Ministry of Higher Education and Scientific Research
Scientific supervision and evaluation device
Department of Quality Assurance and Academic Accreditation

Description of the academic program for colleges and institutes for the academic year 2023-2024

University: Karbala College: Agriculture

Scientific Department: Food Sciences

File filled date: //2024

Head of the Department,

Preliminary Studies Rapporteur

Dr. Abdel Zahra Jabbar Ali,

Dr. Saleh Abdel Wahed Mahdi

Check the file before

Division of Quality Assurance and University Performance

Name of the director of the Quality Assurance and University

Performance Division

Prof. Dr. Ali Nazim Farhoud

: the signature

Authentication of the Dean

1. See the program

Working to establish a solid and advanced scientific base that will contribute to developing plans to .and safety develop projects related to food science in all fields related to human health

2. **Program message**

The department's mission aims to prepare scientific cadres within accreditation standards in the use of modern technologies in education and training, by enhancing students' capabilities scientifically, experts to work in the field of food science, and providing the beneficiaries of the graduating qualified department's outputs in accordance with work requirements, as well as conducting applied and field studies in the field of food science. Foods

3. **Program Goals**

- 1- a specialized and qualified staff in the field of food science, including dairy products, grain Preparing manufacturing and its products, and the manufacture of jams, dates, juices, meat and their products, .to develop projects related to the field of food science
- 2- he department's contribution to shaping the features of projects related to food science and seeking T solutions to existing problems and planning in the Holy Governorate of Karbala in particular and Iraq .in general
- 3- loping solutions to problems related to the fields of food Conducting applied research aimed at deve .science
- 4- .Apply all theoretical and practical knowledge and modern techniques in the field of food science
- 5- trial Achieving the highest level of interaction between the department and productive and indus institutions in application of the principle of linking the university with society, as the Department of Food Sciences is one of the important specializations that is appropriate to the requirements of the .as the governorates of the Middle Euphrates labor market in Karbala Governorate as well

4.	Program accreditation
nothir	ng

5. Other external influences	
nothing	

	Program structure .6												
* comments	percentage	Study unit	Number of	Program structure									
			courses										
Basic course		90	90	Enterprise									
				requirements									
			Yes	College requirements									
			Yes	Department									
				requirements									
			nothing	summer training									
				Other									

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

Program description .7

Credit hou	ırs	Name of the course or	Course or	
practical	theoreti cal	course	course code	Year/level
3	2	General chemistry		
		Gardening principles		
		mathematics		
		Democracy and human rights		
		English language 1		
		Engineering drawing		
		Computer applications 1		
		agricultural economy The		2023-2024
		Quantitative chemistry		The first stage
		Animal production		
		Principles of food industries		
		Counting		
		Principles of soil science		
		Arabic		
		Engineering workshops		
		Computer applications 2		

organic chemistry	
Basics of microbiology	
Industrial crops	
Dairy manufacturing	
Design and analysis of experiments	
Food laboratory engineering	
Computer applications 3	
Agricultural guidance	
The crimes of the Baath regime in Iraq	2023-2024 / The second
Physical chemistry	phase
Biochemistry	
Store pests	
Food health	
Food factory management	
Arabic language	
English language 2	
Computer applications 4	

Food chemistry	
pills Manufacture of	
Molecular biology	
Biology of microscopic foods	
Manufacture of dates and sugars	
Liquid dairy products	2023-2024
Agricultural marketing	/ third level
Dairy chemistry	tillid level
Bread and pastries	
Genetic Engineering	
Biology of dairy microorganisms	
Human nutrition	
Metabolic pathways	
(food manufacturing (1	
(Dairy manufacturing (1	
(Biotechnology (1	
Applications in nutrition	
Graduation Project	
Seminars	2023-2024
Food analysis	/
(Food manufacturing (2	The fourth stage
(Dairy manufacturing (2	2.11.8
(Biotechnology (2	
Quality control	
Meat processing	
Graduation research project	

7. Expected learning outcomes of the programme

a / Knowledge

- A/1- Communicating the acquired information related to food sciences to the beneficiaries and linking it to other sciences to reach a solution to food-related problems
- .A/2- Acquire and demonstrate proficiency in specialized laboratory skills applicable in the field of food research
- A/3- Demonstrate the ability to analyze experimental measurements relevant to the food sciences specialization and accurately prepare reports on observations and analysis
- A/4 Communicate and discuss scientific concepts, experimental results, and analytical arguments clearly and .concisely, orally and in writing
- A/5 Developing appropriate technology to solve problems related to food manufacturing and encouraging research .aimed at progress in all specializations for long-term development
- A/6 Attracting and attracting qualified and talented scientific cadres to conduct scientific research in the college in .the field of food sciences
- A/7 Conveying knowledge and technology to workers in the field of food manufacturing by training them in all fields through specialists.

B/Skills

- .B/1: The ability to manufacture and preserve food effectively, and use modern technologies to improve productivity
- .B/2: Using modern technology to develop food manufacturing
- .B/3: To conduct scientific studies and research in the field of food science and develop them
- B/4: To organize and manage food manufacturing projects effectively and sustainably
- .B/5: To interact and work with relevant government and community agencies

C/values

Developing students' abilities to share ideas

8. Teaching and learning strategies

Providing students with the basics and additional topics related to the previous learning outcomes of skills, to -

- .solve practical problems
- .studied theoretically at the practical level Applying topics -

Asking students during practical lessons to conduct some applied research under the supervision of their -

- .teachers
- .Visiting practical laboratories by academic staff -

9. Evaluation methods

.and oral exams Daily, monthly -

.Semester and final exams -

.Grades for homework and report writing -

Delivering scientific seminars -

10. **education institution**

Faculty members

Preparing tl	he teaching aff	requiren	ecial nents/skills f any)	Special	Scientific rank	
lecturer	angel			private	general	
	angel			Plant diseases	Plant protection	.Mr
	angel			Dairy chemistry	Food science	.Mr
	angel			Food chemistry	Food science	.Mr
	angel			Food chemistry and manufacturing sciences	Food science	Assistant Professor
	angel			Genetic engineering and biotechnology	Genetic engineering and biotechnology	Teacher
	angel			Mechanics of materials	Mechanics of materials	Teacher
	angel			Medicinal plants	Life sciences	Teacher
	angel			Meat and fish technology	Food sciences	Teacher
	angel				Chemistry Science	Teacher

				Soil and water	
	angel			resources	Teacher
				sciences	
	angol			analytical	assistant
	angel			chemistry	teacher
	angel			Microbiology	assistant
	angei			Microbiology	teacher
	angal			Islamic literature	Teacher
	angel			isianne merature	assistant
	angol			Diotachnology	assistant
	angel			Biotechnology	teacher
	angel			Food industry	assistant
				Food industry	teacher

Professional development
Orienting new faculty members
Professional development for faculty members

11. Acceptance standard

12. program The most important sources of information about the

- ".1Food Chemistry yb "Owen R. Fennema and Elhadi M. Yahia.
- ".2Food Processing: Principles and Applications yb "J. Scott Smith and YH Hui.
- ".3Introduction to Food Science yb "Rick Parker andPhilip G. Crandall .

13. Program development plan

1. Determine market needs and program objectives, such as improving the quality of education and

updating curricula.

- 2. Updating and developing curricula to include the latest developments and innovations in the field of food science.
- 3. Strengthen cooperation with industry to ensure that educational skills are compatible with labor market needs.
- 4. Strengthening the program structure and providing the necessary resources such as qualified teachers and modern equipment.
- .5Conduct a periodic evaluation of the program's performance and follow up on achieving the set goals and improving performance.

Program skills chart

required from the program Learning outcomes

required from the program Zent ming cuttomes									1	T					
	Val	ue			Sk	ills			Kno	owledge		Essential or	Course Name	Course	Year/level
C4	С3	C2	C1	B4	В3	B2	B 1	A4	A3	A2	A1	or optional	Course Name	Code	1 car/ievei
	_												General chemistry		
													Principles of gardening		
													mathematics		
													Democracy and human rights		
													English language 1		
													Engineering drawing		
													Computer applications 1		
													The agricultural economy		2023-2024
													Quantitative chemistry		/ The first stage
													Animal production		2.11.61
													Principles of food industries		
													Counting		
													Principles of soil science		
													Arabic		
													Engineering workshops		
													Computer applications 2		

1	1	ı	ı			ı	ı	ı	 	
									organic chemistry	
									Basics of microbiology	
									Industrial crops	
									Dairy manufacturing	
									Design and analysis of experiments	
									Food laboratory engineering	
									Computer 3 applications	
									Agricultural guidance	
									The crimes of the Baath regime in Iraq	2023-2024
									Physical chemistry	The second phase
									Biochemistry	
									Warehouse pests	
									Food health	
									Food factory management	
									Arabic language	
									English language 2	
									Computer 4 applications	

1	1		 1			 	
						Food chemistry	
						Manufacture of pills	
						Molecular biology	
						Biology of microscopic foods	
						Manufacture of dates and sugars	
						Liquid dairy products	2023-2024
						Agricultural marketing	third level
						Dairy chemistry	
						Bread and pastries	
						Genetic Engineering	
						Microbial dairy life	
						Human nutrition	
						Metabolic pathways	
						food manufacturing (1)	
						Dairy manufacturing (1)	
						Biotechnology (1)	
						Applications in nutrition	
						Graduation Project	
						Seminars	2023-2024
						Food analysis	/ The fourth
						Food manufacturing (2)	stage
						Dairy manufacturing	
						(2) Biotechnology (2)	
						Quality control	
						Meat processing	
	 				 	Graduation research project	

1. Course Name Food industry My principles 2. **Course Code** 3. Semester/year / Second2023 -2024 description was prepared Date this 4. 2024/23/4 Available attendance forms 5. Is mandatory 6. (Number of study hours (total) Number of units (total The total number of study hours is 5 hours and the number of units is 3.5 (than one name is mentioned Name of the course administrator (if more : Email Prof. Dr. Zainab Hadi Abbas :Name **Course objectives** Objectives of the study subject Identify all food components Know the nutritional importance of food ingredients Knowledge of food preservation methods causes of food contamination Know the Teaching and learning strategies .9 1- Showing educational videos to the student The strategy 2- Working in the laboratory and conducting experiments 3- Illustrations such as PowerPoint

recording of the lecture Explanation by the teacher and video -4

Course structure	.10				
Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	hours	the week
Questions for discussion Oral exams Reports	Using PowerPoint and educational videos while working in laboratories to acquire skills and techniques	A historical overview of the industry emergence of food science	Food processing science	2 Theoretica I practical 3	1
=	=	Carbohydrates , their types, nutritional types, and importance	Food ingredients	2 Theoretica I practical 3	2
=	=	Proteins, their types, sections, and nutritional importance	Food ingredients	2 Theoretica I practical 3	3
=	=	Fats, their composition, types, presence in food, and importance nutritional	Food ingredients	2 Theoretica I practical 3	4
=	=	Water, its presence, and its physiological importance And biological	Food ingredients	2 Theoretica I practical 3	5
=	=	First test	Food ingredients	2 Theoretica I practical 3	6
=	=	vitamins, ¿Organic acids colourants	Food ingredients	2 Theoretica I practical 3	7

=	=	Enzymes, hormones	Food ingredients	2 Theoretica I practical 3	8
=	=	Meat, its types, nutritional importance, and chemical composition	Types of food	2 Theoretica I practical 3	9
=	=	composition, Its chemical nutritional importance, and uses	eggs	2 Theoretica I practical 3	10
=	=	Second month test	Second test	2 Theoretica I practical 3	11
=	=	Extraction , refining and purification	Oils and fats	2 Theoretica I practical 3	12
=	=	preservation methods Food	Food preservation	2 Theoretica I practical 3	13
=	=	Types of bacteria that infect food	Food spoilage and contamination	2 Theoretica I practical 3	14

preparation, according to the tasks assigned to the student, such as daily 100 Distribution of the grade out of daily, oral, monthly, written exams, and reports

Learning and teaching resources .12

Food industry principles book	(Required textbooks (methodology, if any
Food safety book	(Main references (sources
nothing	references Mainstream recommended books and
nothing	(Reports ،scientific journals)
nothing	Electronic references, websites

1.	Course Name
of ho	orticulture Principles
2.	Course Code

3. Semester/year						
2024-Second semester/2023						
4. The date this description was prepared						
5. Available attendance forms						
My presence						
6. (Number of study hours (total) / number of units (total						
:Theoretical hours / Practical hours: 3 Number of units: 3.5 / 2	:Theoretical hours / Practical hours: 3 Number of units: 3.5 / 2					
7. Name of the course administrator						
: Name: Email						
8. Course objectives						
Learn about the concept of horticulture, its branches, the division of plants according to plant families, the nature and growth of plants, and their . thermal needs	Objectives of the stud subject					
9. Teaching and learning strategies						
opportunities and workshops for students Providing practical training to gain practical skills needed in the food industry	Practical Training					
Encourage students to participate in interactive learning activities such						
food as case studies and simulations to enhance their understanding of Active learning						
processes						
Using technology in education such as multimedia and virtual	Educational					
simulation to enhance the learning experience in the food industries	technology					

10. Course structure						
Evaluation	Learning	topic Name of the unit or	Required learning		the	
method	method	topic mame of the unit of	outcomes	hours	week	

The concept of horticulture, its branches, and the division of plants according to families	2	1
Identify the factors affecting the growth of horticultural crops	2	2
Vegetable crops, their environmental 'division factors affecting vegetable crops	2	3
Methods of growing vegetable crops and preparing agricultural land	2	4
Producing vegetable seedlings, their benefits, dividing vegetable plants	2	5
Fruit and fruit tree division	2	6
orchids, choosing Create species and varieties	2	7
Fruit tree cultivation systems	2	8
First month exam	2	9
Conditions for the success of fruit seedlings, causes of flower drop, and solutions to treat them	2	10
Ornamental plants, their and types, and the division problems surrounding them	2	11
Medicinal and aromatic plants, their types and .cultivation	2	12
The nursery, its types, and the instructions followed by the nursery owner	2	13

			Organic farming storage, process packagin	ing and			2	14
			Second month	exam			2	15
11. Course	e eva	luation						
Final theoretical exam Practical quarterly tests the					Daily Final practical tests test		Final theoretical exam	
%20			%20	%10		%20	%20	
12. Learnin	ng ar	nd teach	ing resources					
Principles of horticulture / Faisal Rashid Nasser Principles of horticulture / Karim -Kanani -Al Saleh Abdul Ornamental plants / Dr. Sami Karim and Nisreen deciduous fruits / Dr. Alaa Abdel -Najjar -Al and others Jumaili-Razzaq Al				(curricu	lum) F	Required text	books	
				reference	references Main			
				Recomm	nended	d supporting	books and	
references								
				Electror	nic refe	erences, web	sites	

13.	Course Name					
Englis	English language					
14.	Course Code					
15.	Semester/year					
2024-9	Second semester/2023					
16.	The date this description was prepared					
17.	forms Available attendance					
My pr	esence					
18.	(Number of study hours (total) / number of units (total					
	:Practical hours: 3 / Theoretical hours Number of units2 / 2					
19.	Name of the course administrator					
:Name	:: Email					
20.	Course objectives					
and ex	pression skills in the English language. Learn more vocabulary Improving reading	Objectives of the stud				
and u	nderstand the rules of the language English	subject				
21.	Teaching and learning strategies					
practica	al skills Providing practical training opportunities and workshops for students to gain	Practical Training				
.neede	needed in the food industry					
Encour	Encourage students to participate in interactive learning activities such as case studies and					
.simula	Active learningsimulations to enhance their understanding of food processes					
techno	ogy in education such as multimedia and virtual simulation to enhance the Using	Educational				
.learnii	ng experience in the food industries	technology				

22. Course struct	ure					
Evaluation method	Learning method	Name of the unit or to	pic	Required learning outcomes	hours	the week
		Simple present	:		2	1
		Present continuous tense			2	2
		Present perfect te	nse		2	3
		Read practice pie	ces		2	4
		Read practice pie	ces		2	5
		First test			2	6
		Simple past tens	se		2	7
		Use of pronouns in English			2	8
		Past continuou	s		2	9
		test Second			2	10
		Reading practice pi	eces		2	11
		Past perfect tens	se		2	12
		Simple future ten	ise		2	13
		Third test			2	14
23. Course evalua	ıtion				·	
Final theoretical exam	Practical quarterly tests	Daily theoretical t	ests	Final practical test	Final theor	
%20 %20 %10			%20	%20		
24. Learning and	teaching resources					
Oxford English Grammer (Required textbooks (curriculum						
Main references						
Recommended supporting books and references				ences		
	Electronic references, websites					

25.	Course Name					
genera	l chemistry					
26.	Course Code					
27.	Semester/year					
2024-F	First semester/2023					
28.	The date this description was prepared					
29.	Available attendance forms					
My pro	esence					
30.	(Number of study hours (total) / number of units (total					
	:Practical hours: 3 / Theoretical hours :Number of units 23.5					
31.	the course administrator Name of					
: Name	:: Email					
32.	Course objectives					
The stu	Ident learns about the most important principles of analytical chemistry and the .1					
types o	of analytical chemistry					
the me	thods of expressing the concentrations of For the student to become familiar with .2					
differe	nt solutions in different units					
The stu	dent gets to know the most important basic principles of chemical equilibria and .3					
.their s	their systematic calculations in homogeneous and heterogeneous solutions Objectives of the study.					
he stud	he student gets to know the types of salts, their hydrolysis, and the most important laws T .4 subject					
related to the acid function.						
The stu	The student gets to know buffer solutions, their importance, methods of preparing them, .5					
.and ca	and calculations of their acid function					
he stud	he student gets to know the types of volumetric analysis reactions T.6					
The stu	The student gets to know the types of analysis methods .7					
33.	Teaching and learning strategies					

Work in small groups in the laboratory .1 $\,$

 $Conduct\ practical\ experiments\ .2$

laboratory reports and discussing them among students Writing .3

34. Course structure

				ı	
Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	hours	the week
Oral evaluation and editing during the lecture through questions and answers		Chemical hazards	Chemical hazards	2	1
Oral evaluation and editing during the lecture through questions and answers		Types of analytical chemistry	Laboratory glassware and instruments	2	2
and Oral evaluation editing during the lecture through questions and answers		Ways to express focus	Ways to express focus	2	3
Oral evaluation and editing during the lecture through questions and answers		Preparation of standard solutions	Preparation of standard solutions	2	4
Evaluate the student's level of understanding		First month exam	First month exam	2	5

Oral evaluation and editing during the lecture through questions and answers Oral evaluation and editing during the lecture through questions and answers Oral evaluation and editing during the lecture through questions and answers Oral evaluation and editing during the lecture through questions and answers Oral evaluation and editing during the lecture through questions and answers Oral evaluation and editing during the lecture through questions and answers Oral evaluation and editing during the lecture through questions and answers Oral evaluation and editing during the lecture through questions and answers Oral evaluation and editing during the lecture through questions and answers Oral evaluation and editing during the lecture through questions and answers Oral evaluation and Oral editing during the lecture through questions and answers Oral evaluation and Oral editing during the lecture through questions and answers Oral evaluation and Oral editing during the lecture through questions and answers Oral evaluation and Oral editing during the lecture through questions and answers Oral evaluation and Oral editing during the lecture through questions and answers Oral evaluation and editing during the lecture through questions and answers Oral evaluation and editing during the						
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lecture through questions and answers Oral evaluation and editing during the lecture through questions and answers evaluation and Oral editing during the lecture through questions and answers oral evaluation and Oral editing during the lecture through answers evaluation and Oral editing during the lecture through questions and answers Oral evaluation and Paper chromatography Oxidation and 2 12 9 Reutralization 2 9 reactions 2 9 Routralization 2 2 9 Routralization 2 2 10 Paper chromatography	Oral evaluation and					
lecture through questions and answers Oral evaluation and editing during the lecture through questions and answers evaluation and Oral editing during the lecture through questions and answers oral evaluation and Oral editing during the lecture through questions and answers Oral evaluation and Oral epithons and answers Oral evaluation and Paper chromatography Paper chromatography Filtration process reactions 2 9 Month exam 2 2 10 Month exam 2 2 11	editing during the			No. 10 or		
questions and answers Oral evaluation and editing during the lecture through questions and answers evaluation and Oral editing during the lecture through questions and answers Oral evaluation and Oral editing during the lecture through questions and answers Oral evaluation and Paper chromatography Oxidation and 2 12	lecture through		Filtration process		2	9
Oral evaluation and editing during the lecture through questions and answers evaluation and Oral editing during the lecture through questions and answers Oral evaluation and Oral electure through questions and answers Oral evaluation and Oral evaluation and Paper chromatography Oxidation and 2 12	questions and					
editing during the lecture through questions and answers evaluation and Oral editing during the lecture through questions and answers Oral evaluation and Paper chromatography month exam 2 2 10 month exam 2 2 11 Total evaluation and Paper chromatography month exam 2 2 11 Oxidation and 2 12	answers					
lecture through questions and answers evaluation and Oral editing during the lecture through questions and answers Oral evaluation and Paper chromatography month exam 2 2 10 month exam 2 2 11 The paper chromatography month exam 2 2 11 Oxidation and 2 12	Oral evaluation and					
questions and answers evaluation and Oral editing during the lecture through questions and answers Oral evaluation and Paper chromatography Oxidation and 2 12	editing during the					
evaluation and Oral editing during the lecture through questions and answers Oral evaluation and Paper chromatography Oxidation and Oxidation and 2 12	lecture through		month exam 2	month exam 2	2	10
evaluation and Oral editing during the lecture through questions and answers Oral evaluation and Paper chromatography Oxidation and 2 12	questions and					
editing during the lecture through questions and answers Oral evaluation and Paper chromatography Separation of chemicals month exam 2 2 11 Oxidation and 2 12	answers					
lecture through questions and answers Oral evaluation and Paper chromatography Separation of chemicals month exam 2 2 11 Oxidation and 2 12	evaluation and Oral					
questions and answers Oral evaluation and Paper chromatography Oxidation and 2 12	editing during the					
questions and answers Oral evaluation and Paper chromatography Oxidation and 2 12	lecture through		Separation of chemicals	month exam 2	2	11
Oral evaluation and Paper chromatography Oxidation and 2 12	_					
Paper chromatography 2 12	answers					
editing during the Paper chromatography 2 12 reduction reactions	Oral evaluation and			Oxidation and	_	
	editing during the		Paper chromatography	reduction reactions	2	12

lecture through questions and								
answers								
Oral evaluation and								
editing during the					Comple	ex formation		
lecture through		extraction	Solv	ent	-	eactions	2	13
questions and					TEACTIONS			
answers								
Oral evaluation and								
editing during the								
lecture through		Automated	l ana	lysis	Autom	ated analysis	2	14
questions and								
answers								
student's Evaluate the								
level of	Monthly e		exa	m	Monthly exam		2	15
understanding								
35. Course evaluation								
	Practica	l guarterly		Daily		Final	Final theor	entical
Final theoretical exam		Practical quarterly tests		theoretical tests		practical	exan	
			theoretical			test	CAUII	•
%20	· ·	%20		%10		%20	%20	1
36. Learning and teaching	resources							
Foundations of analytical ch	iemistry Dr ji -Al	. Muayad Qasi	m	(curriculum) Required textbooks				
	,	lytical Chemist	trv					
	Skoog and West's Fundamentals of Analytical Chemistry: Cengage Technology Edition 2022		y•	Main re	eferences	5		
1- Journal <u>Analytical Chemistry</u>								
	ca Chimica	•		Recommended supporting books and references			nces	
Google scholar, I	Research ge	et, Acs	_	Electro	nic refere	ences, websites		

37.	Course Name				
Quant	itative chemistry				
38.	Course Code				
39.	Semester/year				
2024-	Second semester/2023				
40.	The date this description was prepared				
41.	Available attendance forms				
My pı	resence				
42.	(Number of study hours (total) / number of units (total				
	:Theoretical hours / Practical hours: 3 :Number of units 23.5				
43.	the course administrator Name of				
: Nan	ne: Email				
44.	Course objectives				
fields i feed in chemic .ting the Specific equipm	Introducing the student to the importance of analytical chemistry in agricultural fields in terms of the food industry, pesticides, determining the type of fertilizer and feed in animal production, and the student knows that analytical chemistry is the chemical method in which elements and substances are detected and methods for ting themsepara Specific goal: To enable the student, at the end of the semester, to use laboratory equipment and tools and how to prepare standard solutions, as well as to know analysis methods and their applications				
45.	Teaching and learning strategies				
	ding practical training opportunities and workshops for students to practical skills needed in the food industry	Practical Training			

Encourage students to participate in interactive learning activities such simulations to enhance their understanding of food as case studies and .processes	Active learning
Using technology in education such as multimedia and virtual	Educational
simulation to enhance the learning experience in the food industries	technology

46. Course structure

Evaluation method	Learning	Name of the unit or	Required learning	hours	the
Evaluation method	method	topic	outcomes	Hours	week
		Recognizing the importance of quantitative chemistry and expressing concentrations with problems		2	1
		To express the laws ofppm,w \ w%,v \v with the dilution % laws for generation with problems		2	2
		A beginning on ionic balance, theories of hydrolysis andPH for acids, bases, and salts of both strong and weak types, with problems		2	3
		Methods for measuringpH and a PH device with a detailed explanation of buffer solutions and the method of preparing them. With questions about the topic		2	4
		Explaining the evidence for acids and bases and solving multiple problems on all the topics above. How to		2	5

1. (12. 1	I		
estimateKa and			
adjustment curves			
.with problems			
First test		2	6
rii st test		4	U
delamination and			
addressing the			
method of Moore		2	7
and Volhad And			
. surprise			
The standard, the			
specifications of the			
standard material,			
and the conditions			
		2	0
for correction, with		2	8
questions about the			
subject, beginning			
corrections with			
Complexity			
for corrections A			
ComplexityEDTA			
and its recipes and			
volumetric methods		2	9
involving the use of			
EDTA			
Second test		2	10
Weighted analysis			
Weighted analysis			
with problems		2	11
Weighted analysis		_	
with problems			
Dedes seed of			
Redox analysis		2	12
problems with		_	12
Automated			
analysis with		2	13
issues			
		•	
Third test		2	14
		2	15
		4	13

47. Course evaluation						
Final theoretical exam	Practical quarterly tests	Daily theoretical tests	Final practical test	Final theoretical exam		
%20	%20	%10	%20	%20		
48. teaching resources Learning and						
Foundations of Analytical C Abayji 1981-l		(Required te	extbooks (curr	iculum		
		Main referer	nces			
Recommended supporting books and						
	references					
		Electronic re	eferences, wel	osites		

1.	Course Name
Arabi	
2.	Course Code
3.	year / Semester
First	2023
4.	the description this Preparation date
5.	Available the audience shapes
Мур	presence

6. (total) Units number (total) Academic hours number					
34					
And email (Mentionsed name from more if) Academic The decision re	esponsible i	name			
millimeter. Shaima Abdel Kazeb <u>shama.a@s.uokerbala.edu.iq</u>					
The decision Goals					
Course objectives					
1the Arabic language Developing a spirit of pride in					
2Developing the student's linguistic skills	0				
3- Raising the professional and research level of students					
4- Developing the grammatical and literary abilities of university	Scholarsh	nip			
students					
And learning education Strategies .9	I				
		The			
.Lecture, use of the blackboard, and presentation -		strategy			
.Demonstrations using diagrams and pictures -					
.Interactive discussion -					
.self education -					
.Organizing lectures prepared by students -					

Course structure

Evaluation method	Teaching method	of the unit/topic Name	Required learning outcome s	hours	the week
Exams	theoretical	The importance of the Arabic language Why do we study the Arabic language and what is its importance? Why is the Arabic language called the language of the Qur'an? What are the other names for the Arabic language	BSC	2	1
Exams	theoretical	Interpretation and memorization of twenty verses from Surat Yusuf, while examining the words, their connotations, and meanings, and highlighting the rhetorical and educational .aspects they contain	BSC	2	2
Exams	theoretical	Grammar rules (speech and	BSC	2	3

		(what it consists of			
		What's the talk? What is the			
		difference between speech,			
		speech and word? What are			
		the parts of the word? What			
		are the signs of nouns,			
		verbs, letters and their			
		?divisions			
Exams	theoretical	The verbal sentence and types of verbs in terms of	BSC	2	4
		immanence, transgression,			
		.correctness, and impairment			
Exams	theoretical	Nominal sentence What is	BSC	2	5
		the nominal sentence? What			
		is the definition of subject			
		and predicate? What are the			
		types of beginner? What are			
		the types of news?			
Exams	theoretical	Abrogators of the nominal	BSC	2	6
		.(sentence (abrogating verbs			
Exams	theoretical	Letters similar to the verb,	BSC	2	7
		their meanings, and parsing			

		.examples of them			
Exams	theoretical	First month exam	BSC	2	8
Exams	theoretical	Objects in the Arabic language (object, absolute (object, direct object	BSC	2	9
Exams	theoretical	Numbers, their writing rules, and their parsing	BSC	2	10
Exams	theoretical	The :Arabic Literature beginnings of prose and its types, and memorizing selections from it Arabic poetry: The eras of Arabic poetry and its artistic and thematic features The art of the article) while) memorizing selected models	BSC	2	11
Exams	theoretical	his) Maarri-Ala Al-Abu Al life, topics, and literary works) with memorizing verses from the poem (All of (Life is Tired	BSC	2	12

Exams	theoretical	What is the life of the poet Hamdani? -Abu Firas Al Reading the poem: (The Screaming Dove) with Analyze .precise movements and clarify the poem's verses Literary text: Poet: Abu . Hamdani-Firas Al	BSC	2	13
Exams	theoretical	Rules for writing ta' and hamza in the Arabic language	BSC	2	14
Exams	theoretical	The difference between dha and dha What do we mean by the phenomenon of difference between dha and dha? Why is the Arabic language called the language of Dhad? What are the differences between §'ḍād and ḍā	BSC	2	15
Exams	theoretical	Punctuation marks in the Arabic roll	BSC	2	16

E	xams	theoretical	exam Second month	BSC	2	17				
7.	7. Course Name									
Soil p	Soil principles									
8. Course Code										
9.	9. Semester/year									
/ Second2023 -2024										
10.	10. Date this description was prepared									
6/4/2	6/4/2024									
11.	11. Available attendance forms									
Is mai	Is mandatory									
12.	12. (Number of study hours (total) Number of units (total									

	The decision evaluation .11
- (assignments (5% -activities (5%) -attendance	
	.(final theoretical exam (50%
	And teaching Learning Sources .12
	methodology) Required decided Books (Found that
- The Holy Quran	(Sources) Home the reviewer
- Explanation of Ibn Aqeel	
Wajeez in the Arabic language-Al	
.Collection of Arabic lessons -	
- Arabic language rules, grammar and	
.easy morphology	
- Spelling rules.	
Scientific journals in the Arabic language	that Prevailing And references Books
anacializations	Magazines) With it recommend
.specializations	(Reports ·scientific
The many websites concerned with the Arabic -	Electronic references, websites
language, including YouTube and scientifig	
.archrese	

The total number of study hours is 5 hours and the number of unitsis 3.5				
(Name of the course administrator (if more than one name is mentioned				
: Moussawi Email-Name: Prof. Dr. Ahmed Najm Abdullah Aldr.ahmed.abdallah	@uokerbala	a.edu.iq		
Course objectives				
The student acquires the concept of soil management and how to deal with -A it theoretically, practically, and practically The student acquires the necessary experience to deal with soil-B requirements and soil service Knowledge of agricultural-T Providing the student with full knowledge of agricultural obstacles or -D problems and the proposed solutions				
Teaching and learning strategies .9				
 4- Showing educational videos to the student 5- laboratory and conducting experiments Working in the 6- Illustrations such as PowerPoint Explanation by the teacher and video recording of the lecture -4 	The strategy			

Course structure .10							
Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	hours	the week		
Questions for discussion Oral exams Reports	Using PowerPoint and educational videos while working in laboratories to acquire skills and techniques	Soil science concept	Soil principles	2 Theoretica I practical 3	1		

	I	1	1			
=	=	The emergence and formation of soil science	Soil principles	2 Theoretica	2	
		Tormation of soil science	principles	practical 3		
				2		
=	=	Soil physical properties	Soil	Theoretica	3	
			principles	1		
				practical 3		
			Soil	2 Theoretica		
=	=	Moisture content	principles	I	4	
				practical 3		
				2		
=	=	Chemical properties of	Soil	Theoretica	5	
		soil	principles	1		
				practical 3		
		First test	Soil	Z Theoretica		
=	=		principles	I	6	
				practical 3		
				2		
=	=	Colloidal compounds in	Soil	Theoretica	7	
		soil	principles	1		
				practical 3		
		Soil fertility and plant	Soil	Z Theoretica		
=	=	nutrition	principles	I	8	
				practical 3		
				2		
=	=	Soil vital properties	Soil	Theoretica	9	
	-	Son vital properties	principles	1		
				practical 3		

=	=	Soil salinity	Soil principles	2 Theoretica I practical 3	10
=	=	Second test	Soil principles	Theoretica I practical 3	11
=	=	Soil survey	Soil principles	Theoretica I practical 3	12
=	=	Soil classification and management	Soil principles	2 Theoretica I practical 3	13
=	=	Third test	Soil principles	Theoretica I practical 3	14

Course evaluation .11					
Distribution of the grade out of 10 0 assigned	to the student, according to the tasks				
.such as daily preparation, daily, oral, monthly	, written exams, and reports				
Learning and teaching resources .12					
Soil principles Required textbooks (methodology, if					
Basics of soil science (any					
principles Soil	(Main references (sources				
Basics of soil science	(Main references (Sources				
	Mainstream recommended books				
nothing	and references (scientific journals				
(Reports					
nothing	Electronic references, websites				

13.	:Course Name
mathe	matics
14.	Course Code
15.	Semester/Year First Semester/2024
16.	Date this description was prepared
2024/1	1/9
17.	Available attendance forms
My pre	esence
18.	(Number of study hours (total) Number of units (total
22	
(Name	of the course administrator (if more than one name is mentioned

: Name: M.D. Ahmed Jabbar Abbas Emailahmed.jabbar@uokerbala.edu.iq

Course objectives

- Learn about matrices and mathematical operations on them
- Practice arranging data in matrices and processing it using the above operations
- using matrices multivariable linear equations
- Functions, their properties, diagrams and types
- Complex functions and their properties
- Continuity and goals
- Differentiation and its types

subject

Objectives of the study

Teaching and learning strategies .9

and explaining them in detail on the Presenting mathematical concepts to students blackboard by solving applied examples. Students are also encouraged to derive some .concepts through comparison and deduction

The strategy

Course structure .10

Evaluation method	Learning	Name of the unit	Required learning	hours	the	
	method	topic or	r outcomes		week	
			Learn about the			
Weekly and monthly assignments	Му	Matrices	concept of matrices	2	1	
and exams	presence	Matrices	and their	2	•	
			applications			
	A4		Classify arrays			
monthly assignments Weekly and	Му	Types of arrays	according to their	2	2	
and exams	presence		content			
Weekly and monthly assignments	Му	T	Classifying matrices	_	2	
and exams	presence	Types of arrays	according to their	2	3	

			dimensions		
Weekly and monthly assignments	Му	Operations on	Add and subtract		4
exams and	presence	arrays	matrices	2	4
Weekly and monthly assignments	Му	Operations on	Matrix	2	5
and exams	presence	arrays	multiplication	2	3
Weekly and monthly assignments	Му	Operations on	How to divide two	2	6
and exams	presence	arrays	matrices	2	b
Weekly and monthly assignments	Му	Matrix	Solve a system of		
and exams	l ed		equations first order	2	7
and exams	presence	applications	using matrices		
			Define a function		
Wooldhy and monthly assignments	Mari	-Functions	and determine its		
Weekly and monthly assignments and exams	My	Introduction	domain and	2	8
and exams	presence	presence Introduction con	corresponding		
			domain		
Weekly and monthly assignments	Му	Function	Osmosis, increase	2	9
and exams	presence	properties	and decrease	2	3
Weekly and monthly assignments	Му		How to graph a		
and exams	presence	Drawing functions	function using the	2	10
and exams	presence		table method		
			Complex functions		
Weekly and monthly assignments	Му	Complex functions	how to and	2	11
and exams	presence	Complex functions	determine their		
			domain		
Weekly and monthly assignments	Му		Learn about the		
and exams	presence	differentiation	concept of purpose	2	12
and oxams	presence		and continuity		
Weekly and monthly assignments	Му		The derivative of the		
and exams	presence	differentiation	function and its	2	13
	F		applications		
Weekly and monthly assignments	Му	differentiation	Derivation rules	2	14
and exams	presence				

exams Assignments and	My presence	differentiation	n	Objectives	2	15	
Course evaluation .11							
according to the tasks assigned to the student, such as daily preparation, 100 Distribution of the grade out of							
.daily, oral, monthly, and written exams, reports, etc							
			Learning and teaching resources .12				
Calculus by Thomas			(methodology, if any) Required textbooks				
Calculus by Thomas			(Main references (sources				
0.11			Mainstream recommended books and				
Online sources			(Reports references (scientific journ			urnals	
Khan Academy			Electronic references, websites				

1.	Course Name					
Jiwa	ni production principles					
2.	Course Code					
001	31 PAN					
3.	Semester/year					
2024	-Second / 2023					
4.	Date this description was prepared					
6/4/2	2024					
5.	Available attendance forms					
Is m	andatory					
6.	(Number of study hours (total) Number of units (total					
stud	y hours is 5 hours and the number of units is 3.5 The total number of					
(Nar	ne of the course administrator (if more than one name is mentioned					
: Na	me: Lecturer Ghofran Hassan Aliwi Emailghfran.h@uokerbala.edu.iq					
Cou	rse objectives					
type: Know It air	course aims to introduce the student to the classification of cows, their The-1 types, and other farm animals Knowing their feeding methods and how they reproduce -2 It aims to study sheep and goats-3 Aims to study poultry-4 Objectives of the study subject					
Teac	Teaching and learning strategies .9					
2- e 3- I	1- videos to the student Showing educational 2- experiments in the laboratory and conducting Working 3- Illustrations such as PowerPoint 4 Explanation by the teacher					

Course structure .10					
Evaluation method	Learning method	unit or Name of the topic	Required learning outcomes	hours	the week
Questions for discussion Oral exams Reports	Using PowerPoint and educational videos while working in laboratories to acquire skills and techniques	Economic importance of animal products	Principles of animal production	2 Theore tical 3 practic al	1
	=	Cows and buffalo	Principles of animal production	2 Theore tical 3 practic al	2
=	=	Reproduction in cows	Principles of animal production	Theore tical 3 practic al	3
=	=	Caring for calves	Principles of animal production	2 Theore tical 3 practic al	4
=	=	nutrition	Principles of animal	2 Theore	5

	1	1		1	
			production	tical	
				3	
				practic	
				al	
				2	
			Principles of	Theore	
=	=	Mills production	animal	tical	6
_	_	Milk production		3	0
			production	practic	
				al	
				2	
				Theore	
	=	Sheep and goats	Principles of	tical	7
=			animal production	3	
				practic	
				al	
				2	
		Poultry and its economic importance	Principles of animal production	Theore	8
				tical	
=	=			3	
				practic	
				al	
				2	
				Theore	
			Principles of	tical	
=	=	Monthly exam	animal	3	9
			production	practic	
				al	
				2	
=	=		Principles of animal production	Theore	10
		nutrition		tical	
				3	
			j	<u>I</u>	l .

				practic al	
=	=	Relationships and feed	Principles of animal production	2 Theore tical 3 practic al	11
=	=	Housing and breeding methods	Principles of animal production	2 Theore tical 3 practic al	12
=	=	A field visit	Principles of animal production	Theore tical 3 practic al	13
=	=	Second month exam	Principles of animal production	Theore tical 3 practic al	14

Course evaluation .11	
preparation, daily, Distribution of the grade out of 100 according to	the tasks assigned to the student, such as daily
.oral, monthly, written exams, and reports	
	Learning and teaching resources .12

Principles of animal production	(Required textbooks (methodology, if any
A systematic book on animal production principles	(Main references (sources
	Mainstream recommended books and
Books available in free international and local magazines	(references (scientific journals, reports
Communication sites such as the scientific researcher and	Electronic references, websites
electronic reference	Electronic references, websites

1.	Course Name
D	11 11 11 11
Demo	ocracy and human rights : Article
2.	Course Code
U211	
3.	Semester/year
2023-	First semester / 2023
4.	Date this description was prepared
4/20/2	2024

5. Available attendance forms

My presence

6. (total) Number of study hours (total) Number of units

hours per week, one unit 2

(Name of the course administrator (if more than one name is mentioned

: Ghanimi Email-Name: Prof. Dr. Khudair Yassin Al kudir.yassen@uokerbala.edu.iq

Course objectives

- generation of students capable of Creating a understanding and properly applying this vocabulary
- Students gain experience, skills, and the ability to deal with and analyze data
- Creating an information base capable of dealing of rights and in accordance with the data and principles .the foundations of the democratic system
- Developing a huge amount of information and a conveys knowledge capable of making that student base .decisions and communicating effectively with society

Objectives of the study subject

Teaching and learning strategies .9

:Active learning strategies

By providing examples for each word of the approved curriculum and leaving room for students to think critically, creative thinking, research and exploration to the current in the academic and societal environment and compare them .reality

- life cases of democratic systems, -Using examples and studies of real their foundations, the existing system of rights and freedoms, and the International Charter, and comparing them to illustrate the historical .ubject's vocabularydevelopment of the s
- Brainstorming strategies and focus on putting the learner's mind in a state of readiness and anticipation. To generate the largest number of spontaneous ideas about the word subject of the lesson, identify the problem, reality in order to solve it, after sifting through these ideas and and violate .selecting the best among them

• Electronic learning resources: Providing electronic learning resources, such as videos and reports issued by United Nations human rights organizations emocracy Internationaland D

strategy The

- Group discussions by giving and encouraging students to discuss the .concepts presented for each of the subject terms and return them together
- :Continuous evaluation
- nd Assignments and tests: Assess students' understanding of concepts a .content of the material through assignments and tests
- Focusing on the relationship between human rights and a stable .democratic system as an existing, interconnected dialectic that exists together

	١				4		- 4			1	1	`
•	O	ur	se	S	τr	u	СП	H	re		1	,

Course structure .10	T again	Name of the said	1		41
Evaluation method	Learning	Name of the unit	learning Required	hours	the
	method	or topic	outcomes		week
Daily paper exam	Lectures	Introduction and definition	Understanding the basic principles, introduction/defin ition of concepts	2	1
Direct oral questions for each student	Lectures	Principles of human rights and democracy	A general historical -overview to know getting the most important basic principles in human rights vocabulary / and why human rights and democracy	2	2
=====	====	The relationship between democracy and human rights. Objectives of the two components	Providing students with the scientific ability rstand the to unde subject	2	3
====	====	The relationship between human rights and some elements modern of the phenomenon of information The 1-progress phenomenon of globalization and	Defining the nature of rights and the importance of studying human rights	2	4

		human rights			
====	A	The interests oflearning and 3 Reinforcement and the idea of -human rights/4 The phenomenon corruption and of its impact on human rights	Students' knowledge of these vocabulary	2	5
exam Daily paper	====	International Bill of Human Rights The Universal -1 Declaration of Human Rights	Students' understanding of principles in international laws governing human rights and democracy	2	6
		Monthly exam	Monthly exam	2	7
=====	=====	Declarations and other international conventions The -1 International Covenants on Economic, Social and Cultural Rights Elements of human rights under international conventions and -declarations 1 3-2-Civil rights	Students' understanding of principles in international laws governing human rights and democracy	2	8
Oral questions to be answered by students by specifying their name	====	Part Two: Democracy/its definition and types Democracy in the direct / ancient era democracy types of 'democracies direct -Semi democracy, representative democracy, consensual and	General historical overview, introduction and definition	2	9

The means of transferring power democratically are general election and restricted election by specifying their name Oral questions to be answered by students by specifying their name The means of transferring power democratic the 'government difference between government and means of 'state transfer of power Election and voting systems/ direct election and indirect election/individual voting and list voting system democratic systems / political parties: their pes, definition, ty and relationship with political parties. Human rights and democratic principles Advantages and disadvantages of democratic			social democracy			
Election and voting systems/ direct election and indirect election/individual voting and list voting system democratic systems / political parties: their pes, definition, ty and relationship with political parties. Human rights and democratic principles Advantages and disadvantages of democratic	answered by students by	=====	transferring power democratically are general election and restricted election Democratic the \government difference between government and means of \state	students with the scientific ability nd the to understa subject individually, step	2	10
systems / political parties: their pes, definition, ty and relationship with political parties. Human rights and democratic principles Advantages and disadvantages of democratic	======	====	Election and voting systems/ direct election and indirect election/individual voting and list	======	2	11
Advantages and disadvantages of democratic	=====	====	democratic systems / political parties: their pes, definition, ty and relationship with political parties. Human rights and democratic	=====	2	12
systems Means of - influencing the democratic system and decision -1 Pressure group Corruption-2 13	=====	====	Advantages and disadvantages of democratic systems Means of - influencing the democratic system and decision -1 Pressure group		2	13
	===	====	General Review	General Review		14
=== Monthly exam 2 15		====	Monthly exam		2	15

Course evaluation .11

final -daily oral and paper tests and questions (10%) -Semester theoretical exams (40%)

.(theoretical exam (50%	
	resources Learning and teaching .12
Introduction book to the study of democracy and public freedoms / Prof. Dr. Khudair Yassin, Baghdad, Masala Printing: 2022-Al	Required textbooks (methodology, if (any
The above Declaration of -The French Constitution Publisher, French Department of -Human Rights Communication and Information, French Ministry of 'Foreign Affairs, p. 6 <i>Sciences</i> . CRC press	(Main references (sources
United Nations Charter 1945 Universal Declaration of Human Rights 1948 -2 The International Covenant on Human Rights 1966 -3 European Charter on Human Rights 1953 -4 Rome -Charter of the International Criminal Court -5 1998 Rights and Elections Handbook issued by Human -7 United Nations, 1994, -the Center for Human Rights 15-New York. And Geneva 1994 8- Human Rights, article published line- Http;//www.iep.utm/h hamns.htm 9- Alfred Sauvy, Lopinion Publish Universitaires de France, France, 1958 p99 9- 10- Aristote -La Poltique -Editions Gonthier . Paris, 1964, p. 178	Mainstream recommended books and journals references (scientific Reports
-talebawad@muwatin.org A	Electronic references, websites

49.	: Course Name
statistic	s Science
50.	Course Code
51.	2024-Second semester/year 2023
52.	2023-15-description was prepared is 2 The date this
53.	Available forms of attendance: In person
54.	Number of study hours (total) 2 theoretical hours + 3 practical hours / number of units (total) 5
55.	Name of the course officer: Prof. Nibras Abdel Karim Abdel Kazem
: Name	: Nibras Abdul Karim Emailnibras.a@uokerbala.edu.iq
56.	The course presents the most important concepts of statistics and how to collect samples, : Course objectives
.classify	them, and analyze them statistically according to specific standards
Getting	to know the science of statistics and how it is include
in the fie	eld of food science, how to get to know the sample ar
the popu	ulation, and how to analyze the results statistically by ives of the study subjectObject
and ana	lyzing them ،collecting samples, tabulating them
.statistic	cally according to the factors studied
57.	How the student learns the difference between variance, arithmetic mean, Teaching and learning strategies
standar	d deviation, dispersion, and difference
58.	Course structure

Giving the lecture electronically and using illustrative tools: Learning method

tests during the lecture, oral and written, and final exams: Evaluation method

Name of the unit or	hours	the week	Name of the unit or	hours	the
practical topic			theoretical topic		week
Introduction to statistics	3	1	A historical overview of statistics	2	1
Variance and variance	3	2	Viewing and contrast	2	2
SMA	3	3	Measures of dispersion and dissimilarity	2	3
First test	3	4	Standard deviation	2	4
standard deviation	3	5	First test	2	5
Dispersion and difference	3	6	Principles of probability theory	2	6
Coefficient of variation	3	7	Bernoulli's attempts	2	7
Second test	3	8	Measures of central tendency	2	8
Statistical Society	3	9	Second test	2	9
Sample and types of samples	3	10	Moderate normal probability distribution	2	10
Sample distribution	3	11	Conflicting or discordant events	2	11
Third test	3	12	Standard moderate distribution	2	12
possibility	3	13	Third test	2	13
Continuous distributions	3	14	Continuous distribution	2	14

59. evaluation Course

60.	Learning and teaching resources					
Stati	Statistics book (Required textbooks (curriculum					
	Main references					
		Recommended supporting books ar	nd references			
		Electronic references, websites				
1.	Course Name					
Engi	neering workshops					
2.	Course Code					
3. Semester/year						
/ Second2023 -2024						
4. Date this description was prepared						
6/4/2024						
5. Available attendance forms						
Is mandatory						
6.	(Number of study hours (total) Nu	umber of units (total				
The total number of study hours is 3 hours and the number of units is 3						
(Name of the course administrator (if more than one name is mentioned						
: Name: Professor Anwar Diya Mahdi Emailanwer.mahdi@uokerbala.edu.iq						
Cou	se objectives					
mechanical and electrical The student's acquisition of knowledge Technology with -A						
machines and tools Objectives						
Identify the basics of how electrical circuits work and load distribution -B of the s						
The student acquires knowledge of the basics of transmission, as well as knowledge of -C subjec						
rymetals that are important in the food indust						
Tead	hing and learning strategies .9					
1	Showing educational videos to the stude	nt	The			

2) Practical workshops	strategy
3) Illustrations such as PowerPoint	
4) Explanation by the teacher	

Course structure	.10				
Evaluation method	Learning method	Name of the or topic unit	Required learning outcomes	hours	
Questions for discussion Oral exams Reports	Using PowerPoint and educational videos while working in workshops to acquire skills and techniques	Electric arc welding	Engineering workshops	2 3	1
Questions for discussion Oral exams Reports	Using PowerPoint and educational videos while working in workshops to acquire skills and techniques	Oxyacetylene welding	Engineering workshops	2 3	2
Questions for discussion Oral exams Reports	Questions for Using PowerPoint and educational videos while working inside the workshops		Engineering workshops	2 3	3
Questions for discussion Oral exams Reports	Using PowerPoint and educational videos while inside the workshops working to acquire skills and techniques	phase connection	Engineering workshops	2 3	4
Questions for discussion Oral exams Reports	Using PowerPoint and educational videos while working in workshops to acquire skills and techniques	AC motors	Engineering workshops	2 3	5
Questions for discussion Oral exams Reports	Using PowerPoint and educational videos while working in workshops to acquire skills and techniques	AC motors	Engineering workshops	2 3	6
	•	First test	Engineering workshops	2 3	7
Questions for discussion Oral exams Reports	Using PowerPoint and educational videos while working inside the workshops to acquire skills and techniques	Power transmission means	Engineering workshops	2 3	8

Questions for discussion Oral exams Reports	Using PowerPoint and educational videos while working inside the workshops to acquire skills and techniques	Metals related to food industry the	Engineering workshops	2 3	9
Questions for discussion Oral exams Reports	Using PowerPoint and educational videos while working inside the workshops to acquire skills and techniques	Torque, work and power calculations	Engineering workshops	2 3	10
=	=	Second test	Engineering workshops	2 3	11

Course evaluation .11

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

	• • •	
	Learning and teaching resources .12	
	(Required textbooks (methodology, if any	
Basics of workshop technology		
Foundations of electrical	(Main references (sources	
engineering		
nothing	Mainstream recommended books and references	
nothing	(scientific journals, reports)	
nothing	Electronic references, websites	

7. Course Name

Computer 1

8. Course Code

U01301 COA1

9. year / Semester

2024 - 2023 / Second semester

10. the description this Preparation date

2024/4/5

11. Available the audience shapes

My presence

12. (total) Units number (total) Academic hours number

(hours (weekly) / number of units (2 units 2

(Mentionsed name from more if) Academic The decision responsible name

: Email : the name

Faezah Hamad Husseinfaezah.h@uokerbala.edu.iq

The decision Goals

- The course aims to introduce the student to the computer, types, input and output units, types of operating its systems, and the most important programs attached to the system, such as Wordpad. Dealing with folders and files.
- . Dealing with folders and files
- . The Internet, search engines, and how to create an email

Scholarship Subject Goals

And learning education Strategies .9

- 1- Using PowerPoint and educational videos
- 2- . My theory With an explanation
- 3- Practical application in front of the student for the lessons with the student application

The strategy

The decision structure .10					
Evaluation road	road Learning	the or Unit name topic	Learning Outputs required	hours	the week
Monthly exam + daily exam + + discussions (reports (Sumner	practical application	Introduction to computers	Knowledge of computers, their types, components and importance	2	1
=	theoretical	Input and output units	Introduction to the computer, its types, components, and importance	2	2
=	practical application	+Storage units Quiz1	Introduction to the computer, its types, components, and importance	2	3
=	practical application	operatingsystem	the types of Know operating systems and their features	2	4

=	practical application	paint, snipping tool	Software attached to the system Video player	2	5
=	practical application	wordpad	Software attached to the system Video player	2	6
=	practical application	First the test semester theoretical +) (practical	-	2	7
=	practical application	Dealing with icons and windows	Dealing with icons and windows	2	8
=	practical application	How to work with 2 + foldersQuiz	Know how to work with folders	2	9
=	practical application	Installing programs	How to install and removeanti-virus programs	2	10
=	practical application	The Internet and search engines	How to connect to the Internet and know search engines	2	11
=	practical application	mail-E	+ EmailQuiz3		12
		Second semester exam (theoretical (practical +			13
		Final practical test			14

The decision evaluation .11

like requester With it Assigned mission according to on 100 from Class distribution					
Monthly, editorial, reports, etc And oral Daily exams And Daily Preparatio					
And Learning Sources					
	teaching				
) Required decided E					
(Found that method					
Computer fundamentals, Computer skills	(Sources) Home the reviewer				
	Prevailing And references Books				
	With it recommend that				
(Reports ·scientific Magazi					
https://netaraby.com/control-panel-on-windows-	Electronic references, websites				
10/#tshghyl_albramj_alaftradyt	Electronic references, websites				

Course Name 13. Computer 2

14. Course Code	
	U02301 COA2
15. year / Semester	
2	2024 - 2023 / Second semester
16. the description this Preparation date	
	2024/4/5
17. Available the audience shapes	
	My presence
18. (total) Units number (total) Academic hours number	1.) /
` ` ` ` · · · · · · · · · · · · · · · ·	(ly) / number of units (2 units 2
(Mentionsed name from more if) Academic TI : Email	the name
	seinfaezah.h@uokerbala.edu.iq
T dezait Hamad Huss	The decision Goals
The course aims to introduce the student to computer	Scholarship Subject Goals
n order to solve any problem he faces while using settings i	
. the computer	
And know how to adjust some settings according to user	
requirements, including sound, language, and user accounts	
And lo	aurium advention Otrotonica O
	arning education Strategies .9
4- and educational videos Using PowerPoint	The
5- For theoretical With an explanation the lesson beg	ginning maybe strategy
benefitscontrol panel	1. (1
6- Practical application for the student on how to deal with in the Control panel	in the categories
in the control panel	

The decision structure .10						
Evaluation road	Learning road	the or Unit name	Learning Outputs	hours	the	
		topic	required		week	
Monthly exam + daily exam + discussions + reports (Sumner (practical application	control Board	Definition of the control panel and ways to access it	2	1	

	T		T	ı	1
=	theoretical	System and security	Knowledge of special settings to protect security and order	2	2
=	practical application	Network and Internet +Quiz1	The ability to control and review the network status	2	3
=	practical application	Hardware and Sound	Knowing how to control the most basic options on computer, the including sounds, device battery settings, power consumption method, etc	2	4
=	practical application	programs	Find out how to remove programs through this group	2	5
=	practical application	User Accounts and family Safety	How to create more than one and set a account password and monitoring	2	6
=	practical application	First the test semester theoretical +) (practical	-	2	7
=	practical application	Appearance and Personalization	Control the taskbar settings, as well as background settings, screen appearance, and how to set a screen saver with formatting	2	8
=	practical application	Appearance and Personalization + 2Quiz	Control the taskbar settings, as well as background settings, screen appearance, and how to set a screen saver with formatting	2	9
=	practical application	Clock language and Region	Knowledge of the mechanism for controlling	2	10

			language settings, setting time and date, and changing the time zone			
=	practical application	Ease of Access	Knowledge of the quick and easy access feature that serves people with special needs, such as improving visual display and speech recognition	2	11	
		Second	-		12	
		semester exam				
		theoretical +)				
		(practical				
		Final practical			13	
		test				
The decision evaluation .					ion .11	
like reques	ter With it Assign	ed mission accordi	ng to on 100 from Cla	ss distr	ibution	
M	Monthly, editorial, reports, etc And oral Daily And exams Daily Preparation					
	<u>-</u>		And Learni			
				•	aching	
) Required	decided	Books	
			(Found tha	t metho	dology	
Cor	Computer fundamentals, Computer skills			ne the re	viewer	
				erences	Books	
				ecomme	nd that	
			(Reports ·scient	ific Maga	azines)	
https://neta	raby.com/control	-panel-on-windows-	Electronic refere	nces, we	ebsites	
	10/#tshghy	l_albramj_alaftradyt				
1	20/ " tonging i_dividual tudy t					