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

Academic Program and Course Description Guide

2025

1-Program vision
The department aspires to continue enriching and enhancing the department's outputs that are compatible with the changes occurring in the agricultural climate environment, in order to build knowledge at the objective and agricultural levels to confront these changes .according to a well-thought-out plan

2- Program message
The department's mission is to continue completing the tasks of modern cognitive axes and directing their objectives and outputs to solve the rapid changes in soil degradation, climate change, desertification, and environmental pollution, to find solutions in coordination with .relevant sectors to encourage them to invest in scientific outputs

3- Program objectives .
The department aims to focus on developing the research and scientific skills of the department's students through graduation research projects, and to expand the focus of using geospatial and space technologies in surveying and evaluating soil and water resources, monitoring the agricultural environment and desertification, and transferring these experiences and information to the relevant sectors and participating in developing strategic solutions to the problems of water resources, environmental pollution and the risks of desertification**.**

4- Program accreditation .
Seeking accreditation

5- Other external influences .
Opportunities for support

Program structure .6				
***comments**	**percentage%**	**Study unit**	**Number of**	**Program**
essential	15.79	15.5	9	**Institutional**
essential	22.81	53	13	**College**
major	61.40	124	35	**Department**
essential	**----**	**---**	**1**	**Summer**

				Other

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

7- Program Description .				
Credit hours		Course name	Course code	Year/Level
practical	theoretical			
	2	Democracy and human	UOB102	First stage, first semester
3	2	field crops	FICR115	
3	2	Analytical Chemistry	ACHM121	
3	2	geologic	GEOL113	
	2	mathematics	MATH111	
	2	English 1	UOB102	
	2	Arabic language 1	UOB104	First stage, semester second
3	2	Organic Chemistry	OCHM125	
3	2	Physics	GPHY120	
3	2	Soil science	SOIL114	
3	2	Computer Basics	UOB103	
3	1	flat area	PLSU118	

Knowledge

Expected learning outcomes of the program .8
knowledge

• Lectures, seminars and discussion panels • Daily tests • monthly tests • Final exams • Homework • Agricultural experiment design • Reports • Research	A.1 The student has a solid knowledge of basic sciences and applied agricultural sciences related to soil and water resources. A.2 The student understands the basic concepts of soil science and water resources with the ability to relate them to the agricultural environment. A.3 The student understands the principles of managing natural resources (soil and water) in a sustainable manner, with knowledge of irrigation and drainage techniques , and soil, water, and plant analysis. And the application of the principles of reclamation and combating desertification. A.4 The student masters the use of modern concepts and techniques such as remote sensing , data analysis, and agricultural modeling to improve productivity and resource efficiency. A.5 The student understands the impact of climatic and environmental factors on agricultural systems and understands the importance of reducing pollution and preserving biodiversity to ensure resource sustainability. A.6 The student has a comprehensive understanding of agricultural terminology used in the labor market and realizes the importance of recycling agricultural waste to enhance the agricultural economy. A.7 The student understands the interrelationship between soil, . water and plants and their impact on agricultural production
Skills	

• Teaching students how to engage in objective thinking and analysis methods • Providing students with course basics and additional topics • Ask intellectual questions that require different points of view as .homework • Reports from the institutions where the student performs field or . applied training • Employer reports on program .graduates • Field supervisor's opinion • Applied project • Takes responsibility at work • Proposes solutions based on scientific data • Considers community aspects in agricultural solutions	B1 The student employs basic and applied knowledge to analyze agricultural problems related to soil and water and to use scientific methods to find sustainable solutions. B2 The student is proficient in designing and implementing agricultural experiments and analyzing data using statistical software and modern techniques such as remote sensing and geographic information systems. B3 The student demonstrates the ability to evaluate the impact of pollution and water scarcity on agricultural production and propose practical plans for the reclamation and conservation of natural resources. B4 The student acquires critical and creative thinking skills to devise new solutions to agricultural challenges, with the ability to make informed decisions based on scientific analysis. B5 The student practices practical skills in examining and analyzing soil, water and plant samples, diagnosing field problems and recommending appropriate treatments. B6 The student masters the use of computer programs and information technology in agricultural project management and data analysis. Preparing technical reports.
values	

• Reports from the institutions where the student performs . field or applied training • Employer reports on program .graduates • Field supervisor's opinion • Applied project • Takes responsibility at work • Proposes solutions based on scientific data • Considers community aspects in agricultural solutions	**C1** The student demonstrates a sense of responsibility and professional discipline in dealing with natural resource issues and is keen on their sustainable use to serve society. **C2** The student demonstrates a commitment to agricultural professional ethics and respect for laws and human rights. Taking into account the values of integrity and transparency in scientific and practical practice. **C3** The student works as a team and participates effectively in group work, promoting a culture of cooperation and altruism to achieve common goals. **C4** The student embraces the values of creativity and initiative in facing agricultural and environmental challenges and demonstrates enthusiasm for implementing innovative solutions to serve agriculture and society. **C5** The student perseveres in learning and continuous self-development and demonstrates a commitment to seriousness and diligence to achieve his academic and professional goals.

Teaching and learning strategies .9
.Teaching students how to use objective thinking and analysis methods - .Providing students with the basics of the course and additional topics - .Ask intellectual questions that require different points of view as homework -

Evaluation methods .10
Midterm exams - Monthly tests - Daily tests- Homework - Graduation research discussion tests -

Faculty .11
Faculty members

Faculty preparation		Requirements/Special Skills (If any)		Specialization		Academic rank
lectur	ange			private	general	
	3			Soil fertility and fertilization	Soil Science and Water Resources	Mr
	3			Soil fertility and fertilization	Soil Science and Water Resources	assistant professor
	3			soil chemistry	Soil Science and Water Resources	Mr
	1			soil chemistry	Soil Science and Water Resources	assistant professor
	2			soil chemistry	Soil Science and Water Resources	teacher
	1			Soil management	Soil Science and Water Resources	Mr
	1			Soil management	Soil Science and Water Resources	assistant professor
	1			Soil survey and classification	Soil Science and Water Resources	Mr
	1			Soil survey and classification	Soil Science and Water Resources	assistant professor
	2			Microscopic soil regeneration	Soil Science and Water Resources	assistant professor
	1			Microscopic soil regeneration	Soil Science and Water Resources	teacher
	1			Soil and water maintenance	Soil Science and Water Resources	assistant professor
	1			Soil maintenance and water management	Soil Science and Water Resources	teacher

	1			Soil Physics	Soil Science and Water Resources	assistant professor
	1			land reclamation	Soil Science and Water Resources	assistant professor
	1			soil morphology	Soil Science and Water Resources	teacher
	1			Water Engineering	Civil Engineering	teacher
	1			soil salinity	Soil Science and Water Resources	teacher
	4			Soil Science and Water Resources	Soil Science and Water Resources	Assistant Professor
1				Field irrigation	Soil Science and Water Resources	Professor (Experienced)
1				date	College of Education	teacher
1				Arabic language	College of Education	teacher
1				mathematics	Mathematics	Assistant Professor
1				Organic Chemistry	Food Sciences	assistant professor
1				Organic Chemistry	Food Sciences	Assistant Professor
1				Fruit production	Horticulture and landscaping	Mr
1				Fruit production	Horticulture and landscaping	assistant professor
1				agricultural economy	Administration and Economics	assistant professor
1				Plant protection	Plant protection	assistant professor
1				Plant protection	Plant protection	Assistant Professor
1				Agricultural machinery and equipment	Agricultural machinery and equipment	teacher

1				Agricultural machinery and equipment	Agricultural machinery and equipment	Assistant Professor
1				Agricultural guidance	field crops	assistant professor
1				Physiology of a plant	Horticulture and landscaping	assistant professor
1				Physiology of a plant	Horticulture and landscaping	teacher
1				Horticulture and landscaping	Horticulture and landscaping	assistant professor
1				Horticulture and landscaping	Horticulture and landscaping	assistant professor
1				biochemistry	Livestock	assistant professor

Professional development
Orientation of new faculty members
Encourage new teachers to participate in the development courses held by the university and college, as well as to participate in practical lessons as listeners, to learn from senior and dealing with students , teachers teaching methods, classroom management.
Professional development for faculty members
Directing faculty members to participate in conferences, workshops and seminars, especially international ones, in addition to emphasizing their involvement in development courses held by the university and college to increase their knowledge of modern learning

Acceptance Criteria .12
Admission is centralized after graduating from the sixth scientific and applied year and choosing the College of Agriculture and then competing for the departments according to . the average and then registering in the department

The most important sources of information about the program .13

Specialized scientific books -1 **-2** Academic research **-3** The World Wide Web **-4** The accumulated scientific experience of the department's staff **-5** Feedback from the labor market

Program Development Plan .14
Addressing weaknesses that may appear during the implementation of academic programs

Program Skills Map														
Required learning outcomes of the program														
knowledge											Essential or ?optional	Course name	Course code	Year/Level
A.11	**A.10**	**A.9**	**A.8**	**A.7**	**A.6**	**A.5**	**A.4**	**A.3**	**A.2**	**A.1**				
											essential	Democracy and	UOB102	First stage, first semester
							√	√	√	√	essential	field crops	FICR115	
							√	√	√	√	essential	Analytical	ACHM121	
					√	√	√	√	√	√	essential	geologic	GEOL113	
			√	√	√	√	√				essential	mathematics	MATH111	
					√	√	√				essential	English 1	UOB102	
					√	√	√				essential	Arabic language 1	UOB104	First stage, second semester
							√	√	√	√	essential	Organic	OCHM125	
					√	√	√				essential	Physics	GPHY120	
	√	√	√	√	√	√	√	√	√	√	essential	Soil science	SOIL114	
					√	√	√				essential	Computer Basics	UOB103	
	√	√	√	√	√	√	√	√	√		essential	flat area	PLSU118	

Program Skills Map													
Required learning outcomes of the program													
The skill										Essential or ?optional	Course name	Course code	Year/Level
B10	**B9**	**B8**	**B7**	**B6**	**B5**	**B4**	**B3**	**B2**	**B1**				
										essential	Democracy and	UOB102	First stage, first semester
				√	√	√	√			essential	field crops	FICR115	
				√	√	√	√			essential	Analytical	ACHM121	
				√	√	√	√			essential	geologic	GEOL113	
		√	√	√	√	√	√			essential	mathematics	MATH111	
				√	√	√	√			essential	English 1	UOB102	
		√	√	√						essential	Arabic language 1	UOB104	First stage, second semester
				√	√	√	√			essential	Organic	OCHM125	
				√	√	√	√			essential	Physics	GPHY120	
	√	√	√	√	√	√	√	√	√	essential	Soil science	SOIL114	
			√	√	√	√				essential	Computer Basics	UOB103	
		√	√	√	√	√	√	√	√	essential	flat area	PLSU118	

Program Skills Map												
Required learning outcomes of the program												
values									Essential or ?optional	Course name	Course code	Year/Level
				C5	**C4**	**C3**	**C2**	**C1**				
				√	√	√	√	√	essential	Democracy and	UOB102	First stage, first semester
						√	√	√	essential	field crops	FICR115	
						√	√	√	essential	Analytical	ACHM121	
						√	√	√	essential	geologic	GEOL113	
						√	√	√	essential	mathematics	MATH111	
						√	√	√	essential	English 1	UOB102	
						√	√	√	essential	Arabic language 1	UOB104	First stage, second semester
						√	√	√	essential	Organic	OCHM125	
						√	√	√	essential	Physics	GPHY120	
						√	√	√	essential	Soil science	SOIL114	
						√	√	√	essential	Computer Basics	UOB103	
						√	√	√	essential	flat area	PLSU118	

Course Description Form Democracy and human rights

Course name .1					
Democracy and human rights					
Course code .2					
DEHR105					
Semester/Year .3					
First / First stage					
Date of preparation of this description .4					
1-9-2023					
Available forms of attendance .5					
My presence					
Number of study hours (total) / Number of units (total) .6					
hours per week / 2 units 2					
Name of the course supervisor (if more than one name is mentioned) .7					
:Name Asst. Dr. Wedad Salem Mohammed :Email widad.mohammad@uobasrah.edu.iq					
Course objectives .8					
Personal development: Instilling a sense of dignity, freedom, equality, social justice, and democratic practice. This is achieved by enhancing students' awareness of their			Course objectives		
Teaching and learning strategies .9					
The course includes (2) theoretical hours - the number of weekly hours is approved .and distributed over 15 weeks			Strategy		
Course structure .10					
Evaluation method	Learning method	Name of unit or topic	Required learning outcomes	watches	week
Surprise tests and assigning students to manage the lecture under our	An explanatory lecture with explanations and examples	The concept of democracy (its development, (definition, goals, roots	Understanding the concept of democracy, its goals, and its	4	2-1
Surprise tests and assigning students to manage the lecture under our	An explanatory lecture with explanations and examples	The historical development of democracy	Understanding the stages of the emergence and	4	4-3

Surprise tests and assigning students to manage the lecture under our	An explanatory lecture with explanations and examples	Forms of democracy	Distinguishing between direct, representative,	4	6-5
Surprise tests and assigning students to manage the lecture under our	An explanatory lecture with explanations and examples	Representative (parliamentary) system mechanism	Understanding the role of the parliamentary system in	4	8-7
Surprise tests and assigning students to manage the lecture under our supervision and	An explanatory lecture with explanations and examples using a	Definition of freedom and its development	Understanding the concept of freedom and its philosophical	4	10-9
	An explanatory lecture with explanations and examples	Types of freedom + exam	Classification of different freedoms: individual,	2	11
Surprise tests and assigning students to manage the lecture under our	An explanatory lecture with explanations and examples	Opinions on freedom	Analysis of multiple intellectual views on	2	12
Surprise tests and assigning students to manage the lecture under our	An explanatory lecture with explanations and examples	Freedom in Islam	Understanding Islam's position on freedom and	2	13
Surprise tests and assigning students to manage the lecture under our	An explanatory lecture with explanations and examples	Thoughts on freedom	Comparison of philosophical and social views on the	2	14
		exam	Assessing the extent of understanding of concepts	1	15

Course Evaluation .11
The grade is distributed out of 100 based on the tasks assigned to the student, such as daily preparation, .daily, oral, monthly and written exams, reports, etc

Learning and teaching resources .12	
A methodological book on human rights	Required textbooks (methodology if available)
	Main References (Sources)
	Recommended supporting books and references (...scientific journals, reports)
	Electronic references, websites

Description Form Course Analytical Chemistry

Course name .1	
Analytical Chemistry	
Course code .2	
ANCH121	
Semester/Year .3	
First / First stage	
Date of preparation of this description .4	
2023-9-1	
Available forms of attendance .5	
My presence	
Number of study hours (total) / Number of units (total) .6	
hours (2 theoretical + 3 practical) / 3.5 units 3	
Name of the course supervisor (if more than one name is mentioned) .7	
Name: Elham Kazem NasserEmail : elham.nasser@uobasrah.edu.iq	
Course objectives .8	
□ Introducing the student to the importance of analytical chemistry in .agricultural fields, especially in food sciences □ Familiarity with the basics of quantitative volumetric analysis using .different correction methods and their conditions □ Learn how to express the concentrations of different solutions and how to .prepare them □ Familiarity with the laws of quantitative volumetric correction and the .ability to solve problems based on the laws of quantitative volumetric analysis □ Learn how to calculatepH .and prepare buffer solutions	Course objectives
Teaching and learning strategies .9	
.weeks of in-person lectures, including two to three monthly exams 15	Strategy
Course structure .10	
Theoretical part	

Evaluation method	Learning method	Name of unit or topic	Required learning outcomes	watches	week
Homework	Lecture with presentation	Volumetric titration method, conditions (requirements) for volumetric titration, solution and its types, methods of expressing molar concentrations	To introduce the student to the concept of volumetric correction, its conditions, and the types of solutions used .in it	2	1
exam	Lecture with presentation	Examples of molarity, standardization and examples of them, molality, formalism, mole fraction and examples	The student should be able to distinguish between molarity, standardization, molality, formalin, mole fraction and percentage and calculate them .with examples	2	2
Participation	Lecture with presentation	,Percentage and its types, solved examples ppm and examples about it, unsolved examples about concentration and types of volumetric titration methods	The student will apply methods of expressing concentration usingppm in practical .problems	2	3
Homework	Lecture with presentation	Chemical calculations used in volumetric titration with examples	The student will perform calculations related to volumetric titration reactions .accurately	2	4
exam		First exam	The student should explain the principle of equalization corrections, distinguish between the used indicators and their effect, and choose the .appropriate ones	2	5

Participation	Lecture with presentation	Acid and base titration (neutralization titration), indicators and explanation of their function, how to choose the appropriate indicator, acid and base indicator range, calculatingpH of strong acid and base solutions with examples	The student will calculate thepH value of solutions of strong acids and bases, salts, and buffer solutions using correct .equations	2	6
Homework	Lecture with presentation	Calculatingthe pH of salt solutions with examples. Calculatingthe pH of buffer .solutions with examples	The student will explain the Moore-Volhard method for estimating chloride ions and apply it .mathematically	2	7
exam	Lecture with presentation	Precipitationtitration Mohr and Volhard methods for chloride determination	The student will be able to define oxidation and reduction processes, identify oxidizing and reducing agents, and use the Nernst equation .in calculations	2	8
Participation		Second exam	The student should be able to distinguish between different iodide corrections and .apply them	2	9
Homework	Lecture with presentation	Oxidation-Reduction Titration (Redox Titration) Definition of the oxidation-reduction process, the oxidizing and reducing agent, types of oxidizing and reducing agents, Nernst equation, choosing the appropriate indicator, range of the oxidation-reduction indicator	The student should explain the concept of ligands and their types, the role ofEDTA in titration and the .effect of pH	2	10
exam	Lecture with presentation	Abbreviation, iodoform corrections	The student will use the Aerochrome Black T manual and explain its mechanism of action and the types of	2	11

			complex .compounds		
Participa tion	Lecture with presentation	Complex types of ligands, titrations in , whichEDTA is used effect of pH on ,	The student reviews the acquired information and discusses the main ideas of the various theoretical topics in preparation for .the exams	2	12
		The third exam	To introduce the student to the concept of volumetric correction, its conditions, and the types of solutions used .in it	2	13
exam	Lecture with presentation	Complex, examples of indicators used, how to make the Aerochrome Black T indicator and compounds, types ofEDTA titrations	The student should be able to distinguish between molarity, standardization, molality, formalin, mole fraction and percentage and calculate them .with examples	2	14
		General review and discussion	The student will apply methods of expressing concentration usingppm in practical .problems	2	15

Course Evaluation .11
Monthly exams, homework grades, reports, student activity grades during lectures, and their .commitment to attendance and absence
Learning and teaching resources .12

[1] Quantitative Analytical Chemistry: Written by Dr. Majeed Al-Qaisi [2] Theoretical basics of inorganic analytical chemistry, quantitative gravimetric and volumetric analysis: written by Dr. .Hadi Kazim Awad [3] Analytical Chemistry for Students of the Faculty of Agriculture and Forestry: Written by Dr. Nabil Fadel Khalil	Required textbooks (methodology if available)

English Language Course Description Form 1

Course name .1	
English language /1	
Course code .2	
ENGI106	
Semester/Year .3	
First / First stage	
Date of preparation of this description .4	
2024	
Available forms of attendance .5	
My presence	
Number of study hours (total) / Number of units (total) .6	
hours per week / 2 units 2	
Name of the course supervisor (if more than one name is mentioned) .7	
Abed Ibrahim Name: Fares farse.abrahee @uobasrah.edu.iq	
Course objectives .8	
By unless Way no that it from Preservation importance Perception the language teaching in Certain and methods means following And reading The lesson to understand like the language English	Course objectives
Teaching and learning strategies .9	
The course includes (2) theoretical hours - the number of weekly hours is approved .and distributed over 15 weeks	Strategy

Course structure .10					
Evaluation method	Learning method	Name of unit or topic	Required learning outcomes	watches	week
Surprise tests and assigning students to manage the lecture under our supervision and guidance, including tests	Demonstrative lecture with explanation and examples	and grammar reading		2	1
Surprise tests and assigning students to manage the lecture under our supervision and guidance, including tests	Demonstrative lecture with explanation and examples	pronunciation		2	2
Surprise tests and assigning students to manage the lecture under our supervision and guidance, including tests	Demonstrative lecture with explanation and examples	For I listen understanding		2	3
Surprise tests and assigning students to manage the lecture under our supervision and guidance, including tests	Demonstrative lecture with explanation and examples	reading		2	4
Surprise tests and assigning students to manage the lecture under our supervision and guidance, including tests	Demonstrative lecture with explanation and examples	rules		2	5
Surprise tests and assigning students to manage the lecture under our supervision and guidance, including tests	Demonstrative lecture with explanation and examples	Spelling		2	6
Surprise tests and assigning students to manage the lecture under our supervision and guidance, including tests	Demonstrative lecture with explanation and examples	Punctuation Signs		2	7
Surprise tests and assigning students to manage the lecture under our supervision and guidance, including tests	Demonstrative lecture with explanation and examples	to express		2	8
Surprise tests and assigning students to manage the lecture under our supervision and guidance, including tests	Demonstrative lecture with explanation and examples	reading		2	9
	Demonstrative lecture with explanation and examples	(grammer) Negative exam +		2	10
Surprise tests and assigning students to manage the lecture under our supervision and guidance, including tests	Demonstrative lecture with explanation and examples	positive		2	11

Surprise tests and assigning students to manage the lecture under our supervision and guidance, including tests	Demonstrative lecture with explanation and examples	Interrogative		2	12
Surprise tests and assigning students to manage the lecture under our supervision and guidance, including tests	Demonstrative lecture with explanation and examples	reading		2	13
Surprise tests and assigning students to manage the lecture under our supervision and guidance, including tests	Demonstrative lecture with explanation and examples	Listening		2	14
	Demonstrative lecture with explanation and examples	Pronunciation+ Exam		2	15

Course Evaluation .11
The grade is distributed out of 100 based on the tasks assigned to the student, such as daily preparation, .daily, oral, monthly and written exams, reports, etc

Learning and teaching resources .12	
	Required textbooks (methodology if (available
Soars, John, and Liz Soars. New headway: Beginner student's book. Oxford: Oxford University Press, 2010, 2010.	Main References (Sources)
Brackstone, Mark, Ben Waterson, and Mike McDonald. "Determinants of following headway in congested traffic." Transportation Research Part F: Traffic Psychology and Behavior 12.2 (2009): 131-142.	Recommended supporting books and references (scientific journals, reports...)
	Electronic references, websites

Field Crops Principles Course Description Form

Course name .1
Principles of field crops
Course code .2
FICR115
Semester/Year .3
Chapter One / First Stage

Date of preparation of this description .4	
2023-9-1	
Available forms of attendance .5	
My presence	
Number of study hours (total) / Number of units (total) .6	
hours per week (2 theoretical + 3 practical) / 3.5 units 5	
Name of the course supervisor (if more than one name is mentioned) .7	
:Name: Prof. Dr. Kareem Hanoun Mohsan EmailKareem.mohsan@uobasrah.edu.iq M.M. Raghad Sabah Hassan	
Course objectives .8	
Teaching the student the basic sciences of field crops specialization, of field crop science, its economic importance, the importance defining field crops, the most important divisions of field crops, and the impact .of environmental conditions on crop growth The important agricultural	Course objectives
Teaching and learning strategies .9	
In-person lectures for 15 weeks, during which there are daily exams and two monthly .exams	Strategy
Course structure .10	
Theoretical part	

Evaluation method	Learning method	Name of the unit or topic	Required learning	watches	week
Daily exam	Lecture with explanation and	Concept of field crop science Field crop classifications - - Scientific nomenclature	Understand the concept of crops, their classification	2	1
Daily exam	Lecture with explanation and	The effect of environmental and temperatures conditions on plant growth and yield	Understanding the effect of temperature on different	2	2
Daily exam	Lecture with explanation and	The effect of light on plants and photoperiod	Understand the relationship between light	2	3
Daily exam	Lecture with explanation and presentation	The effect of drought on plant growth and the damage ,caused by excess water	Analysis of the effects of excess moisture and drought on production	2	4

		-Exam-1	Distinguish between soil and water	2	5
Daily exam	Lecture with explanation and	Soil, texture, types of water in the soil, how to infer the presence of salinity in the soil	Understanding the factors that affect seed germination	2	6
Discussing reports	Lecture with explanation and	Germination of field crop seeds - factors affecting - germination	Learn about dormancy its , .to treat it	2	7
Daily exam	Lecture with explanation and presentation	Seed dormancy, what are its causes and how to get rid of ?it	Identifying weed species, their losses, and management	2	8
Daily exam	Lecture with explanation and	Definition of jungles, methods of combating them, and the losses they cause	Distinguish between types of fertilizers and	2	9
		Exam 2	Analyzing relationships	2	10
Daily exam	Lecture with field explanation	Field visit to nearby crop fields to learn about the plants	Understanding crop rotation design and its impact on soil	2	11
Discussion of the report	Lecture with explanation and	Fertilizers and fertilization - - Types of fertilizers	Linking theoretical study with field	2	12
Daily exam	Lecture with explanation	Methods of adding fertilizers	Understand the concept of crops, their	2	13
Discussion of the report	Lecture with explanation and	Biological factors and the study of the relationship between field crops and other organisms	Understanding the effect of temperature on different	2	14
Daily exam	Lecture with explanation and	Crop rotation, its importance and benefits for plants and how to design it	Understand the relationship between light	2	15
Practical part					
Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	watches	week
Display screen + field	Lecture with explanation and	Concept of field crop science Field crop classifications - - Scientific nomenclature	Distinguish between types of crops according to	3	1

Display screen + field	Lecture with explanation and	Soil Service Operations - 1- Tillage - Benefits of Tillage - Machines Used in Tillage	Understanding land preparation tools and	3	2
Display screen + field	Lecture with explanation and	Soil Service Operations -2- Smoothing 3- Leveling 4- Laser Leveling - Advantages of Land Modification	Understanding the role of precise land preparation in	3	3
Display screen + field	Lecture with explanation and	Crop service operations - Planting methods - A- Planting method according to the method of placing seeds	Learn about different farming systems and	3	4
Display screen + field	Lecture with explanation and	Crop service operations - weeding - patching - thinning (thinning) - planting depth - planting distances	Field application of crop care steps	3	5
Display screen + seed model	Lecture with explanation and	Germination of field crop seeds - factors affecting germination - types of germination Calculate the	Calculating germination percentage and analyzing	3	6
Display screen + lab	Lecture with explanation and	Conducting a laboratory experiment - requirements and how to conduct germination tests - writing a	Conduct a practical experiment to accurately	3	7
Display screen + field	Lecture with explanation and	Botanical description of cereal crops and legumes - Display models Botanical description	Distinguishing the phenotypic characteristics of different	3	8
Display screen + field	Lecture with explanation and	Botanical description of oil - crops and sugar crops display of samples-	Applying irrigation methods and understanding	3	9
field	Lecture with explanation and	Field visit to nearby crop fields to learn about the plants	Using fertilizers and determining the most	3	10
display screen	Lecture with explanation and	(Irrigation and drainage) - Irrigation methods - General benefits of constructing drains	Knowing the right harvest timing and its effects	3	11
display screen	Lecture with explanation and	Fertilizers and fertilization - Types of fertilizers - Methods of adding fertilizers	See real agricultural applications in the fields	3	12
display screen	Lecture with explanation and	Harvest - Damages of early and late harvest	Distinguish between types of crops according to	3	13

a report	-----	Scientific visit to the Agricultural Research Station	------	3	14
		exam	-----	3	15

Course Evaluation .11	
The grade distribution is 50 for the final exam, 10 for daily and oral exams and reports, and 20 for each .monthly exam	
Learning and teaching resources .12	
	Required textbooks (methodology if (available
Mohammad Amin Omid Nouri (1986). Principles of Field Crops. Ministry of Higher Education and Scientific .Research. University of Basra. College of Agriculture Al-Ansari, Majeed Mohsen and others (1980). Principles of Field Crops. Ministry of Higher Education and Scientific .Research Mohammed Hadhal Kazim Al-Baldawi, Alaa Al-Din Abdul Majeed Al-Jubouri, and Muwaffaq Abdul Razzaq Suhail Al-	Main References (Sources)
Al-Ansari, Majeed Mohsen (1982). Field Crop Production. Ministry of Higher Education and Scientific Research. .College of Agriculture, University of Baghdad	Recommended supporting books and references (scientific journals, reports...)
	Electronic references, websites

course description form Mathematics

Course name .1
mathematics 1 /
Course code .2
MATH111
Semester/Year .3
Chapter One / First Stage
Date of preparation of this description .4
2023-9-1
Available forms of attendance .5

Full time (theoretical lecture)
Number of study hours (total) / Number of units (total) .6
hours per week for 14 weeks / 2 units 2
Name of the course supervisor (if more than one name is mentioned) .7
Name: M.M. Jenan Abdul Imam Najm :Emailjenan.najem@uobasrah.edu.iq
Course objectives .8

:Graduating students who are able to • Think critically and find new solutions to problems using mathematics. • The ability to apply mathematical concepts to real-life problems and challenges facing the agricultural sector, such as improving productivity and reducing negative .environmental impacts • Participation in scientific research in the field of	Course objectives

Teaching and learning strategies .9	
Providing students with the basics and additional topics related to the previous /1 .learning outcomes of skills, to solve scientific problems Enabling students to gain knowledge and understand the domain of the function and /2 .determine the range of the function Enabling students to gain knowledge and understanding of the basics of integration /3 .and its applications	Strategy
Course structure .10	

Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	watches	week
Tests Daily and monthly Final and reports Daily	Lectures Theoretical dialogue + and discussion	function	Introducing students to the .function	2	1
Tests Daily and monthly Final and reports Daily	Lectures Theoretical dialogue + and discussion	Domain of the function	Introducing students to methods for finding the domain of .functions	2	2
Tests Daily and monthly Final and reports Daily	Lectures Theoretical dialogue + and discussion	Function range	Introducing students to methods for finding the .range of functions	2	3

Tests Daily and monthly Final and reports Daily	Lectures Theoretical dialogue + and discussion	The purpose of the function	Introducing students to methods of finding the limit .of functions	2	4
Tests Daily and monthly Final and reports Daily	Lectures Theoretical Dialogue + and Discussion Presentation Dialogue + and discussion	The function's limit .is at infinity	Explain the properties of the limit and methods of finding it at .infinity	2	5
Tests Daily and monthly Final and reports Daily	Lectures Theoretical dialogue + and discussion	Graph the function	Introducing students to how to .graph functions	2	6
Tests Daily and monthly Final and reports Daily	Lectures Theoretical dialogue + and discussion	Derivation of the function	Introduce students to the methods of deriving functions using definition and derivation .methods	2	7
Tests Daily and monthly Final and reports Daily	Lectures Theoretical dialogue + and discussion	Tangent equation of a function	Explain to students how to find the tangent equation for functions	2	8
Tests Daily and monthly Final and reports Daily	Lectures Theoretical dialogue + and discussion	Indefinite integration	Explain the definition of indefinite integration and its properties	2	9
Tests Daily and monthly Final and reports Daily	Lectures Theoretical dialogue + and discussion	definite integration	Explanation of how to calculate definite integration and its properties	2	10
Tests Daily and monthly Final and reports Daily	Lectures Theoretical dialogue + and discussion	Trigonometric functions	Explaining and introducing students to the derivative and integral of trigonometric	2	11

			functions and their .properties		
Tests Daily and monthly Final and reports Daily	Lectures Theoretical dialogue + and discussion	Logarithmic functions	Explain and introduce students to the derivative and integral of logarithmic functions and their .properties	2	12
Tests Daily and monthly Final and reports Daily	Lectures Theoretical dialogue + and discussion	Exponential functions	Explaining and introducing students to exponential functions, their properties, and how to calculate the derivative and .integral	2	13
Tests Daily and monthly Final and reports Daily	Lectures Theoretical dialogue + and discussion	Integration by substitution	Explaining some integration methods	2	14

Course Evaluation .11
.Daily exams with scientific questions - .Participation grades for competition questions on academic topics - .Grading homework and reports - .Grades for the student's activity during the lecture and his commitment to regular attendance and absence -

Learning and teaching resources .12	
	Required textbooks (methodology if available)
1) Ayres, Frank and Mendelson, Elliott., (2012), Schaum's Outline of Calculus, 6th Edition. US:McGraw-Hill 2) Thomas, Jr., Weir, Hass, (2014), Thomas's Calculus, 13th Edition. Pearson	Main References (Sources)
Various researches on functions and integrals	Recommended supporting books and references (scientific journals, reports...)
Mathway | Algebra Problem Solver	Electronic references, websites

:Course name .1
General Physics
:Course code .2
GPHY120
Semester .3/ Academic Year
Second / First Stage
:Date of preparation of this description .4
2023-9-1
:Available forms of attendance .5
Lecture System - Official Working Hours
Number of study hours / number of units .6
) / (theoretical + 3 practical 2)3.5 (units
Name of the course supervisor (if more than one name is mentioned): Mr. Samir Khairi Lazim .7
:Name Mr. Samir Khairy Lazem :Email samir.lazim@uobasrah.edu.iq

Course objectives .8	
• Learn the most important basic concepts and theories in physics and how to deduce .physical laws and formulate them in a correct mathematical manner • Providing a scientific and practical basis for students to serve the study requirements .of advanced-level students of the College of Agriculture • .Ability to solve scientific problems in agricultural machinery	Course objectives

Teaching and learning strategies .9	
• .Teaching students how to use objective thinking and analysis methods - • .Providing students with the basics of the course and additional topics - • .Ask intellectual questions that require different points of view as homework -	Strategy

Course structure .10

Evaluation method	Learning method	Name of unit or topic	Required learning outcomes	watches	week
Daily short quizzes- daily student participation assessment -	- Theoretical Explaining lectures using modern teaching and presentation	General Introduction Physical - Quantities	Physical quantities, measurement systems, and some ,physical dimensions important physical terms	2	the first

Daily short quizzes- daily student participation	- Theoretical Explaining lectures using modern teaching and	Equations of motion	Motion of objects: Motion in one dimension (equations of motion in a straight line with constant acceleration, equations of motion for a	2	the second
Daily short quizzes- daily student	- Theoretical Explaining lectures using modern	Equations of motion	Motion in two dimensions (in a plane): Equations of uniform circular motion, Equations of motion for	2	the third
Daily short quizzes- daily student	- Theoretical Explaining lectures using modern	Newton's laws	A brief overview of Newton's laws of motion and some of their applications	2	Fourth
Daily short quizzes- daily student	- Theoretical Explaining lectures using modern	determination	Torque and perfect equilibrium of bodies	2	Fifth
First month test	- Theoretical Explaining lectures using	determination	Finding the vector equation for the moment of force	2	Sixth
Daily short quizzes- daily student	- Theoretical Explaining lectures using modern		General exercises and questions	2	Seventh
Daily short quizzes- daily student	- Theoretical Explaining lectures using modern	fluids	Fluids: General Introduction, Pressure in Static Fluids	2	The eighth
Daily short quizzes- daily student	- Theoretical Explaining lectures using modern	fluids	Surface tension, capillary action, contact angle	2	Ninth
Daily short quizzes- daily student	- Theoretical Explaining lectures using modern	fluids	Newton's law of , Viscosity viscosity, effect of temperature and pressure on viscosity	2	tenth
Daily short quizzes- daily student	- Theoretical Explaining lectures using modern	fluids	Fluid flow: continuity equation, Bernoulli's equation	2	eleventh
Second month test	- Theoretical Explaining lectures using modern	Bernoulli's equation	Applications of Bernoulli's equation: Venturi tube	2	twelfth
Daily short quizzes- daily student	- Theoretical Explaining lectures using modern	Bernoulli's equation	Pitot tube, Torricelli's theory	2	thirteenth
Daily short quizzes- daily student	- Theoretical Explaining lectures using modern	Bernoulli's equation	General exercises and questions	2	fourteenth

Course Evaluation .11	
:The grade is distributed out of 100 according to the tasks assigned to the student, as follows Daily tests: 10% Monthly tests 40% Final exam 50%	
Learning and teaching resources .12	
nothing	Required textbooks (methodology if available)
Serway, Jewett – Physics for Scientists and Engineers with Modern Physics (9th edition)	Main References (Sources)
	Recommended supporting books and references (scientific journals, (...reports
	Electronic references, websites

Course Evaluation .11	
The grade is distributed out of 100 based on the tasks assigned to the student, such as daily preparation, .daily, oral, monthly and written exams, reports, etc	
Learning and teaching resources .12	
Engineering drawing for students of colleges of agriculture. Dr. Natiq Sabry Hassan. 1999	Required textbooks (methodology if (available
Al-Khafaf, Abdul-Rasoul, Engineering Drawing, University of Technology, Arabization and Publishing Center, Baghdad, 1986	Main References (Sources)
Engineering drawing for engineers and technicians	Recommended supporting books and references (scientific journals, reports...)
Osama Mohamed El-Mardy Soliman, “Lecture Notes in Engineering Drawing 2,” Nile Valley University, Faculty .of Engineering and Technology, 1995	Electronic references, websites

Computer Fundamentals Course Description

Course name .1
Computer Basics
Course code .2
CPMP101
Semester/Year .3

First / First stage
Date of preparation of this description .4
2023-9-1
Available forms of attendance .5
My presence
Number of study hours (total) / Number of units (total) .6
hours (3 practical) / 2 units 3
Name of the course supervisor (if more than one name is mentioned) .7
:Name:Essam Mohammed Ali Abdel Karim Email issam.abdalkareem@uobasrah.edu.iq
Course objectives .8

• Knowing the history of the computer and its stages of development • Knowledge of the hardware and software components of the computer, and details about the computer and its protection	Course objectives
Teaching and learning strategies .9	
weeks of in-person lectures, including two monthly exams, daily 15 .exams, and homework	Strategy
Course structure .10	

Evaluation method	Learning method	Name of unit or topic	Required learning	watches	week
duty	Lecture with explanation and	General introduction to computers definition of computers - stages - of the computer life cycle - generations of computers -	Gain an understanding of the physical components	3	1
duty	Lecture - Explanation with a presentation	System unit - memory, storage, .and ports	Follow-up - Gain an understanding of the physical	3	2
duty	Lecture with explanation and	Software components - types of software components - operating .systems - application programs	Gain an understanding of the physical components	3	3
short exam	Lecture with explanation and presentation	Computer Security and Software Licensing - Computer Security and Software Licensing - Types of - Violations in the Digital World Electronic Hacking - Types and	Knowledge of computer components .and software	3	4

duty	Lecture with explanation and presentation	Viruses - their characteristics, components and types - protection from electronic hacking - the .harms of computers to health	Learn about the operating system and how to interact .with it	3	5
duty	Lecture with explanation and presentation	/Operating systemWindows 10 - Installation requirements - The most important features of the system - Operating system environment - Window definition-	Learn about Word and how to benefit from it in our work	3	6
duty	Lecture with explanation and presentation	Desktop components - Start menu Taskbar - Folders, files, and - icons - Performing operations on windows - Control Panel - Common computer settings	Follow-up - Learn about the Word program and how to benefit	3	7
duty	Lecture with explanation and	The Internet - its features, disadvantages and benefits - types of browsers - running Internet Explorer10 and some of its	Learn about Excel and how to use it to accomplish	3	8
duty	Lecture with explanation and presentation	- Internet search enginesGoogle search engine search methods - and how to deal with some of the tags that help in it - downloading	Follow-up - Learn about the Excel program and how to benefit	3	9
duty	Lecture with explanation and	Introduction toWord 2010 how , to access the program, the main window title, opening, creating, saving, and closing a document,	Learn about PowerPoint presentation software and	3	10
short exam	Lecture with explanation and	Home tab: (Clipboard group, Font group, Paragraph group, Editing (group, Styles group	Follow-up - Learn about the PowerPoint	3	1 1
duty	Lecture with explanation and	Pages group, Table :Insert tab group, Formulas application group, Illustrations group, Header and Footer group, Text group,	A comprehensive overview of computer	3	12
duty	Lecture with explanation and presentation computer -	Page Layout tab: (Page Setup group, Page Background group, .(Paragraph group, Arrange group	Learn how to manage the Internet and benefit from it for our daily .needs	3	13
duty	Lecture with explanation and presentation	Review tab: (Proofreading group, Language group, Comments group), View tab: (Document Views group, Show group, Zoom .(in and out group	Learn how to manage email and benefit from it in our .daily lives	3	14

duty	Lecture with explanation and presentation	Page hints, creating a backup copy, file properties, usingWord 2010 to work with previous versions, necessary keys used in .editing text	Learn about the uses of cloud computing and how to benefit	3	15

Course Evaluation .11	
monthly 15 points for each exam, short exam and application on the program of , points Final exam of 50 .points, and homework of 15 points 5	
Learning and teaching resources .12	
nothing	Required textbooks (methodology if available)
Office 2010, Ihsan Al-Haisami, 2014, Computer -1 .Directorate, Education Office, Ibb, Yemen Windows 2010, Mohamed Abu El-Ela, Egypt, 2016 -2 Comprehensive guide to learning -3Windows 2010 .Wissam Ali Al-Khazai, 2020, Iraq , operating system	Main References (Sources)
	Recommended supporting books and references (scientific journals, reports...)
	Electronic references, websites

Course Description Form Arabic Language

Course name .1
Arabic
Course code .2
ARAI104
Semester/Year .3
Second / First Stage
Date of preparation of this description .4
2024/15/1
Available forms of attendance .5
My presence
Number of study hours (total) / Number of units (total) .6

hours per week 2
Name of the course supervisor (if more than one name is mentioned) .7
:Name: Anwar Walid Khaled Email anwarwaleed@uobasrah.edu.iq
Course objectives .8

• The importance of the Arabic language for scientific specializations, and its distinction among living languages • Avoid common mistakes and ensure correct pronunciation	Course objectives

Teaching and learning strategies .9	
The course includes (2) theoretical hours - the number of weekly hours is approved .and distributed over 15 weeks	Strategy
Course structure .10	

theoretical

Evaluation method	Learning method	Name of unit or topic	Required learning	watches	week
Surprise tests and assigning students to manage the	An explanatory lecture with explanations	The importance of the Arabic language for scientific specializations, and its distinction among living	Clarifying the status of the Arabic language and its role in	2	1
Surprise tests and assigning students to manage the	An explanatory lecture with explanations	Surah Al-Kahf Reasons for Revelation	Understanding the reasons for the revelation of Surat Al-Kahf	2	2
Surprise tests and assigning students to manage the	An explanatory lecture with explanations	Interpretation of twenty verses with memorization	Interpretation and understanding of the meanings	2	3
Surprise tests and assigning students to manage the	An explanatory lecture with explanations	Arabic Grammar/Grammar Rules	Applying basic grammar rules to Arabic sentences and	2	4
Surprise tests and assigning students to manage the	An explanatory lecture with explanations	Subject and predicate	Distinguishing between subject and predicate, their types, and	2	5
Surprise tests and assigning students to manage the	An explanatory lecture with explanations	Verb-like letters	Identifying the letters that resemble the verb (inna and	2	6
Surprise tests and assigning students to manage the	An explanatory lecture with explanations	Intransitive verbs	Identifying defective verbs kana and its) sisters) and	2	7

Surprise tests and assigning students to manage the	An explanatory lecture with explanations	Effects	Differentiating between the types of objects because of it, in)	2	8
Surprise tests and assigning students to manage the	An explanatory lecture with explanations	preparation	Applying the rules of number and countable and	2	9
Surprise tests and assigning students to manage the	An explanatory lecture with explanations	Spelling/Rules for writing the hamza	Mastering the writing of the medial and final hamza and	2	10
Surprise tests and assigning students to manage the	An explanatory lecture with explanations	Rules for writing the letter taa	Differentiating between open and closed taa and applying the	2	11
Surprise tests and assigning students to manage the	An explanatory lecture with explanations	Arabic Literature/Introduction to the Ages of Arabic Literature, the Characteristics of Each	Learn about the eras of Arabic literature and the most important	2	12
Surprise tests and assigning students to manage the	An explanatory lecture with explanations	A study and critique of an ancient poetic text/The Mourning Dove poem by Abu Firas al-Hamdani	Analysis and criticism of the poem according to the elements	2	13
Surprise tests and assigning students to manage the	An explanatory lecture with explanations	Arabic prose and its arts	Learn about the arts of Arabic prose and their development	2	14
Surprise tests and assigning students to manage the	An explanatory lecture with explanations	Common writing mistakes	Correcting the most common mistakes in Arabic writing	2	15

Course Evaluation .11	
The grade is distributed out of 100 based on the tasks assigned to the student, such as daily preparation, .daily, oral, monthly and written exams, reports, etc	
Learning and teaching resources .12	
A systematic book on grammar	Required textbooks (methodology if (available
	Main References (Sources)
	Recommended supporting books and references (scientific journals, reports...)

	Electronic references, websites

Organic Chemistry Course Description Form

1. Course name
Organic Chemistry
2. Course code
ORCH125
3. Semester/Year
Chapter Two / First Stage
4. Date of preparation of this description
15/1/2024
5. Available forms of attendance
My presence
6. Number of study hours (total) / Number of units (total)
5 hours / Number of units3.5
7. Name of the course administrator (if more than one name is mentioned)
:Name A.M. Mariam Abdulbari Ouraiby Email: mariam.ouraiby@uobasrah.edu.iq
8. Course objectives
The curriculum includes a general study of organic chemistry and some of its types, including aliphatic compounds, methods of their preparation, their most important reactions and their nomenclature, as well as aromatic compounds and their derivatives and their nomenclature, halogenated organic compounds, oxygenated organic compounds, nitrogenous compounds and stereochemistry.

9. Teaching and learning strategies	
The modern teaching strategy includes achieving learning objectives in general and teaching chemical concepts in particular, as well as the difficulties that students face in understanding and acquiring organic chemistry concepts, and treating these difficulties by defining organic chemistry concepts and helping students acquire the .correct chemical concepts	Strategy

10. Course structure

Theoretical part

Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	watches	week
Student participation in discussion and lecture preparation	Theoretical lecture and group discussion	General idea about organic chemistry and classes of organic compounds	Students will be able to identify organic compounds and how dangerous .they are	2	1
Student participation in discussion and lecture preparation	Theoretical lecture and group discussion	Alkanes	Students' knowledge of organic compounds	2	2
Student participation in discussion and lecture preparation	Theoretical lecture and	Alkenes	Students' knowledge of organic compounds	2	3

	group discussion				
Student participation in discussion and lecture preparation		Alkynes	Students' knowledge of organic compounds	2	4
nothing	nothing	exam		2	5
Student participation in discussion and lecture preparation	Theoretical lecture and group discussion	Aromatic hydrocarbons and their derivatives	Learn about the chemical composition of .compounds	2	6
Student participation in discussion and lecture preparation	Theoretical lecture and group discussion	alkyl halides	Identify the structural and molecular formulas of organic .compounds	2	7
Student participation in discussion and lecture preparation	Theoretical lecture and group discussion	Esterases	Identify the structural and molecular formulas of organic .compounds	2	8
Student participation in discussion and lecture preparation	Theoretical lecture and group	Alcohols	Learn the formula for the types of alcohols, primary, secondary, and .tertiary	2	9

	discussion				
Student participation in discussion and lecture preparation	Theoretical lecture and group discussion	Phenols	Phenols identifier and methods of preparation	2	10
Student participation in discussion and lecture preparation	Theoretical lecture and group discussion	Ethers	Ether ID and types	2	11
Student participation in discussion and lecture preparation	Theoretical lecture and group discussion	Aldehydes	Learn about aldehydes	2	12
Student participation in discussion and lecture preparation	Theoretical lecture and group discussion	Ketones	Knowledge of ketone compounds	2	13
Student participation in discussion and lecture preparation	Theoretical lecture and group	Carboxylic acids and their derivatives	Learn about carboxylic acids and their derivatives	2	14

	discussion				
Student participation in discussion and lecture preparation	Theoretical lecture and group discussion	Amines	Learn about amines, their types, and methods of .preparation	2	15
Practical part					
Evaluation method	Learning method	Name of unit or topic	Required learning outcomes	watches	week
Evaluation during the practical experiment in the laboratory, evaluation of the student's professional competence during the written and practical exam	Laboratory experiments	Physical properties of organic materials	Learn about compounds and .physical properties	3	1
Evaluation during the practical experiment in the laboratory	Laboratory experiments	Purification of organic materials and recrystallization	We know how to purify solid .compounds	3	2
Evaluation during the practical experiment in the laboratory	Laboratory experiments	Solubility of organic compounds	Learn about the solubility of organic .compounds	3	3
Evaluation during the exam	Laboratory experiments	First exam	nothing	3	4
Evaluation during the practical experiment in the laboratory	Laboratory experiments	Detection of the double bond (alkenes)	Cleavage of the double bond in alkenes	3	5

Student evaluation during the written and practical exam		Alcohol detection	Alcohol detection	3	6
Student evaluation during the written and practical exam	Laboratory experiments	Detection of phenols	Phenols detection	3	7
Evaluation during the practical experiment in the laboratory	Laboratory experiments	Detection of aldehydes	Detection of aldehydes	3	8
Evaluation during the practical experiment in the laboratory	Laboratory experiments	Ketone detection	Ketone detection and differentiation from aldehydes	3	9
Evaluation during the exam	Laboratory experiments	Second exam	nothing	3	10
Evaluation during the practical experiment in the laboratory	Laboratory traders	Detection of carboxylic acids	Detection of carboxylic acids	3	11
No materials found	theoretical study	Methane gas preparation	nothing	3	12
No materials	theoretical study	Aspirin preparation		3	13
Evaluation during the exam		The third exam	nothing	3	14
		review		3	15
11. Course Evaluation					

The grade is distributed out of 100 based on the tasks assigned to the student, such as daily preparation, ,daily, oral, monthly and written exams, reportsetc.	
12. Learning and teaching resources	
- Othman, Ibrahim Muhammad (2005). Organic Chemistry: Concepts and Applications. Dar Al-Amal .for Publishing and Distribution	Required textbooks (methodology if (available
- Mazahra, Ayman Mukhtar (2017). Fundamentals of Organic Chemistry and its Applications. Dar Al .Manahj for Publishing and Distribution	Main References (Sources)
	Recommended supporting books and references (scientific journals, reports)
	Electronic references, websites

Geology Course Description Form Principles of

Course name .1
Geologist/Theoretical
Course code .2
GEOL112
Semester/Year .3
Second semester / 2024-2025
Date of preparation of this description .4
2025/01/02
Available forms of attendance .5
Attendance in classrooms
Number of study hours (total) / Number of units (total) .6
hours per week / 2 units 2
Name of the course supervisor (if more than one name is mentioned) .7

:Name Dr. Salwa Jumaa Fakher .Prof .Asst Email :salwa.fakher@uobasrah.edu.iq
Name: M.M. Sadiq Jaafar Talib :Emailsadiq.jaafar@uobasrah.edu.iq

Course objectives .8

• Detailed study of the Earth • Identify and describe the main types of rocks and .minerals • Teaching students about rock formation processes and their cycle • Teach students the concept of geologic time and .methods of dating rocks • Discuss major events in Earth's history and the evolution .of life • Teaching students about tectonic plates	Course objectives

Teaching and learning strategies .9

• Theoretical lectures in classrooms. • Presentations and video materials. • Group discussions. • Learning based on problem solving, inquiry and brainstorming. • Report and project based learning.	Strategy

Course structure .10

Evaluation method	Learning method	Name of unit or topic	Required learning	watches	week
Oral discussion and questions	• Theoretical lecture • Presentation • Group	Introduction to its - Geology concept, origins	Students will be able to understand the basic principles	hours 2	the first
Conduct independent research on a geological topic, demonstrating the	• Theoretical lecture • Presentation • Group	Geological phenomena and . how they arise	Students will be able to understand the concept of	hours 2	the second
Oral discussion and questions	• Theoretical lecture • Presentation • Group	Minerals and their formation methods .	Students will be able to identify and classify different	hours 2	the third
Report on the types of weathering	• Theoretical lecture • Presentation • Group	Types : Weathering and Relationship to Soil Formation	Students will be able to distinguish between physical	hours 2	Fourth

Oral discussion and questions	• Theoretical lecture • Presentation • Group	Rock cycle in nature, igneous ,rocks	Students will be able to identify and classify different rocks,	hours 2	Fifth
Oral discussion and questions	• Theoretical lecture • Presentation • Group	sedimentary rocks	Students will be able to identify types of sedimentary	hours 2	Sixth
nothing	nothing	First monthly exam	nothing	hours 2	Seventh
Oral discussion and questions	• Theoretical lecture • Presentation • Group	metamorphic rocks	Students will be able to identify the types and classification of	hours 2	The eighth
Oral discussion and questions	• Theoretical lecture • Presentation • Group	: Water cycle surface water	Students will be able to identify the water cycle .in nature	hours 2	Ninth
Report on the assessment of geological problems, including	• Theoretical lecture • Presentation • Group	groundwater	Students will be able to identify the types and sources of	hours 2	tenth
Oral discussion and questions	• Theoretical lecture • Presentation • Group	Natural Resources Survey	Students will be able to identify the types of .natural giants	hours 2	eleventh
Oral discussion and questions	• Theoretical lecture • Presentation • Group	The relationship between geology, soil, and agriculture	Students will be able to identify the study of soil and rocks that	hours 2	twelfth
Natural Resources Report	• Theoretical lecture • Presentation • Group	Applications in Geological Sciences	Students will be able to identify and manage the Earth's natural	hours 2	thirteenth
nothing	nothing	Second monthly exam	nothing	hours 2	fourteenth
nothing	• Group discussion • Answering students'	General review	nothing	hours 2	fifteenth
Practical curriculum					
Evaluation method	Learning method	Name of unit or topic	Required learning	watches	week

Oral discussion and questions	• Practical lecture • Presentation • Group	The relationship between geology and soil	Students will be able to identify the basic aspects .of geology	hours 3	the first
Report on Geology and its applications	• Practical lecture • Presentation • Group	Geology, its divisions and branches	Students will be able to distinguish between the	hours 3	the second
Solve practical examples	• Practical lecture • Presentation • Solving problems	Mineralogy, its divisions and crystal forms	Students will be able to distinguish between minerals and their crystalline .forms	hours 3	the third
Discussion between students and between them and the course teacher about the	• Explanation by the subject professor • Explanation	Mineralogy, crystal axes and symmetry planes	Students will be able to identify crystallographic and symmetry	hours 3	Fourth
Solve practical examples	• Practical lecture • View samples of materials and equipment • Performing	Mineralogy, Coordinates and Barometer	Students will be able to identify the coordinates .of minerals	hours 3	Fifth
Discussion between students and between them and the subject teacher	• Explanation by the subject professor • Explanation by farm management in case of	Minerals, crystal systems, and Miller coefficients	Students will be able to identify how to deal with .crystal systems	hours 3	Sixth
nothing	nothing	First monthly exam	nothing	hours 3	Seventh
Oral discussion and questions	• Practical lecture • Presentation • Video presentations	Rocks, their properties and classification methods igneous rocks	Students will be able to identify igneous rocks .and their types	hours 3	The eighth

Oral discussion and questions	• Practical lecture • Presentation • Video presentations	Rocks, their properties and classification methods sedimentary rocks	Students will be able to identify sedimentary rocks and their .types	hours 3	Ninth
Report on rock types in Iraq	• Practical lecture • Presentation • Video presentations	Rocks, their properties and classification methods metamorphic rocks	Students will be able to identify metamorphic rocks and their .types	hours 3	tenth
Oral discussion and questions	• Practical lecture • Presentation • Video	Natural properties of minerals in Iraq	Students will be able to identify the most important	hours 3	eleventh
Oral discussion and questions	• Practical lecture • Presentation • Video	Natural properties of rocks in Iraq	Students will be able to identify the most important rocks	hours 3	twelfth
Oral discussion and questions	• Practical lecture • Presentation • Video presentations	The natural properties of the most important minerals of the Earth's crust	Students will be able to identify minerals found in the Earth's .crust	hours 3	thirteenth
nothing	nothing	Second monthly exam	nothing	hours 3	fourteenth
nothing	• Group discussion • Answering students'	General review	nothing	hours 3	fifteenth
Course Evaluation .11					
The grade is distributed out of 100 based on the tasks assigned to the student, such as daily preparation, .daily, oral, monthly and written exams, reports, etc tests 10 assignments 10 10 Lab 10 Report 10 Midterm Exam 50 Final Exam					
Learning and teaching resources .12					

Ahmed Mustafa Al-Basili, Muzaffar Muhammad Minerals and Rocks, Dar Al-Hikma for , 1980 ,Mahmoud . University of Mosul - Printing and Publishing	Required textbooks (methodology if (available
Principles of Geology (Penguin Classics) Paperback Abridged, June 1, 1998	Main References (Sources)
	Recommended supporting books and references (scientific journals, reports...)
https://www.britannica.com/biography/Charles-Lyell/Scientific-eminence	Electronic references, websites

Plane Area Course Description Form for

Course name .1	
flat area	
Course code .2	
PLSU118	
Semester/Year .3	
Second / First Stage	
Date of preparation of this description .4	
1-2-202 4	
Available forms of attendance .5	
My presence	
Number of study hours (total) / Number of units (total) .6	
hours (2 theoretical + 3 practical) 3.5 units 5	
Name of the course supervisor (if more than one name is mentioned) .7	
:Name :Mohsin Naseh Hoshan Emailmohsin.hoshan @uobasrah.edu.iq	
Course objectives .8	
• Knowing the types of surveys, their requirements, measurement systems, and their importance in the agricultural process, and how to use the tools and equipment used in soil leveling and calculating point	Course objectives
Teaching and learning strategies .9	

weeks of in-person lectures, including two monthly exams and daily 15 .exams	Strategy

Course structure .10

Theoretical part

Evaluation method	Learning method	Name of unit or topic	Required learning	watches	week
Oral discussion and questions	• Theoretical lecture • Presentation Group discussion	Definition of surveying, types of surveys, requirements for a good survey, importance of surveying in agriculture	Students learn about surveying, types of surveys, requirements for a good survey, and the importance of	hours 2	the first
Oral discussion and questions	• Theoretical lecture • Presentation Group discussion	Measurement systems, units of measurement, errors and mistakes	Students learn about measurement systems, units of	hours 2	the second
Oral discussion and questions	• Theoretical lecture • Presentation Group discussion	Strip scanning, station selection criteria, field book arrangement	Students learn strip about scanning, station selection	hours 2	the third
Oral discussion and questions	• Theoretical lecture • Presentation Group discussion	Errors in surveying work, methods of handling and overcoming them	Students errors identify in surveying work, methods for handling and	hours 2	Fourth
Oral discussion and questions	• Theoretical lecture • Presentation Group discussion	Drawing scale, its types, categories, determining factors, areas, regular and irregular shapes, area by coordinates	Students learn drawing about scale, its types, categories, and determining factors	hours 2	Fifth
nothing	nothing	First month exam	nothing	hours 2	Sixth

Oral discussion and questions	• Theoretical lecture • Presentation Group discussion	Settlement, its terms, types of adjustment, uses of the level device	Students learn leveling, about its terminology, types of adjustment, and uses of the	hours 2	Seventh
Oral discussion and questions	• Theoretical lecture • Presentation Group discussion	Types of settlement, the phenomena of curvature and refraction and their treatment	Students learn the types about of settlement, the phenomena of curvature and refraction	hours 2	The eighth
Oral discussion and questions	• Theoretical lecture • Presentation Group discussion	Methods for calculating point levels and elevation differences, direct and indirect	Students learn methods for calculating point levels and elevation differences,	hours 2	Ninth
Oral discussion and questions	• Theoretical lecture • Presentation Group discussion	Making longitudinal sections, defining them, determining a central axis, determining a set of points, drawing scale	Students learn the about function of longitudinal sections, their definition, determining a central axis	hours 2	10th
Oral discussion and questions	• Theoretical lecture • Presentation Group discussion	Calculation of point levels, distance scale, design and actual section projection	Students learn how to calculate point levels, scale distances, and projection of	hours 2	eleventh
Oral discussion and questions	• Theoretical lecture • Presentation Group discussion	Finding excavation height and backfill depth, calculating cut and fill areas, calculating cut and fill volumes, evaluating project economics by applying mathematical examples	Students learn find how to excavation height and backfill depth, calculate cut and fill areas, calculate cut and fill volumes, and	hours 2	twelfth
Oral discussion and questions	• Theoretical lecture • Presentation Group discussion	Topographic maps, representation methods	Students learn about topographic maps, representation ,methods	hours 2	thirteenth

Oral discussion and questions	• Theoretical lecture • Presentation Group discussion	Contour lines, methods for finding contour space and interval, finding contour lines, contour line features, methods for drawing contour lines	Students learn contour about lines, methods for finding contour space and interval, finding contour lines, contour line features, and methods	hours 2	fourteenth
nothing	nothing	Second month exam	nothing	hours 2	fifteenth
Practical part					
Evaluation method	Learning method	Name of unit or topic	Required learning outcomes	watches	week
Oral discussion and questions	• Practical lecture • Presentation Group discussion	Visit the Agricultural Research Station at the College of Agriculture to see the measuring tools and how to use them in flat soil area and points of elevation and learn about and depression the tools used in surveying, characteristics, defects, and .adjustment	Students get to know the Agricultural Research Station in the College of Agriculture to see the measuring tools and how to use them in flat soil area and points of elevation and	hours 3	the first
Oral discussion and questions	• Practical lecture • Presentation Group discussion	Adjusting orientation in measurements, calculating flat and inclined distances, and correcting measurements	Students learn adjust how to orientation in measurements, calculate flat and slanted distances, and	hours 3	the second
Oral discussion and questions	• Practical lecture • Presentation Group discussion	Methods of residence and projection. Field survey using .tape	Students learn methods about of placement and projection. Field survey .using tape	hours 3	the third

Oral discussion and questions	• Practical lecture • Presentation Group discussion	Length scale and station installation. Methods of erection and projection. Beams and .barriers	Students learn length about scales and station installations. Methods of	hours 3	Fourth
Oral discussion and questions	• Practical lecture • Presentation Group discussion	Drawing a linear map at an appropriate scale, applications in drawing scale, longitudinal, and .schematic. Selection methods	Students learn draw a how to linear map at an appropriate scale, applications of linear, longitudinal,	hours 3	Fifth
nothing	nothing	First month exam	nothing	hours 3	Sixth
Oral discussion and questions	• Practical lecture • Presentation Group discussion	Applications in area calculations, practical examples, squares and ellipses	Students learn about applications in calculating areas, practical examples,	hours 3	Seventh
Oral discussion and questions	• Practical lecture • Presentation Group discussion	Applications in calculating the area of irregular shapes, mathematical methods, Simpson's method	Students learn about applications in calculating the area of irregular shapes, mathematical	hours 3	The eighth
Oral discussion and questions	• Practical lecture • Presentation Group discussion	Learn about the level device, its parts and accessories. Types of .adjustments. Reading the ruler	Students learn about the level device, its parts and accessories, types of adjustments	hours 3	Ninth
Oral discussion and questions	• Practical lecture • Presentation Group discussion	Applications of direct methods for finding point levels in the field	Students learn about applications of direct methods for finding the elevations of points in the .field	hours 3	10th

Oral discussion and questions	• Practical lecture • Presentation Group discussion	Finding levels using the elevation and depression method and the device elevation method	Students learn to find how levels using the rise and fall method and the instrument elevation method	hours 3	eleventh
Oral discussion and questions	• Practical lecture • Presentation Group discussion	Applications in longitudinal sector work, determining the main axis of the project, calculating a set of points on the project axis	Students learn about applications in longitudinal section work, determining the main axis of the project, and calculating a	hours 3	twelfth
Oral discussion and questions	• Practical lecture • Presentation Group discussion	Drawing on graph paper and determining the excavation and backfill volume and project economics	Students learn draw on how to graph paper, determine excavation and backfill volume, and project	hours 3	thirteenth
Oral discussion and questions	• Practical lecture • Presentation Group discussion	Applications in making contour maps, drawing them, determining the period, and drawing lines mathematically	Students learn about applications in making contour maps, drawing them, determining the period, and	hours 3	fourteenth
nothing	nothing	Second month exam	nothing	hours 3	fifteenth

Course Evaluation .11	
for each exam, daily exam 5 and reports 5 10 monthly ,Final exam of 50	
Learning and teaching resources .12	
Plane Area. Fawzi Al-Khalisi. College of Engineering, .University of Basra	Required textbooks (methodology if (available
1- Engineering and cadastral surveying. Ziad Abdul .Jabbar Al-Bakr 2- Topographic Surveying and Geodesy. Muhammad .Farid Youssef. Dar Al-Rateb University, Beirut	Main References (Sources)
.Calculating Areas and Quantities. Hiam Youssef. 1985	Recommended supporting books and references (scientific journals, reports...)

	Electronic references, websites