Reports...)	**Dairy science journal**
Electronic References, Websites	

Course Description Form

1. Course Name
Quality control
2. Course Code:NO
QUCO419
3. Semester
/ Year: 2023-2022
4. Description Preparation Date:
2022
5. Available Attendance Forms:
My presence in the halls of the College of Agriculture
6. Number of Credit Hours (Total) /
3 hours Units 3.5
7. Course Administrator's Name (Mention All, If More Than One Name)
Dr. Diaa Faleh Abdullah Name: Sheren Fadhel Abbas Email: sheren.abbas@uobasrah.edu.iq **sara hashem**

8. Course Objectives	
Course Objectives	**• The student's knowledge of the applied foundations of the basic quality control subject, the extent to which the subject relates to daily life and how to deal with it, knowledge of methods of fraud, the most important common mistakes in the process of**
9. Teaching and Learning Strategies	
Strategy	THE PRACTICAL SECTION OF THE PRINCIPLES OF INDUSTRIES COURSE AIMS TO DEVELOP AND LINK THE PRACTICAL EXPERIENCES OF THE WITH THE THEORETICAL INFORMATION OF THE STUDENT , STUDENT, AND THE CONSOLIDATION OF THE THEORETICAL FOUNDATIONS THAT THE STUDENT RECEIVES , AND INSTALL IT IN HIS MIND. PRACTICAL EXPERIENCES THAT BENEFIT THE STUDENT HAVE BEEN SELECTED , IN THE METHODS OF I ON FRAUD AND WAYS TO DETECT IT
10. Course Structure	

Week	Hour	Required	Unit or Subject	Learning	Evaluation

15	**3**	**Knowledge and understanding, brainstorming and mental skills, professional and scientific skills, and general skills**	**Quality, quality measures and quality marks Metrics - and measurements Defects and estimation of defects and sources of contamination Chemical and microbia**	**Laboratory experiments.**	**Evaluation during the practical experiment in the laboratory.**

11. Course Evaluation	
Distribution of 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 Sources	
Required Textbooks (Curricular Books, If Any)	[1] Basics of quality control
Main References (Sources)	The methodological book for the subject of quality control

Recommended Books and References (Scientific Journals, Reports...)	[3] Standard specifications for food quality and nutrition
Electronic References, Websites	**And the book Food Quality Control and Food Safety**

Course Description Form

1. Course Name*:*	
Cereal Processing	
2. Course Code:	
CEPR313	
3. Semester First /	
2023-2024	
4. Description Preparation Date:	
31-1-2024.	
5. Available Attendance Forms:	
6. 3 Hours	
7. Course Administrator's Name (Mention All, If More Than One Name)	
Name: Bushra bader jerad	Email:bushra.jeraduobasrah.edu.iq
8. Course Objectives	
Course Objectives	• Training on laboratory bread making and sensory evaluation • Training in making Arabic bread, cakes and biscuits • Bread hardening tests • Estimation of yeast activity.
9. Teaching and Learning Strategies	
Strategy	
10. Course Structure	

Week	Hours	Required learning outcomes	Unit or Subject Name	Learning Method	Evaluation Method
8	3		Training in making bread and pastries such as cakes	practical	Sensory methods
6	3		Morphological characteristics of grains Determination		Sensory methods

11. Course Evaluation

Distribution of 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 Sources

Required Textbooks (Curricular Books, If Any)	Saidi.(1983).Mohammad Abd.(1983).Cereal technology
Main References (Sources)	Saidi.(1983).Mohammad Abd.(1983).Cereal technology
Recommended Books and References (Scientific Journals, Reports ...)	
Electronic References, Websites	

Course Description Form

1. Course Name:
Cereal Processing
2. Course Code:
CEPR313
3. Semester First / 2023-2024
4. Description Preparation Date:31-1-2024.

5. Available Attendance Forms:

6. 1Hour

7. Course Administrator's Name (Mention All, If More Than One Name)

Name: Bushra bader jerad

Email:bushra.jeradu@basrah.edu.iq

8. Course Objectives

Course Objectives	• **Knowing the characteristics of cereal** • **How to deal with grain shipments** • **Grain storage**

9. Teaching and Learning Strategies

Strategy	

10. Course Structure

Week	Hours	Required	Unit or	Learning	Evaluation
5	**2**		**Manufacture of coarse wheat Grindin**		
8	**3h**		**Study of the physical properti**		

11. Course Evaluation

Distribution of 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 Sources

Required Textbooks (Curricular Books, If Any)	**Saidi.(1983).Mohammad Abd (1983) Cereal technology**

Main References (Sources)	**Saidi.(1983).Mohammad Abd (1983) Cereal technology**
Recommended Books and References (Scientific Journals, Reports...)	
Electronic References, Websites	

Course Description Form

1. Course Name:
Microbiology
2. Course Code:
MICB218
3. Semester / Year:
First Semester
4. Description Preparation Date:
4/ 2/ 2024
5. Available Attendance Forms:
attendance in the hall of Sections 1, 2, and 3 and the practical part in the microbiology laboratory
6. Number of Credit Hours (Total) / Number of Units (Total)
5 hr. / 3 units
7. Course Administrator's Name (Mention All, If More Than One Name)
Name: Prof.Dr.Alaa Jabbar Abd Email: alaa.abd@uobasrah.edu.iq Name Assist.Prof.Dr. Saher Sabih George Email: saher.george@uobasrah.edu.iq Zainab abd Ali Email: zainab.abdali@uobasrah.edu.iq
8. Course Objectives

Course Objectives	**• Introducing students to the basics of microbiology according to the vocabulary of the microbiology curriculum by giving a detailed idea about it and how to deal with it and benefit from it in various life applications.** **• Introducing students to the fields of microbiology in (food - medicine - industry) and the most important microbial diseases that affect humans and plants and how to spread and resist them.** **•Introducing students to the pros and cons of the presence of microorganisms in nature.**
9. Teaching and Learning Strategies	
Strategy	***Using modern teaching methods and illustrative films, as well as involving students in scientific lectures.** ***Reports on one of the topics related to the specialty.** *** Discussions inside the classroom**
10. Course Structure	

Week	**Hours**	**Required**	**Unit or Subject**	**Learnin**	**Evaluation**

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	**2 The ory 3 prac tical**		**Microbio logy Morphol ogical of Bacteria Anatom y of Bacteria Growth of the bacteria Bacteria growth and reproduc**		

11. Course Evaluation	
25 marks for the monthly theoretical exam, 5 marks for the student's activity in discussion during the lecture and scientific reports, 20 marks for the monthly practical exam, 50 marks for the semester exam (end of the semester)	
12. Learning and Teaching Sources	
Required Textbooks (Curricular Books, If Any)	**Al-Dulaimi, Khalaf Sufi. Basics of microbiology.**
Main References (Sources)	**Principles of microbiology / Dr. Fawaz Aziz Al-Ani and**
Recommended Books and References (Scientific Journals, Reports...)	
Electronic References, Websites	**Lectures prepared by the subject teacher based on**

Course Description Form

1. Course Name:
Food Industries
2. Course Code:

FOIN131	
3. Semester / Year:	
The second 2024	
4. Description Preparation Date:	
2018	
5. Available Attendance Forms:	
In presence	
6. Number of Credit Hours (Total) / Number of Units (Total)	
3 hour 3hour	
7. Course Administrator's Name (Mention All, If More Than One Name)	
Nawal khaled zben Email: : nawal.zben@uobasrah.edu.iq Name:Alia Zyara Hashim Email: : alia.hashim@uobasrah.edu.iq ا.م.د.بتول محمود محمد الايميل: batool.muhmed@uobasrah.edu.iq	
8. Course Objectives	
Course Objectives	• **The importance of food industries** • **Food components include proteins, carbohydrates, fats, vitamins and minerals.** •**.Methods of preserving, storing and manufacturing food physiological,**
9. Teaching and Learning Strategies	
Strategy	**This science is explained and is related to many applied sciences such as chemistry, physics, biology, physiology, crops, horticulture, and economics.**
10. Course Structure	

Week	**Hou**	**Required**	**Unit or Subject**	**Learning**	**Evaluatio**
1 2 3	**2**	**Explain the unit require**	**The importance of**	**In presence**	**PowerPoint**

15	**3**	**Knowledge and understanding, brainstorming**	**The student's knowledge of the practical foundati**	**Laboratory experiments.**	**Evaluation during the pract**

11. Course Evaluation	
Distribution of 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 Sources	
Required Textbooks (Curricular Books, If Any)	**Principles of food industries**
Main References (Sources)	**Principles of food industries**
Recommended Books and References (Scientific Journals, Reports...)	**] food chemistry Manufacturing process chain**
Electronic References, Websites	**Basics of food science**

Course Description Form

1. Course Name:
Quantitative Chemistry
2. Course Code:
QUCH112
3. Semester / Year:
Second/ 2022-2023
4. Description Preparation Date:
30/1/2024
5. Available Attendance Forms:
In the hall
6. Number of Credit Hours (Total) / Number of Units (Total)

3.5 /30	
7. Course Administrator's Name (Mention All, If More Than One Name)	
Name: **FALEEHA HASAN HUSSEIN** Email: faleeha.hussein@uobasrah.edu.iq Enas Abdul-Rahman Ali enas.ali@uobasrah.edu.iq	
8. Course Objectives	
Course Objectives	Analytical chemistry studies the indicators used in the analysis of acids and bases, the foundations of choosing the indicator, the mechanism of the work of the indicator, and calculating the ph for all solutions.
9. Teaching and Learning Strategies	
Strategy	

10. Course Structure

Wee	**Hou**	**Required learning**	**Unit or**	**Learning**	**Evaluation**
15	**2**	**Preparing highly competent students**	**Theoretical analytical Chemi**	**Explanation, presentation of the**	**Exams**

11. Course Evaluation	
Distribution of 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 Sources	
Required Textbooks (Curricular Books, If Any)	**Nothing**

Main References (Sources)	**[1]Basics of general chemistry** **[2]Foundations of quantum chemistry: theory and application** **{3} Muhyiddin Al-Bakoush and others. (2003). Principles of General Chemistry, Tripoli, 687 pages.**
Recommended Books and References (Scientific Journals,	**Scientific journals in the field of general chemistry**
Electronic References, Websites	**The website of the College of Agriculture in addition to the Internet**

Course Description Form

1. Course Name:
Food Sanitation
2. Course Code:
FOSA215
3. Semester / Year:
First Semester
4. Description Preparation Date:
8/ 2/ 2024
5. Available Attendance Forms:
attendance in the hall of Sections 1, 2, and 3 and the practical part in the microbiology laboratory
6. Number of Credit Hours (Total) / Number of Units (Total)
5 hr. / 3 units
7. Course Administrator's Name (Mention All, If More Than One Name)

Name: Assis Prof.Dr. Ammar B. ALtemimi Name Assist.Prof.Dr. Saher Sabih George Email: saher.george@uobasrah.edu.iq Nawal khaled zben Email: : nawal.zben@uobasrah.edu.iq	
8. Course Objectives	
Course Objectives	**• Introducing students to the basics of microbiology according to the vocabulary of the microbiology curriculum by giving a detailed idea about it and how to deal with it and benefit from it in various life applications.** **• Introducing students to the fields of microbiology in (food - medicine - industry) and the most important microbial diseases that affect humans and plants and how to spread and resist them.** **•** • **Studying food contamination and its relationship to individual health** • **Knowing how dangerous microorganisms are to health** • **Knowing the relationship between microorganisms and infection with diseases** • **Knowing the extent of the danger of some types of fungi and viruses and their relationship to the health of the individual** • **Finding ways to prevent diseases** **A comprehensive study of the types of poisoning that can be transmitted through food and how it can be prevented**
9. Teaching and Learning Strategies	
Strategy	***Using modern teaching methods and illustrative films, as well as involving students in scientific lectures.** ***Reports on one of the topics related to the specialty.** *** Discussions inside the classroom**

10. Course Structure

Week	Hours	Required learning	Unit or Subject Name	Learning Method	Evaluation Method

1 2 3 4 5 6 7 8 9 10 11 12 15	**2 Theory 3 practical** 3		**-1 Micro- organisms 2The importance of food health -3chemical hazard 4- Biological Hazards 5- -Botulism Food Poisoning 6- Food poisoning by infection and poison 7- Bacillus Food Poisoning 8- Shigellosis food poisoning 9- -Enter pathogenic *Escherichia coli* 10- -Mycotoxins 11- Adulterated Foods 12- Hazard Analysis Critical Control Point) Food Sampling and samples perperation Method detected the efficiency of cleaning and sanitation**		

11. Course Evaluation
25 marks for the monthly theoretical exam, 5 marks for the student's activity in discussion during the lecture and scientific reports, 20 marks for the monthly practical exam, 50 marks for the semester exam (end of the semester)

12. Learning and Teaching Sources	
Required Textbooks (Curricular Books, If Any)	**1- Food Hygiene Book 2008 2- Food Safety Book 2008 3-Bacterial toxins 2012**
Main References (Sources)	**Practical Microbiology Principles**
Recommended Books and References (Scientific Journals, Reports...)	**Practical Microbiology Principles**
Electronic References, Websites	**Lectures prepared by the subject teacher based on methodological books**

1. Course Name:	
dairy chemistry	
2. Course Code:	
DACH319	
3. Semester / Year	
the second 2024-2023	
4. Description Preparation Date	
2024/2/5	
5. Available Attendance Forms:	
Hall	
6. Number of Credit Hours (Total) / Number of Units (Total)	
2 hours for 14 weeks 4 units	
7. Course Administrator's Name (Mention All, If More Than One Name)	
Name: Najla housen saper Raghad Saad Musa	Email: **Najla.saper@@uobasrah.edu.iq** Email: raghad.saad@uobasrah.edu.iq
8. Course Objectives	
Course Objectives	• **Understanding the chemical composition of milk.** • **• Study of variation in milk composition.** • **• Follow correct and scientific**
9. Teaching and Learning Strategies	
Strategy	**Generating creative ideas and emphasizing the importance of opinions and diverse perspectives, as well as fostering teamwork in the laboratory for students**
10. Course Structure	

Week	Hours	Required	Unit or	Learning	Evaluation

14	**2**			**Two hours of theoretical lecture**	**Daily exam, quarterly exam and**
12	**3**				

11. Course Evaluation	
Distribution of 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 Sources	
Required Textbooks (Curricular Books, If Any)	**dairy Chemistry / Dr. Mohsen Al-Shabibi and Dr. Amer**
Main References (Sources)	**dairy chemistry**
Recommended Books and References (Scientific Journals, Reports...)	**Principles of dairy chemistry**
Electronic References, Websites	**Research in dairy chemistry**

Course Description Form

1. Course Name:
General Chemistry
2. Course Code:
GECH127
3. Semester / Year:
Second/ 2022-2023
4. Description Preparation Date:
30/1/2024
5. Available Attendance Forms:
In the hall
6. Number of Credit Hours (Total) / Number of Units (Total)

3.5 /30					
7. Course Administrator's Name (Mention All, If More Than One Name)					
Name: **FALEEHA HASAN HUSSEIN** Email: faleeha.hussein@uobasrah.edu.iq Enas Abdul-Rahman Ali enas.ali@uobasrah.edu.iq					
8. Course Objectives					
Course Objectives	Analytical chemistry studies the indicators used in the analysis of acids and bases, the foundations of choosing the indicator, the mechanism of the work of the indicator, and calculating the ph for all solutions.				
9. Teaching and Learning Strategies					
Strategy					
10. Course Structure					
We	**Hou**	**Required learning**	**Unit or**	**Learning**	**Evaluation**
15	**2**	**Preparing highly competent students**	**Theoretical analytical Chemi**	**Explanation, presentation of the**	**Exams**
11. Course Evaluation					
Distribution of 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 Sources					
Required Textbooks (Curricular Books, If Any)	**Nothing**				

Main References (Sources)	**[1]Basics of general chemistry** **[2]Foundations of quantum chemistry: theory and application** **{3} Muhyiddin Al-Bakoush and others. (2003). Principles of General Chemistry, Tripoli, 687 pages.**
Recommended Books and References (Scientific Journals,	**Scientific journals in the field of general chemistry**
Electronic References, Websites	**The website of the College of Agriculture in addition to the Internet**

Course description form

Counting : Course name .1
Biotechnology/ 1
Course code .2
BITE442
Semester/year .3
The second course
The date this description was prepared .4
2022
Available attendance forms .5
My presence in the department halls
Number of study hours (total)/number of units (total) .6
3.5 2
Name of the course administrator (if more than one name is mentioned) .7
:Email Professor Wael Ali Sawadi :Name

Course objectives .8	
Teaching practical calculation methods ..... **Design of sectors in the scientific ... . experiment .....**	Objectives of the study subject
Teaching and learning strategies .9	
The modern teaching strategy includes achieving the objectives of learning in general and teaching in particular, and identifying the types of standards, medium, mode, and random sectors in the experiment, agricultural service operations, determining the	The strategy
Course structure .10	

Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	hours	the week
Students participate in the lecture through	**My presence**	**Mode, median, arithmetic mean**	**Knowledge and understanding, brainstorming**	**3**	**15**

Course evaluation .11
Distribution of the grade out of 100 according to the tasks assigned to the student, such as .daily preparation, daily, oral, monthly, written exams, reports, etc

Learning and teaching resources .12	
Methodical book	Required textbooks (methodology, if any)
Statistics and design	Main references (sources)
	Recommended supporting books and references (scientific journals, reports...)
	Electronic references, websites

Course Description Form

1. Course Name:
Horticulture
2. Course Code:
HORT116

3. Semester / Year:
First Semester : / 2023-2024
4. Description Preparation Date:
First course for the academic: 2023-2024
5. Available Attendance Forms:
6. Number of Credit Hours (Total) / Number of Units (Total)
3Hours / 1.5 Unite
7. Course Administrator's Name (Mention All, If More Than One Name)
Name: Zainab abd alameer Email: Zainab saihood.uobasrah.edu.iq
8. Course Objectives

. The curriculum included the study of the concept of horticulture, the division of horticultural crops according to the time period, horticultural division and according to the duration of their life, the study and methods of growing horticultural crop species, methods of reproduction, horticultural service, cutting and shaping	• Student review of his knowledge of chemistry • This information is needed throughout the study period .. . • ..... • .....

9. Teaching and Learning Strategies	
Strategy	**It includes a modern teaching strategy in achieving learning goals in general and education in particular and identifying the types of horticultural crops grown in Iraq and methods of propagation and agricultural circles suitable for growing plants and the difficulties faced by the student in understanding and acquiring the concepts of growing horticultural plants and treating difficulties by determining the appropriate date for planting each crop and conducting agricultural service operations and determining the appropriate environment for planting each plant and helping students to acquire the correct scientific concepts for growing and caring for plants**

10. Course Structure

Week	Hours	Required learning	Unit or Subject Name	Learning Method	Evaluation Method

the first **the second** **the third** **the fourth** **Fifth** **VI** **Seventh** **VIII** **Ninth** **The tenth**	**2** **2** **2** **2** **2** **2** **2** **2** **2** **2** **2** **2**		**The concept of horticulture and the division of horticultural crops by time period Seed planting method Agricultural circles** **Learn about horticultural plants, vegetable fruits, ornamental plants, and medicinal drug plants** **Reproduction in horticultural plants Sexual reproduction, vegetative propagation by cuttings, budding, rhizomes, grafting** **Horticultural crop composition, service process Hoeing, mulching, Annuals, fertilizing and irrigation** **Plant non-annuals and perennials** **Cutting and Recycling Process shaping Horticultural plant breeding methods**	My presence	Students participate in the lecture through questions coz exam Monthly exams

11. Course Evaluation	
Distribution of 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 Sources	
Required Textbooks (Curricular Books, If Any)	Principles of Horticulture and Garden Engineering Book Ayad Hani Al-Allaf
Main References (Sources)	
Recommended Books and References (Scientific Journals, Reports...)	
Electronic References, Websites	

Course Description Form

1. Course Name:
Food Chemistry
2. Course Code:
FOCH312
3. Semester / Year:

First Semester/2023-2024	
4. Description Preparation Date:	
30/1/2024	
5. Available Attendance Forms:	
Attendance in college laboratories	
6. Number of Credit Hours (Total) / Number of Units (Total)	
45/3	
7. Course Administrator's Name (Mention All, If More Than One Name)	
Name:Anfal Alwan Abdulnabi Email: anfal.abdul_nabi@uobasrah.edu.iq	
8. Course Objectives	
Course Objectives	• **Chemical reactions and interactions between the basic components of food, and the study of methods for**
9. Teaching and Learning Strategies	
Strategy	**Lectures are based on explanation, delivery style, and brainstorming.** **Computer-based and internet-based education for gathering**
10. Course Structure	

Wee	**Ho**	**Required**	**Unit or Subject**	**Learning**	**Evaluatio**
15	**3**	**Knowledge and**	**Solutions, Viscosity, Emulsions,**	**Lab Experime**	**Evaluation**

11. Course Evaluation	
Distribution of 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 Sources	
Required Textbooks (Curricular Books, If Any)	

Main References (Sources)	**Biochemistry and Food Chemistry**
Recommended Books and References (Scientific Journals, Reports...)	**Introduction to Food Chemistry**
Electronic References, Websites	

Course Description Form

1. Course Name:	
metabolic pathways	
2. Course Code:	
MEPA323	
3. Semester / Year:	
Second Semester /2023-2024	
4. Description Preparation Date:	
30/1/2024	
5. Available Attendance Forms:	
Attendance in college laboratories	
6. Number of Credit Hours (Total) / Number of Units (Total)	
45/ 3	
7. Course Administrator's Name (Mention All, If More Than One Name)	
Name: Anfal Alwan Abdulnabi Email: anfal.abdul_nabi@uobasrah.edu.iq	
8. Course Objectives	
Course Objectives	• **. A fundamental lesson from the nutrition department courses because of its importance, including topics and methods for measuring blood sugar and cholesterol levels, as well as other important**
9. Teaching and Learning Strategies	

Strategy	**Lectures are based on explanation, delivery style, and brainstorming. Computer-based and internet-based education for gathering information. Each student will give a discussion session on one of the course topics.**

10. Course Structure

Week	Hours	Required	Unit or Subject	Learning	Evaluation
15	**3**	**Knowledge and understanding,**	**Plasma separation, Blood sugar measureme**	**Lab Experiments**	

11. Course Evaluation

Distribution of 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 Sources

Required Textbooks (Curricular Books, If Any)	
Main References (Sources)	**Biochemistry**
Recommended Books and References (Scientific Journals, Reports...)	
Electronic References, Websites	

Course Description Form

1. Course Name:
Dairy Products / 2
2. Course Code:
DAPR415
3. Semester / Year:
Second Semester/2023-2024
4. Description Preparation Date:
30/1/2024

5. Available Attendance Forms:					
Laboratories					
6. Number of Credit Hours (Total) / Number of Units (Total)					
3 hours per week distributed over 10 weeks / number of unit 6					
7. Course Administrator's Name (Mention All, If More Than One Name)					
Name: Raghad Saad Musa Email: raghad.saad@uobasrah.edu.iq					
8. Course Objectives					
Course Objectives	**Teaching the student about understanding the units of food and dairy engineering, the production process flow of food products, and the steps involved in establishing food and dairy laboratories.**				
9. Teaching and Learning Strategies					
Strategy	**Generating creative ideas and emphasizing the importance of opinions and diverse perspectives, as well as fostering teamwork in the laboratory for students.**				
10. Course Structure					
Week	**Hours**	**Required learning outcomes**	**Unit or Subject Name**	**Learning Method**	**Evaluation Method**
10 weeks	**3 hours per week**				
11. Course Evaluation					
Distribution of the score out of 20 according to the tasks assigned to the student, such as daily preparation, daily oral, monthly, or written exams, reports, etc.					
12. Learning and Teaching Sources					
Required Textbooks (Curricular Books, If Any)	**Book of food and dairy engineering**				
Main References (Sources)	**Reading of food and dairy engineering**				
Recommended Books and References (Scientific Journals, Reports...)					
Electronic References, Websites					

Course Description Form

1. Course Name:
Food factory management
2. Course Code:
FCMA216
3. Semester / Year:
2
4. Description Preparation Date:
2023
5. Available Attendance Forms:
Attendance in college laboratories
6. Number of Credit Hours (Total) / Number of Units (Total)
2\3
7. Course Administrator's Name (Mention All, If More Than One Name)
mohammed.eskander@uobasrah.edu.iq: Email: ***MOHAMMED ZYARAH ESKANDERA*** Name:
8. Course Objectives

The subject aims to get acquainted with the study of the management method of food laboratories through knowledge of the modern management method for all sections of food laboratories such as human resources management, financial management, marketing and procurement, production management and quality control. Knowing the duties and qualities of the manager to achieve the factory's goals in producing foodstuffs with strong competition in the market.	1-Preparing scientific cadres with the ability to manage food laboratories 2- Students' ability to manage production in food laboratories. 3- Students' ability to manage the quality control department of food laboratories. 4- Students' ability to manage marketing and address market demands. 5- Students' ability to choose the optimal combination of resources that reduce costs.

9. Teaching and Learning Strategies

Strategy	**Using modern methods in managing food factories to reach the best production at reasonable prices to meet the needs of the local market and achieve self-sufficiency.**

10. Course Structure

Week	Hours	Required learning outcomes	Unit or Subject Name	Learning Method	Evaluation Method

1	**2**		management concept		
	2		management jobs		
2	**2**		Planning in food laboratories		
3	**2**		Organization in food laboratories		
4	**1**		Assignment 1		
5	**2**		Guidance in food laboratories		
6	**2**		Control in food laboratories		
7	**2**		Director	**direct**	**Good**
8	**1**		Assignment 2		
9	**2**		Production management in food factories		
10	**2**				
11	**2**		Human resource management in food laboratories		
12	**2**		Marketing management in food laboratories		
13	**2**		Maintenance management in the food factory		
14	**2**		Quality control management in food laboratories		
11. Course Evaluation					

Distribution of 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.	
Exams	40
Reading Checks	4
Participation	4
Attendance	2
Assignments	50

12. Learning and Teaching Sources	
Required Textbooks (Curricular Books, If Any)	[1] Food Laboratories Administration, written by: Dr. Hailan Hammadi Al-Tikriti and others 1986 AD
Main References (Sources)	[2] Printed lectures for the subject professor
Recommended Books and References (Scientific Journals, Reports...)	
Electronic References, Websites	**Yes**

Course Description Form

1. Course Name:
Horticulture
2. Course Code:
HORT116
3. Semester / Year:
First Semester : / 2023-2024
4. Description Preparation Date:

First course for the academic: 2023-2024
5. Available Attendance Forms:
2/3
6. Number of Credit Hours (Total) / Number of Units (Total)
3Hours / 1.5 Unite
7. Course Administrator's Name (Mention All, If More Than One Name)
Name: Zainab abd alameer Email: Zainab saihood.uobasrah.edu.iq
8. Course Objectives

. The curriculum included the study of the concept of horticulture, the division of horticultural crops according to the time period, horticultural	• Student review of his knowledge of chemistry • This information is needed throughout the study period .. .

9. Teaching and Learning Strategies	
Strategy	**It includes a modern teaching strategy in achieving learning goals in general and education in particular and identifying the types of horticultural crops grown in Iraq and methods of propagation and agricultural circles suitable for growing plants and the difficulties faced by the student in understanding and acquiring the**

10. Course Structure

Week	Hours	Require	Unit or Subject	Learning	Evaluation

the first the second the third the fourth Fifth VI Seve	**2 2 2 2 2 2 2 2 2 2 2 2**		**The concept of horticulture and the division of horticultural crops by**	My presence	Students participate in the lecture through questions coz exam Monthly

11. Course Evaluation	
Distribution of 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 Sources	
Required Textbooks (Curricular Books, If Any)	Principles of Horticulture and Garden Engineering
Main References (Sources)	
Recommended Books and References (Scientific Journals, Reports...)	
Electronic References, Websites	

Course Description Form

1. Course Name:
food manufacting / 1
2. Course Code:
FCMA216
3. Semester / Year:

1
4. Description Preparation Date:
2024
5. Available Attendance Forms:
In person
6. Number of Credit Hours (Total) / Number of Units (Total)
2\3
7. Course Administrator's Name (Mention All, If More Than One Name)
Name: ***MOHAMMED ZYARAH ESKANDERA*** Email:: mohammed.eskander@uobasrah.edu.iq
8. Course Objectives

The topic aims to identify the methods of food manufacturing for products of nutritional, economic and commercial importance, the most important of which is the manufacture and preservation of food by various manufacturing methods such as canning, drying, cryopreservation, freezing, irradiation, in addition to other methods such as salting, pickling, use of additives and others.	1- Preparing scientific competencies specialized in the science and technology of modern food manufacturing. 2- Getting to know the reality of the food industries in Iraq and the world. 3- Cooperation with scientific and production institutions in various fields of food inspection and manufacture. 4- Preparing skilled people to examine foods before and after manufacturing. 5- Learn about modern methods of preserving and manufacturing foodstuffs, as well as packaging materials.

9. Teaching and Learning Strategies

Strategy	Yes, it is possible (point an appropriate aspect) - Food efficiency for infants, children, adults and the elderly - Fighting poverty

10. Course Structure

Week	Hours	Required learning outcomes	Unit or Subject Name	Learning Method	Evaluation Method

1	**2**		The reality of food industries in Iraq and the Arab world		
2			Packing materials		
3			Food preservation by canning		
4			Assignment 1		
5			Food preservation and refrigeration		
6			Food preservation by canning		
7			Preservation of sugar and manufacture of syrups, juices, marmalade and jelly		
8			Dry preservation Assignment 2	**Direct**	**Good**
9			food additives		
10			Radiation preservation Food preservation by freezing		
11			Assignment 3 soft drink industry		
12			Preserving food by water pressure		
13					
14					
15					
11. Course Evaluation					

Distribution of 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.

Exams	25
Reading Checks	1
Participation	2
Attendance	2
Assignments	30

12. Learning and Teaching Sources	
Required Textbooks (Curricular Books, If Any)	- Food science; by N.N.Pptter, 1984
Main References (Sources)	Food biochemstry and food prossing , by Y.H. Hui 2006
Recommended Books and References (Scientific Journals, Reports...)	
Electronic References, Websites	**Yes**

Course Description Form

1. Course Name:
Soil Science
2. Course Code:
SOIL114
3. Semester / Year:
first semester / Second stage
4. Description Preparation Date:
6-2-2024

5. Available Attendance Forms:
Attending
6. Number of Credit Hours (Total) / Number of Units (Total)
5 hours (2 Theoretical and 3 practical) 3 units
7. Course Administrator's Name (Mention All, If More Than One Name)
Name: **Rashad Adel Imran** **Email**: Rashad.imran@uobasrah.edu.iq
8. Course Objectives

Course Objectives	• **Identify the concept of soil science** • **The most important soil properties** • **Soil formation factors, physical characteristics, and fertility.**

9. Teaching and Learning Strategies	
Strategy	**In-person lectures for 15 weeks, including two monthly exams and daily exams**.

10. Course Structure

The theoretical part

Week	Hours	Required learning	Unit or Subject Name	Learning Method	Evaluation Method
1	**2**		1-Definition of soil science The main components of soil 2-Mineral soils and organic soils 3- Soil as a natural body.	Lecture with explanation presentation	daily exam
2	**2**		**soil Formation**	Lecture with explanation	daily exam
3	**2**		**Soil Texture** • **Soil Structure** •	Lecture with explanation	daily exam

4	**2**		**:**The apparent density of the soil • Population and distribution of • **:**pores The effect of soil installation on **.**plant growth **:**Siol Air Soil heat:	Lecture with explanation presentatio n	daily exam
5	**2**		Soil water and moisture content Soil water energy Factors affecting the water availability for the plant • The movement of water in the soil	Lecture with explanation presentatio n	daily exam
6	**2**		Colloids and soil chemical • properties Mineral colloids • • Organic colloids	Lecture with explanation presentatio	daily exam
7	**2**		Adsorption and exchange of ions • in the soil Exchangeable positive ions • prevailing in the soil • Factors affecting the capacity of positive ion exchange	Lecture with explanation presentatio n	daily exam
8	**2**		Salinity and soil alkalinity Classification of soils affected by • salts The impact of salinity on • agricultural production • Reclamation of lands affected by salinity	Lecture with explanation presentatio n	daily exam
9	**2**		Appropriate management of reclaimed soils	Lecture with explanation presentatio	daily exam
-10 11	**2**		• Coexistence with salinity and alkalinity	Lecture with explanation presentatio	daily exam

12	**2**		• Biological properties of soil	Lecture with explanation presentatio	daily exam
13	**2**		**:**Environmental division • the main groups of soil	Lecture with explanation presentatio	daily exam
14	**2**		• Activities of fungi in soil	Lecture with explanation presentatio n	daily exam
15	**2**		The role of neighborhoods of • **:**microscopic soil Carbon cycle in nature drawing contour lines	Lecture with explanation presentatio n	daily exam

11. Course Evaluation
The final exam consists of 50 monthly exams, 10 for each monthly exam, 5 daily exams, and 5 reports

12. Learning and Teaching Sources	
Required Textbooks (Curricular Books, If Any)	Dr.. Abdullah Najm Al-Ani. 1980. Principles of soil science. ,, Ministry of Higher Education and Scientific Research. University of Baghdad, House of Wisdom
Electronic References, Websites	

Course Description Form

1. Course Name:
Practical food and dairy engineering.
2. Course Code:
DAPR414
3. Semester / Year:
Second Semester/2023-2024

4. Description Preparation Date:	
30/1/2024	
5. Available Attendance Forms:	
Laboratories	
6. Number of Credit Hours (Total) / Number of Units (Total)	
3 hours per week distributed over 10 weeks / number of unit 6	
7. Course Administrator's Name (Mention All, If More Than One Name)	
Name: Raghad Saad Musa	Email: raghad.saad@uobasrah.edu.iq
8. Course Objectives	
Course Objectives	• **Teaching the student about understanding the units of food and dairy engineering, the production process flow of food products, and the steps involved in establishing food and dairy laboratories.**
9. Teaching and Learning Strategies	
Strategy	**Generating creative ideas and emphasizing the importance of opinions and diverse perspectives, as well as fostering teamwork in the laboratory for students.**

10. Course Structure

Week	Hours	Required learning	Unit or Subject	Learning Method	Evaluation Method
10 weeks	**3 hours per**				

11. Course Evaluation
Distribution of the score out of 20 according to the tasks assigned to the student, such as daily preparation, daily oral, monthly, or written exams, reports, etc.
12. Learning and Teaching Sources

Required Textbooks (Curricular Books, If Any)	**Book of food and dairy engineering**
Main References (Sources)	**Reading of food and dairy engineering**

Recommended Books and References (Scientific Journals, Reports ...)	
Electronic References, Websites	

Course Description Form

1. Course Name:
Dairy Products / 1
2. Course Code:
DAPR414
3. Semester / Year
the second 2024-2023
4. Description Preparation Date
2024/2/15
5. Available Attendance Forms:
Hall
6. Number of Credit Hours (Total) / Number of Units (Total)
2 hours for 14 weeks 4 units
7. Course Administrator's Name (Mention All, If More Than One Name)
Name:Dr.Najla hussen saper Email: Najla.saper@@uobasrah.edu.iq Dr. Raghad Rahim
8. Course Objectives

Course Objectives	• Understanding the chemical composition of milk. • • Study of variation in milk composition. • • Follow correct and scientific methods in raising dairy cattle and provide healthy conditions for milk production • Understanding the foundations of manufacturing various dairy products • • A detailed study on cheese

9. Teaching and Learning Strategies	
Strategy	The dairy products curriculum is one of the important curriculum series in the Department of Food Sciences, as it guides students to the most important dairy principles, explaining the chemical composition of dairy products to help

10. Course Structure

Week	Hours	Required	Unit or	Learning	Evaluation
1	2	Knowledge and understanding, brainstorming	History and definition of cheese	PowerPoint display on screen	Daily questions, discussions
2	2	_	Cheese making steps / cheese	_	_
3	2	_	Milk and its relationship to cheese	_	_

4	2	–	The most important other factors	–	–
5	2	–	Unsuitable milk for cheese	–	–
6	2	–	Milk components and their	–	–
7	2	–	Ways to cheese the	–	–
8	2	–	Additives and raw materials in	–	–
9		–	types of prefixes	–	–
10		–	curd making basics	–	–
11			Steps for making dry		
12			Cheese ripening and smoothing		

11. Course Evaluation
Distribution of 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 Sources	
Required Textbooks (Curricular Books, If Any)	**Cheese and fermented dairy industry / Dr. Lotfi Abdel**
Main References (Sources)	**dairy chemistry and**
Recommended Books and References	**Principles of dairy chemistry**
Electronic References, Websites	**Research in dairy chemistry**